

ELECTRONIC COMPONENTS

PCB  ACCESSORIES

WIRING  CLAMPS 

CABLE  TIES

GROMMETS &  BUSHINGS

WIRING  TUBES & DUCTS

SYMBIOSIS & COLLABORATION

KITAGAWA INDUSTRIES CO., LTD.

A global technology group providing high quality for life's amenities through "Symbiosis & Collaboration"

The high pace of industrial technology innovation can lead to various problems. We carry out the research and propose the solutions to the problems in order to provide a clean electromagnetic environment.



R&D bases



Technology Center



Kasugai factory



Inazawa factory



Thailand factory



Wuxi (China) factory



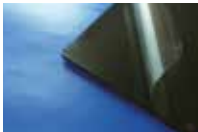
Shenzhen factory

Functional film



Sputtering technology applied at the nano-Level for producing functional coatings provides greater design exibility for high density electronic equipment.

KG-GEL(vibration damping and shock buffering)



KG-GEL is a special polystyrene gel with super-low hardness of ASKER FP, which provides excellent shock buffering, vibration and noise damping for equipment and sub-assembly components.

LOSTOMER(vibration damping)



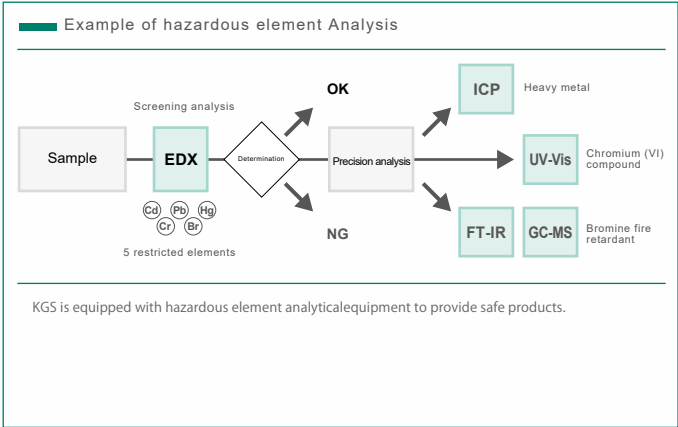
High vibration damping and heat resistant properties (100°C) for a wide range of applications. Can be produced in customized con gurations.

COOLPROVIDE(Heat+EMC)



Using our original composite technology we develop multifunctional materials for simultaneous management of EMC and thermal problems.

Environmental policy



PCB ACCESSORIES



Spacers
P3-19



Rivets
P20-22



Card Guides
P23-28

P1-28

WIRING CLAMPS



For Cables
P31-64



For Flat cables
P65-71



For Connectors, capacitors and optical fibers
P72-81

P29-81

CABLE TIES



Plastic type
P83-85



Wire lock
P86



Cable tie mount
P87-89



Band & SK Binder
P90-93

P82-93

GROMMETS & BUSHINGS



Edge protection
P95-100



Securing with protection
against dust, water, damage
P101-104



P94-104

WIRING TUBES & DUCTS



Tube
P106



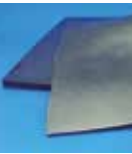
Ducts
P107

P105-107

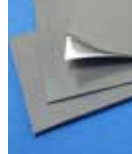
FUNCTIONAL MATERIALS



Material
P109-111



Sheets & Standard
Products
P112-115



Damper
P116-119



Fanfixer & Holder
P120-122

P108-122

INDEX

P123-128

LOCKING CLAMP / LBWS

P.39



Push mount, locking clamp

Features

- Compact, space-saving clamp.
- Clamp is open for cable insertion without causing any damage to cables such as optical fibers.

Material

- Nylon 66 (Color : Natural / LBWS-0206S-AM-HT-NC)

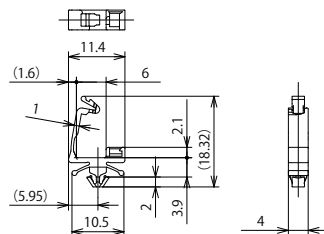


Snap Mounting



Round hole

LBWS-0206S-AM-HT-NC



※ Operating temperature range: -40°C ~ 125°C

USB CONNECTOR COVER / USBCC-B-YR

P.72



Removal prevention clamp for USB connector (Upper tab)

Features

- Locking tab makes it easy to lock and release USB connector.
- The upper tab is suitable for USB connectors arranged side-by-side.

Material

- PBT (Color : Black)

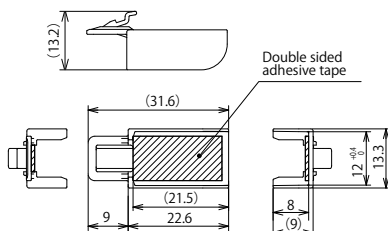
UL94 V-0



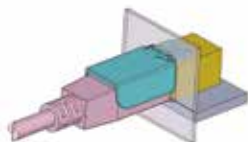
Snap Mounting



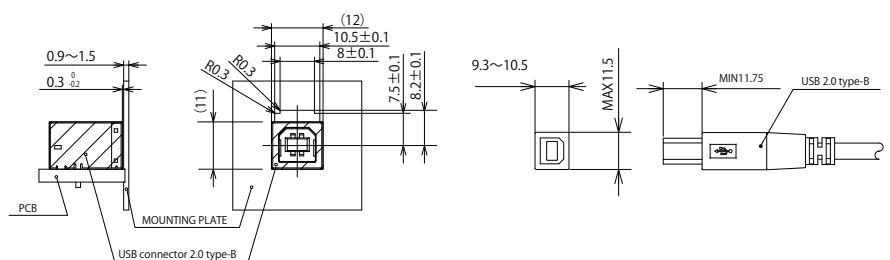
Square hole



Application examples



Specification drawing



Part No.	Compatible connector	USB plug size	Std. Package
USBCC-B-YR	Type-B USB connector	Refer to Specification drawing	100 pcs.

(Unit : mm)

※ This product is assembled on a USB connector with double-sided adhesive.
Make sure to press the component firmly onto the connector. Assembled product cannot be reused.

FIBER GUIDE / OFG-SCLC-1-R30-V0

P.76

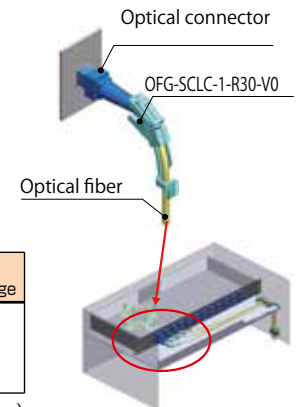


It maintains safe radius for fibers extending from connector boot.

Features

- The GUIDE maintains bend radius of 30° or more for opticalfibers extending from connector boots.
- Applicable to both SC and LC connectors
- Downsized design is also applicable to LC duplex connectors.
- Lock structure prevents unfastening from the fibers.

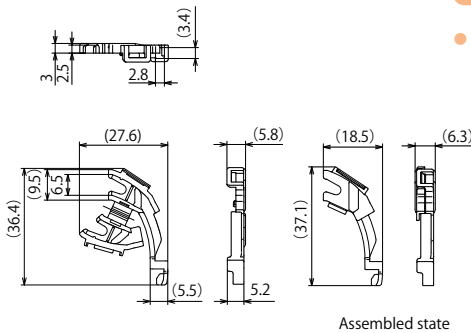
Application examples



Material

- Nylon 66 (Color : Natural)

UL94 V-0



Assembled state

Part No.	Applicable connector	Std. Package
OFG-SCLC-1-R30-V0	SC Connector, LC Connector	100 pcs.

(Unit : mm)

SCREW-LESS BAND / VLSG

P.84



Screw-mount band that allows for easy bundling of cables

Features

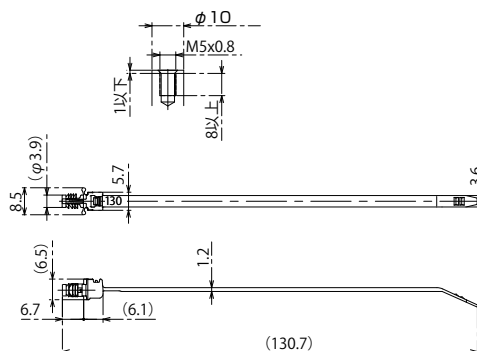
- Plug-in mounting in screw hole is available without tool.
- Applying heat resistant aging material for the products that has AM-HT-BK at the end of the part number, both heat resistance and durability are performed.

Material

- Nylon 66 (Color : Black)

UL94 V-2

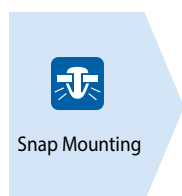
VLSG-130-M5-AM-HT



Operating temperature range: -40°C~125°C

Spacers

Securing, holding and spacing for PC boards and chassis



KGLS-S/KLCS/KGLS-M
P3-4
LOCKING CARDSPACER



RLS
P4
RE-USE SPACER



RPS
P5
RE-USE CARDSPACER



KGPS-S / KGPS-M
P5
CARDSPACER



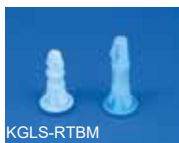
WLS
P6
DOUBLE LOCKING SPACER



MPS-L
P6
MINI CARD SPACER



KGLS-RT
P7
LOCKING CARD SPACER



KGLS-RTBM
P7
LOCKING CARD SPACER



SCT
P8
LOCKING CARD SPACER



SDC
P8
LOCKING CARD SPACER



SDB
P9
LOCKING CARD SPACER



SDX
P9
LOCKING CARD SPACER



KGPS-RF
P10
CARD SPACER



KGPS-RTBM
P10
CARD SPACER



QDCT
P11
LOCKING CARD SPACER



SDN
P11
LOCKING CARD SPACER



KGLS-04T
P13
LOCKING CARD SPACER



KGES
P13
CARD EDGE SPACER



CESP-55
P14
CARD EDGE SPACER



KGCP-08-0
P14
CARD SPACER



PHD
P15
PIERCE HOLD



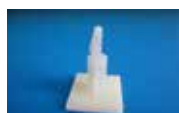
RES
P16
RE-USE EDGE SPACER



RPH
P17
RE-USE PIERCE HOLD



Snap and Adhesive
tape Mounting



BTT

P12

LOCKING CARD SPACER



KGLS-M

P12

LOCKING CARD SPACER



Snap and Screw
Mounting



KGTS-T, K

P17

TAPPING CARD SPACER



Screw Mounting



NB/ NA/ TA

P18

ONE TOUCH
COLLAR BUSHING



ES

P19

EXPANSION NUT



TFR

P19

TOGGLE FIXER

Rivets

Securing metal plates and components



Snap
Mounting



P/ NR/ NRP/ P-SN

P20

NYLON RIVET



RVT-9943

P20

RIVET



NRK-450L WT

P23

RIVET

Card Guides

Card guides and ejectors support smooth insertion and extraction

Card Guides



Snap Mounting



KGCH-20-0

P21

CARD CORNER HOLDER



RCH-40-V0

P22

RE-USE CARD HOLDER



RUEGR/ UEGR

P23

CARD FIXER
RE-USE CARD FIXER



GR-45A

P24

CARD GUIDE



GR

P25

CARD GUIDE



GR-170SS

P28

CARD GUIDE
WITH STOPPER

Ejectors



Spring pin
mounting



CBE-15

P26

EJECTOR



CBE

P28

EJECTOR



Snap Mounting



EJC-1A

P27

EJECTOR



CBE-18

P27

EJECTOR



Snap-mount PCB spacer

Features

- Provides simultaneous functions of spacing and supporting for PCB and chassis.

Material

- Nylon 66 (Color : Natural)

UL94 V-2(V-0*)



Snap Mounting



Round hole

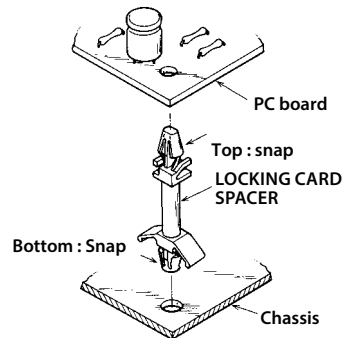
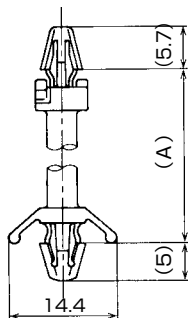


Can be used with KGPS-S series
Supports heavily loaded PC boards at the middle of PCB

P5

For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

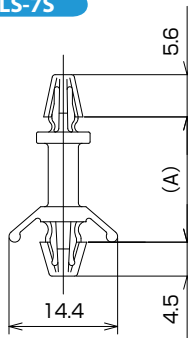
KGLS-S



Part No.	(A)	Mounting hole size	Panel thickness	Std. Package
KGLS-3S	9.8	Top $\phi 4^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$	Top 1~2 Bottom 0.5~2.3	100 pcs.
KGLS-4S	11.4			
KGLS-6S	14.4			
KGLS-8S	17.7			
KGLS-10S	20.9			
KGLS-12S	24.1			
KGLS-14S	27.2			
KGLS-16S	30.4			
KGLS-18S	33.6			
KGLS-22S	39.9			

(Unit : mm)

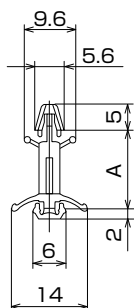
KGLS-7S



Part No.	(A)	Mounting hole size	Panel thickness	Std. Package
KGLS-7S	16.6	Top $\phi 4^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$	Top $\leq t1.8$ Bottom 0.5~2.3	1000 pcs.

(Unit : mm)

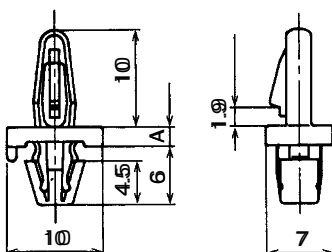
KLCS



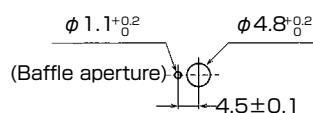
Part No.	A	Mounting hole size	Panel thickness	Std. Package
KLCS-4H	12.0	Top $\phi 4^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$	Top 1.2~1.6	100 pcs.
KLCS-6	14.4		Bottom 0.5~1	

(Unit : mm)

KGLS-1S



Specification drawing for bottom holes

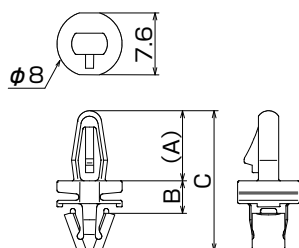


Part No.	A	Mounting hole size	Panel thickness	Std. Package
KGLS-1S	2.0	Top $\phi 4^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$ *Baffle aperture is required.	Top 1.7 Bottom $1.2^{+0.15}_{-0.18}$	1000 pcs.

(Unit : mm)

LOCKING CARD SPACER /KGLS™-S•KLCS•KGSL-M

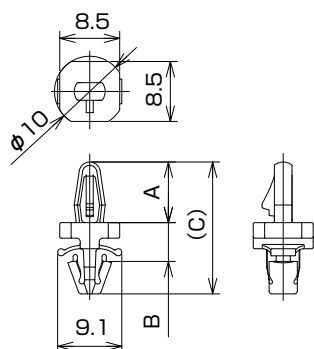
KGSL-1M-V0



Part No.	(A)	B	C	Mounting hole size	Panel thickness	Std. Package
KGSL-1M-V0	8.6	4.0	17.2	Top $\phi 4^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$	Top 1.6 ± 0.1 Bottom 1 ± 0.1	1000 pcs.

(Unit : mm)

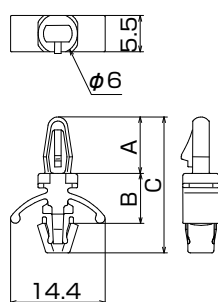
KGSL-1.5M-V0



Part No.	A	B	(C)	Mounting hole size	Panel thickness	Std. Package
KGSL-1.5M-V0	8.6	5.5	18.7	Top $\phi 4 \pm 0.1$ Bottom $\phi 4.8^{+0.2}_0$	Top $1.6 \sim 1.8$ Bottom $1.0 \sim 1.6$	1000 pcs.

(Unit : mm)

KGSL-※M-V0



Part No.	A	B	C	Mounting hole size	Panel thickness	Std. Package
KGSL-2M-V0	8.6	7.6	20.7	Top $\phi 4^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$	Top 1.6 ± 0.1 Bottom $0.5 \sim 1.3$	1000 pcs.
KGSL-3M-V0		8.4	21.5			
KGSL-5M-V0		11.6	24.7		Top 1.6 ± 0.1 Bottom $0.5 \sim 1.3$	100 pcs.
KGSL-7M-V0		13.2	26.3			

(Unit : mm)

RE-USE SPACER / RLS



Releasable PCB spacer

Features

- Holding and spacing for PC boards and chassis.
- Easily removed for maintenance and disassembling.



Push Type



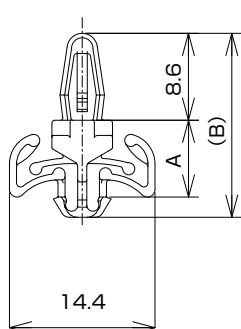
Round hole

Material

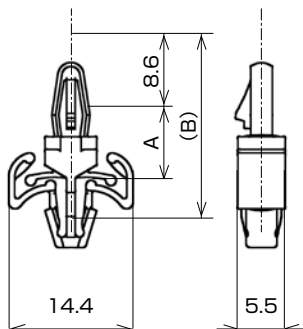
- Nylon 66 (Color : Natural)

UL94 V-0

RLS-2E

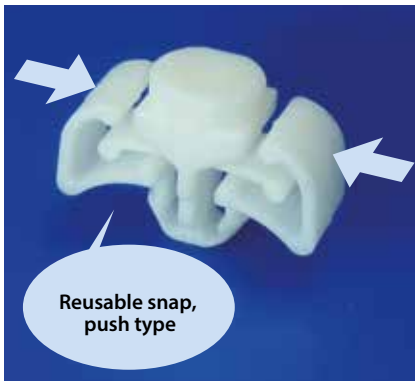


RLS-3E



Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
RLS-2E-V0	7.6	18.2	Top $\phi 4.0^{+0.2}_0$ Bottom $\phi 4.8^{+0.2}_0$	Top : $1.6 \sim 1.8$ Bottom : $0.8 \sim 1.2$	1000 pcs.
RLS-3E-V0	8.4	21.5		Top : $1.6 \sim 1.8$ Bottom : $0.5 \sim 1.6$	1000 pcs.

(Unit : mm)



Releasable snap-mount spacer

Features

- Supports load at the middle of PCB and keeps spaces.
- Snap is easily removed to shorten time for maintenance and disassembling.

Material

- Nylon 66 (Color : Natural)

UL94 V-0



Push Type

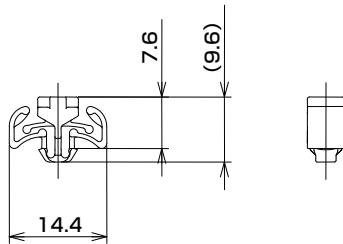


Round hole

Reusable Snap

For push-type, refer to

P4



Part No.	Mounting hole size	Panel thickness	Std. Package
RPS-2E-V0	$\phi 4.8^{+0.2}_0$	0.8~1.2	1,000 pcs.

(Unit : mm)

CARD SPACER™ - / KGPS-S•KGSP-M•KGSP-MP



Snap-mount PCB spacer support

Features

- Provides spacing and support at the centre of PCB.
- Supports heavily loaded PCB at the centre.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0*)



Snap Mounting



Round hole

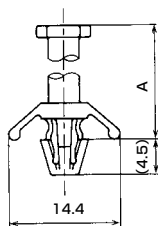


Can be used with KGLS-S series
Securing and spacing for PCB

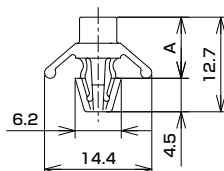
P3

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

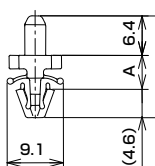
KGPS-S•KGSP-M



KGPS-3.5S-N



KGSP-1.5MP-V0



Part No.	A	Mounting hole size	Panel thickness	Std. Package
KGPS-3S	7.5	$\phi 4.8^{+0.2}_0$	0.5~2.3	100 pcs.
KGPS-4S	9.1			
KGPS-6S	12.1			
KGPS-8S	15.4			
KGPS-10S	18.6			
KGPS-12S	21.8			
KGPS-14S	24.9			
KGPS-16S	28.1			
KGPS-18S	31.3			
KGSP-2.5M-V2	6.6	$\phi 4.8^{+0.2}_0$	0.5~1.6	1000 pcs.
KGSP-3M-V0	7.4		0.5~1.3	

(Unit : mm)

Part No.	A	Mounting hole size	Panel thickness	Std. Package
KGPS-3.5S-N	8.2	$\phi 4.8^{+0.2}_0$	0.5~2.3	500 pcs.

(Unit : mm)

Part No.	A	Mounting hole size	Panel thickness	Std. Package
KGSP-1.5MP-V0	5.5	Top $\phi 3.5 \pm 0.1$ Bottom $\phi 4.8^{+0.2}_0$	Top — Bottom 1.0~1.6	500 pcs.

(Unit : mm)



PCB spacer for space saving

Features

- Space-saving PCB spacer.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0*)

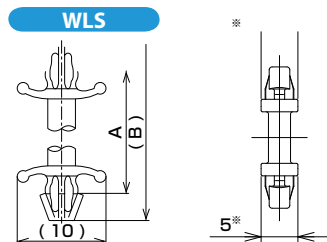
※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Can be used with MPS series

Supports heavily
loaded PC boards at
the middle of PCB

Refer to the bottom column



Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
WLS-03-0	6.2	10.8	$\phi 3.5^{+0.2}_{-0}$	Top /bottom 1.6 ± 0.15	500 pcs.
WLS-04-0	7.2	11.8			

※WLS-03-0, -04-0 : 4.5

Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
WLS-06-0	9.2	15.2	$\phi 4 \pm 0.1$	Top /bottom 1.6 ± 0.15	500 pcs.
WLS-08-0	11.2	17.2			1000 pcs.
WLS-10-0	13.2	19.2			500 pcs.
WLS-12-0	15.2	21.2			1000 pcs.
WLS-13-0	16.2	22.2			500 pcs.
WLS-14-0	17.2	23.2			1000 pcs.
WLS-16-0	19.2	25.2			500 pcs.
WLS-16.8-0	20.0	26.0			1000 pcs.
WLS-18-0	21.2	27.2			500 pcs.
WLS-20-0	23.2	29.2			

(Unit : mm)

MINI CARD SPACER / MPS,-L



Snap-mount PCB spacer support for space saving

Features

- Space-saving type, with support at the centre of PCB.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 : MPS**-0

UL94 V-0 : MPS**-L-V0

※ Please contact us material and lot size for MPS**-0 V0 type



Snap Mounting



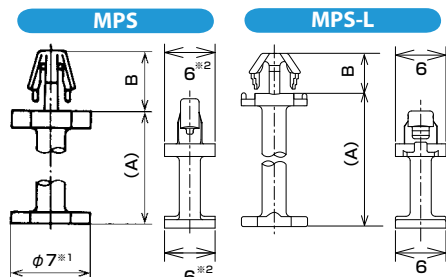
Round hole



Can be used with WLS series

Mini PCB spacer

Refer to the top column



※1 MPS-20 : $\phi 6$
※2 MPS-20 : 5

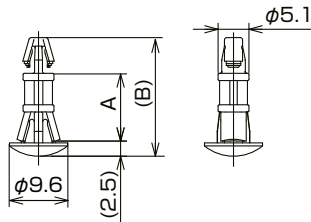
Part No.	(A)	B	Mounting hole size	Panel thickness	Std. Package
MPS-2.5-0	2.5	5.35	$\phi 3.0^{+0.1}_{-0}$	1.6 ± 0.15	500 pcs.
MPS-04-0	4.0	5.35			
MPS-06-0	6.0	5.35			
MPS-08-0	8.0	5.35			
MPS-10-0	10.0	5.35		1.6 ± 0.15	1000 pcs.
MPS-12-0	12.0	5.35			
MPS-14-0	14.0	5.35			
MPS-14.8-0	14.8	5.35			
MPS-16-0	16.0	5.35		1.6 ± 0.15	500 pcs.
MPS-18-0	18.0	5.35			
MPS-20	20.0	5.1	$\phi 3.5^{+0.1}_{-0}$	$1.6^{+0.1}_{-0}$	1000 pcs.

Part No.	(A)	B	Mounting hole size	Panel thickness	Std. Package
MPS-03L-V0	3.0	3.9	$\phi 4.0^{+0.2}_{-0}$	$0.8 \sim 1.6$	1000 pcs.
MPS-04L-V0	4.0	3.9			1000 pcs.
MPS-05L-V0	5.0	3.9			1000 pcs.
MPS-06L-V0	6.0	3.9			1000 pcs.
MPS-07L-V0	7.0	3.9			1000 pcs.
MPS-08L-V0	8.0	3.8			1000 pcs.
MPS-09L-V0	9.0	3.9			500 pcs.
MPS-10L-V0	10.0	3.9			1000 pcs.
MPS-11L-V0	11.0	3.9			1000 pcs.
MPS-12L-V0	12.0	3.9			1000 pcs.

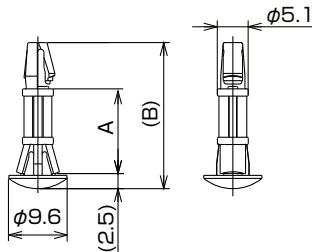
(Unit : mm)



KGLS-RTBM V0



KGLS-14RTBM



Dome-head, snap-mount spacer for thin panel or thin back plate

Features

- Applicable thickness of sheet metal is at 0.4 to 1.2mm.
- Applicable thickness of PC board is for 1.6mm and 1.2mm.
- Dust resistant performance is performed by bowl shaped snap mounted from chassis bottom.

Material

- Nylon 6 (Color : Natural)
- Nylon 66 (Color : Natural)

UL94 V-0 : KGLS-8, 10, 12RTBM V0

UL94 V-0 : KGLS-3.5, KGLS-5, 6RTBM V0

UL94 V-2 : KGLS-14RTBM

Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
KGLS-3.5 RTBM V0	3.5	11.9	Top $\phi 4^{+0.2}_{-0}$ Bottom $\phi 5.5^{+0.2}_{-0}$	Top 1.2~1.6 Bottom 0.4~1.2	100 pcs.
KGLS-5RTBM V0	5	13.4			
KGLS-6RTBM V0	6	14.4			
KGLS-8RTBM V0	8	16.4			
KGLS-10RTBM V0	10	18.4			
KGLS-12RTBM V0	12	20.4			
KGLS-16RTBM V0	16	24.4			

(Unit : mm)

Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
KGLS-14RTBM	14	24.15	Top $\phi 4^{+0.2}_{-0}$ Bottom $\phi 5.5^{+0.2}_{-0}$	Top 1.2~1.6 Bottom 0.4~1.2	100pcs.

(Unit : mm)

LOCKING CARD SPACER™ / KGLS™-RT



Dome-head, snap-mount spacer

Features

- Dome head snap mounted from underside of chassis, seals the hole from dust intrusion.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0*)

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting

(Dome head with low protrusion)



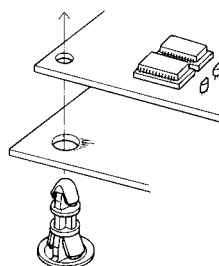
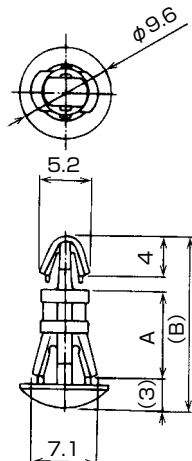
Round hole



Can be used with KGPS-RF series

Supports heavily loaded PC boards at the middle of PCB

P10



Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
KGLS-5RT	5	13.8	Top $\phi 4^{+0.2}_{-0}$ Bottom $\phi 5.5^{+0.2}_{-0}$	Top 1.6±0.15	100 pcs.
KGLS-6RT	6	14.8			
KGLS-7RT V0	7	15.8			
KGLS-8RT	8	16.8		Bottom 1~1.75	100 pcs.
KGLS-10RT	10	18.8			
KGLS-12RT	12	20.8			
KGLS-14RT	14	22.8			
KGLS-16RT	16	24.8			
KGLS-18RT	18	26.8			
KGLS-20RT V0	20	28.7			
KGLS-22RT	22	30.7			500 pcs.
KGLS-24RT	24	32.8			

(Unit : mm)

LOCKING CARD SPACER / SCT



Dome-head, snap-mount spacer

Features

- Holding and spacing for PC boards and chassis



Snap Mounting

Material

- Nylon 66 (Color: Natural)

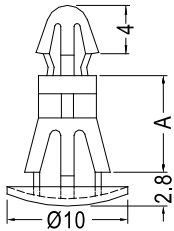
UL94 V-2 (V-0*)



Round hole

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

P.C.B Ø4.0
THICKNESS 1.2~1.7



CHASSIS Ø5.5
THICKNESS 1.2~1.8

Part No.	"A"±0.4mm	Std.Package
SCT-5	5.0	1000 pcs.
SCT-6	6.0	
SCT-7	7.0	
SCT-8	8.0	
SCT-10	10.0	
SCT-12	12.0	
SCT-14	14.0	
SCT-18	18.0	

(Unit: mm)

LOCKING CARD SPACER / SDC



Dome-head, snap-mount spacer

Features

- Holding and spacing for PC boards and chassis



Snap Mounting

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

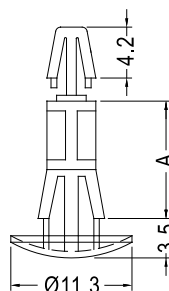


Round hole

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

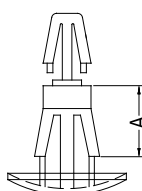
Fig. 2

P.C.B Ø4.0
THICKNESS 1.2~1.7



CHASSIS Ø5.5
THICKNESS 1.5~2.2

Fig. 1



Part No.	"A"±0.4mm	Std.Package
SDC-3	3.5	1000 pcs.
SDC-5	5.0	
SDC-6	6.35	
SDC-8	8.0	
SDC-10	10.0	
SDC-12	12.7	
SDC-15	15.9	
SDC-19	19.0	1000 pcs.
SDC-25	25.4	
SDC-35	35.5	

(Unit: mm)



Dome-head, snap-mount spacer

Features

- Holding and spacing for PC boards and chassis

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)



Snap Mounting



Round hole

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

(Unit: mm)

Fig. 1

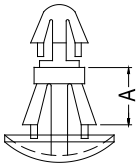
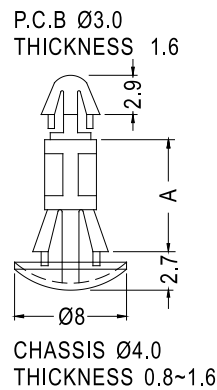


Fig. 2



Part No.	"A"±0.4mm	Std.Package
SDB-2.5	2.5	2000 pcs.
SDB-3	3.2	
SDB-4	4.0	
SDB-5	5.0	
SDB-6	6.0	1000 pcs.
SDB-7	7.0	
SDB-8	8.0	
SDB-9	9.0	
SDB-10	10.0	
SDB-12	12.0	
SDB-14	14.0	
SDB-16	16.0	

LOCKING CARD SPACER / SDX



Dome-head, snap-mount spacer

Features

- Holding and spacing for PC boards and chassis

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)



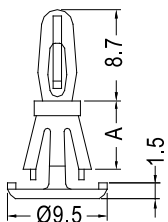
Snap Mounting



Round hole

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

P.C.B Ø3.2
THICKNESS 1.2~1.7



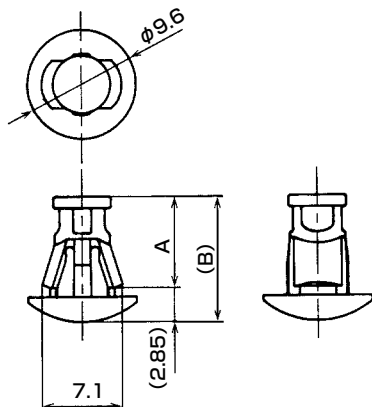
P.C.B Ø4.8
THICKNESS 1.2~1.6

Part No.	"A"±0.4mm	Std.Package
SDX-6.5	6.5	1000 pcs.
SDX-7.9	7.9	
SDX-9.7	9.7	
SDX-11.1	11.1	
SDX-12.7	12.7	
SDX-14.3	14.3	
SDX-15.9	15.9	

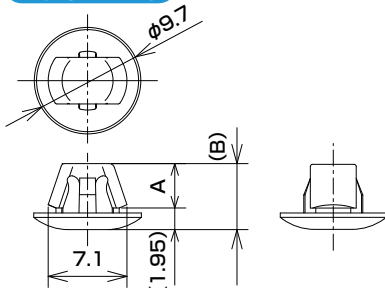
(Unit: mm)



KGPS-RF



KGPS-4RF-V0



Dome-head, snap-mount spacer support

Features

- Provides spacing and support at the centre of PCB.
- Dome head snap protects against dust intrusion. Mounted from underside of chassis.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0*)

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting

(Dome head with low protrusion)



Round hole

KGLS-RT



Can be used with KGLS-RT series

Securing and
spacing for PCB

Refer to the page 7

Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
KGPS-5RF	5	7.9	$\phi 5.5^{+0.2}$	1~1.7	500 pcs.
KGPS-6RF	6	8.9			
KGPS-8RF	8	10.9			
KGPS-10RF	10	12.9			
KGPS-12RF	12	14.9			
KGPS-14RF	14	16.9			
KGPS-16RF	16	18.9			
KGPS-18RF	18	20.9			

(Unit : mm)

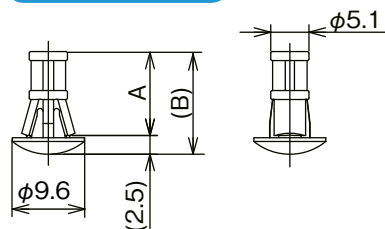
Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
KGPS-4RF-V0	4	5.95	$\phi 5.5 \pm 0.1$	0.6~1.2	1,000 pcs.

(Unit : mm)

CARD SPACER™ / KGPS-RTBM



KGPS-RTBM



Dome-head, snap-mount spacer support for thin panel

Features

- Provides spacing and support at the center of PCB.
- Applicable thickness of sheet metal is at 0.4 to 1.2mm.
- Dust resistant performance is performed by bowl shaped snap mounted from chassis bottom.

Material

- Nylon 6 (Color : Natural)
- Nylon 66 (Color : Natural)

UL94 V-0 : KGPS-8, 10, 12RTBM V0

UL94 V-0 : KGPS-5, 6RTBM V0

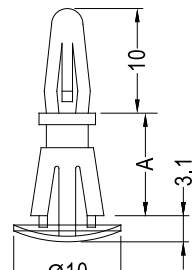
UL94 V-2 : KGPS-14RTBM

Part No.	A	(B)	Mounting hole size	Panel thickness	Std. Package
KGPS-5RTBM V0	5	7.5	$\phi 5.5^{+0.2}$	0.4~1.2	100 pcs.
KGPS-6RTBM V0	6	8.5			
KGPS-8RTBM V0	8	10.5			
KGPS-10RTBM V0	10	12.5			
KGPS-12RTBM V0	12	14.5			
KGPS-14RTBM	14	16.5			

(Unit : mm)



P.C.B Ø4.0
THICKNESS 1.6



CHASSIS Ø5.5
THICKNESS 1.0~1.7

Dome-head, snap-mount spacer

Features

- Holding and spacing for PC boards and chassis

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting



Round hole

Part No.	"A"±0.4mm	Std.Package
QDCT-6	6.3	1000 pcs.
QDCT-8	7.9	
QDCT-10	10.0	
QDCT-12A	12.0	
QDCT-12	12.7	

(Unit: mm)

LOCKING CARD SPACER / SDN



Dome-head, snap-mount spacer

Features

- Holding and spacing for PC boards and chassis

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting



Round hole

Fig. 1

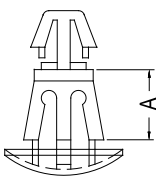


Fig. 2

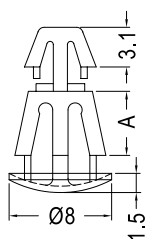
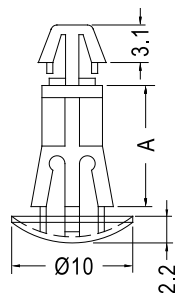


Fig. 3

P.C.B Ø4.0
THICKNESS 1.2~1.7

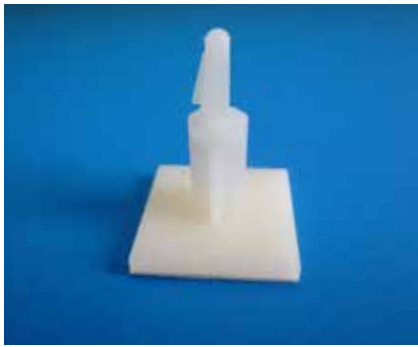


CHASSIS Ø5.5
THICKNESS 0.8~1.6

Part No.	"A"±0.4mm	Std.Package
SDN-3	3.5	Fig.1
SDN-5	5.0	
SDN-6	6.35	
SDN-5SP	5.0	
SDN-7	7.0	
SDN-8	8.0	Fig.2
SDN-8.5	8.5	
SDN-10	10.0	
SDN-12A	12.0	
SDN-12	12.7	
SDN-13.5	13.5	Fig.3
SDN-14	14.0	
SDN-15	15.2	
SDN-16	15.9	
SDN-18	18.0	
SDN-19	19.0	
SDN-20	20.0	
SDN-22	21.7	
SDN-24	24.0	
SDN-25	25.4	
SDN-30	30.0	

1000 pcs.

(Unit: mm)



Locking Card Spacer with adhesive tape mount

Features

- Holding and spacing for PC boards and chassis

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)



Top: Snap Mounting

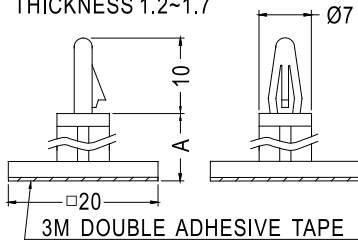


Round hole



Bottom: Adhesive tape mounting

P.C.B Ø4.0
THICKNESS 1.2~1.7



* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

Part No.	"A"±0.4mm	Std.Package
BTT-5	5.4	500 pcs.
BTT-6	6.3	
BTT-8	8.0	
BTT-10	9.8	
BTT-12	12.8	
BTT-15	16.2	

(Unit: mm)

LOCKING CARD SPACER / KGLS-M



PCB spacer with adhesive tape mount with no drilling required

Features

- Spacing and securing for PCB and chassis.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



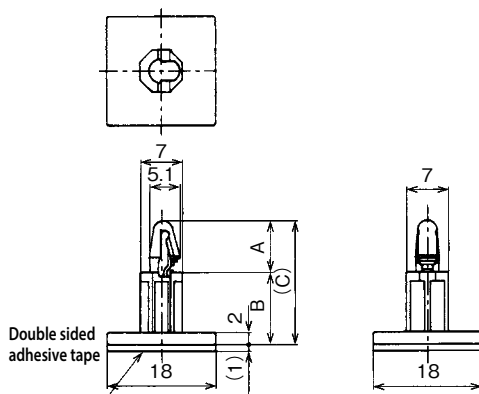
Top : Snap Mounting



Round hole



Bottom : Adhesive tape mounting



Part No.	A	B	(C)	Mounting hole size	Panel thickness	Std. Package
KGLS-4M-R	8.5	5.6	14.1	Top $\phi 4^{+0.1}_0$	Top 1.6~2.0	100 pcs.
KGLS-6M-R	8.5	8.7	17.2			1,000 pcs.
KGLS-8M-R	8.5	11.9	20.4			100 pcs.

(Unit : mm)



Snap-mount spacer for wooden chassis and PCB panel

Features

- Spacing and securing for PCB and chassis.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

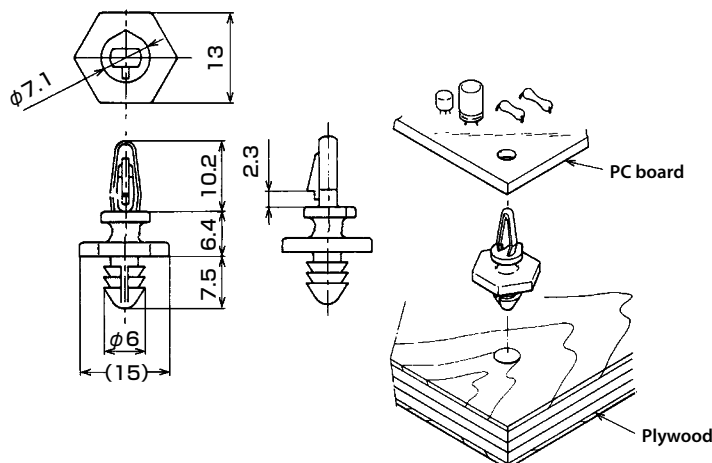


Top : Snap Mounting

Bottom : Snap mounting for wood panels



Round hole



Part No.	Mounting hole size	Panel thickness	Std. Package
KGLS-04T	Top $\phi 4^{+0.2}$ Bottom $\phi 5.5 \sim 5.8^{**}$	Top Max.2.0 Bottom — [*]	100 pcs.

(Unit : mm)

^{*}Varies according to the material, please confirm suitable hole dimensions and panel thickness using the actual material.

CARD EDGE SPACER / KGES



Releasable PCB spacer for easy mount and dismount

Features

- Board is mounted and dismounted easily using the special lever.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0^{*})

^{*} For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting

Top



Round hole

Bottom

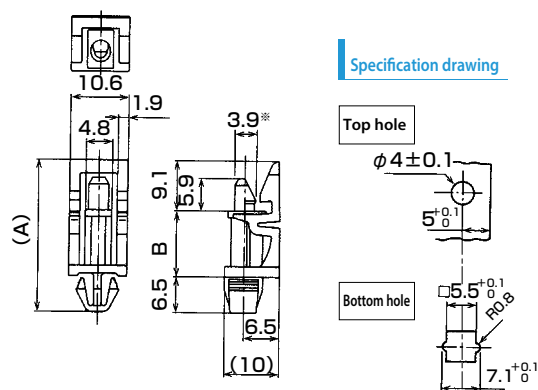


Odd-shaped hole



Can be used with PHD series
Holding and opening of PCB for
access to backside with no hinge
used.

▶ P15



^{*}3.8mm for KGES 4-8.

Specification drawing

Part No.	(A)	B	Mounting hole size	Panel thickness	Std. Package
[*] KGES-4	19.6	4	Refer to Specification drawing	Top 1.6 ± 0.1	1,000 pcs.
KGES-6	21.6	6			100 pcs.
KGES-8	23.6	8		Bottom $1 \sim 1.8$	1,000 pcs.
KGES-10	25.6	10			
KGES-12	27.6	12			
KGES-14	29.6	14			
KGES-18	33.6	18			
KGES-25	40.6	25			
KGES-30	45.6	30			

^{*}KGES-4 has a slightly different configuration from the left drawing.

(Unit : mm)



Releasable PCB spacer that does not drilling for easy access

Features

- PC board spacer that stabilise edge of PC board by simply pressing it onto this product.
- Easy removable of board by lever action.
- Suitable to mount thin PC board. (Thickness of mounted PC board : $1.2 \pm 0.17\text{mm}$)
- Suitable to prevent bending of PCB and secure spacing.

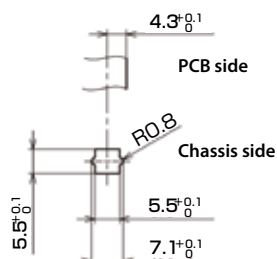
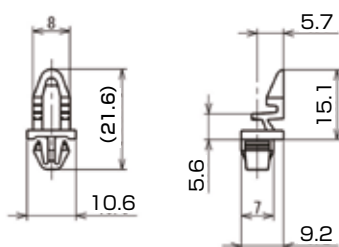
※ We recommend you to utilize this product as a supplementary usage together with screw or other fixing means.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

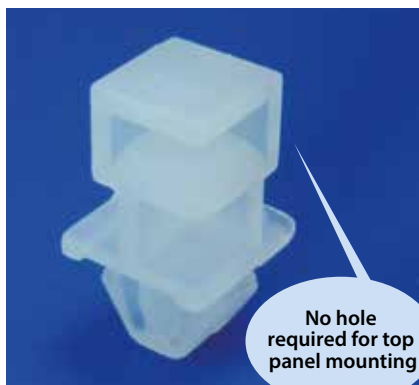
Specification drawing



Part No.	Chassis thickness		Mounting hole size	
	PC board	Chassis	PC board	Chassis
CESP-55	1.2 ± 0.17	0.8~1.8	—	Custom (See above)

(Unit : mm)

CORNER POST / KGCP



No hole required for top panel mounting

Releasable PCB spacer that does not require drilling

Features

- Requires no mounting hole and occupies only 6mm square.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



Snap Mounting

Bottom



Odd-shaped hole

Top : No mounting hole needed

(Space of 6mm square is required at each panel corner)

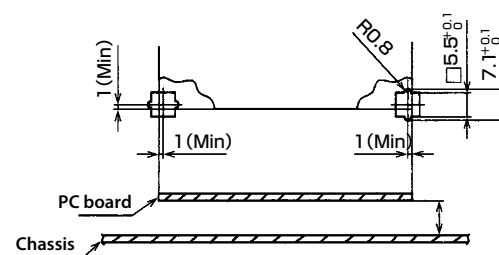
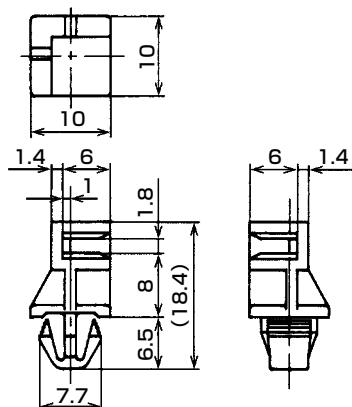


Can be used with KGES-8 series

For installation and removal of PCB

Refer to the left page

Specification drawing



Part No.	Mounting hole size	Panel thickness	Std. Package
KGCP-08-0	Refer to Specification drawing	Top 1.6 ± 0.15 Bottom 1~1.8	1,000 pcs.

(Unit : mm)



Spacer that allows easy opening/ closing/ removal of PCB

Features

- PCB can be mounted and opened for access to the backside for maintenance.
- Non-hinge mechanism protects the product from damage by PCB open/close movement.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0[※])

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting

Top



Round hole

Bottom



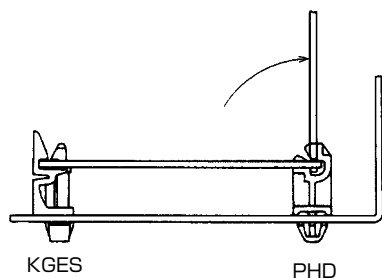
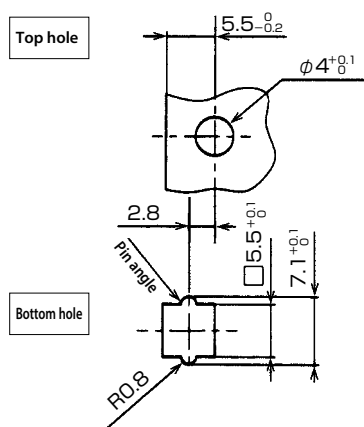
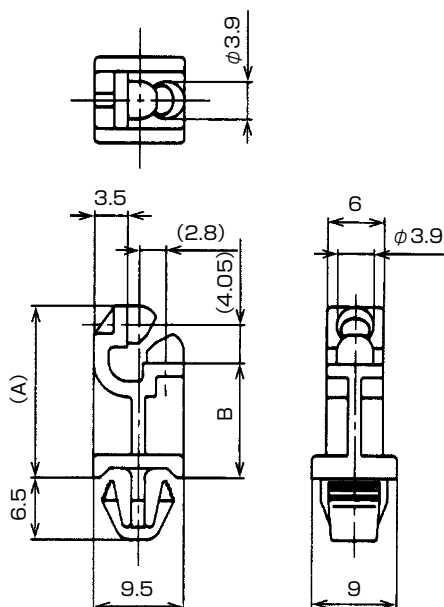
Odd-shaped hole



Can be used with KGES series
For installation
and removal of
PCB

P13

Specification drawing



Part No.	(A)	B	Mounting hole size	Panel thickness	Std. Package
PHD-04	10	4	Top $\phi 4^{+0.1}$ Bottom Refer to Specification drawing	Top 1.6 ± 0.1 Bottom 1~1.8	1000 pcs.
PHD-06	12	6			
PHD-08	14	8			
PHD-10	16	10			
PHD-12	18	12			1000 pcs/ MOQ: 10,000 pcs.
PHD-14	20	14			
PHD-18	24	18			
PHD-25	31	25			
PHD-30	36	30			1000 pcs.

(Unit : mm)



Releasable spacer for easy access and maintenance of PCB and panel

Features

- Easily mount and dismount PCB by pushing down the lever.
- Removal by one hand with no tools required.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0※)

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



ReusableSnap Mounting

Top



Round hole

Bottom

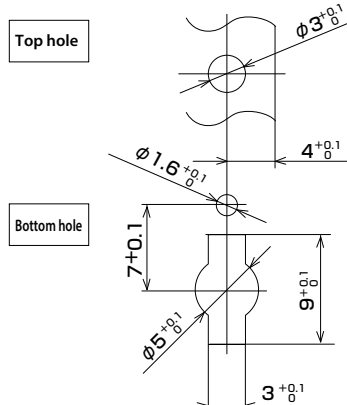
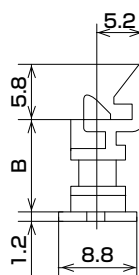
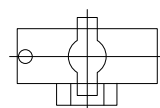
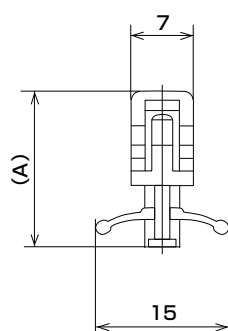


Odd-shaped hole

Can be used with RPH series
Holding and opening of
PCB for backside access.

P17

Specification drawing



Part No.	(A)	B	Mounting hole size	Panel thickness	Std. Package
RES-6	13	6	Refer to Specification drawing	Top 1.6±0.1 Bottom 0.8~1.6	100 pcs.
RES-8	15	8			
RES-10	17	10			
RES-12	19	12			
RES-14	21	14			

(Unit : mm)



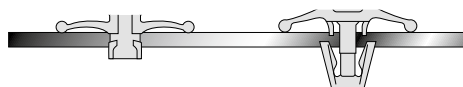
Turn and remove

Reusable Snap (Twist type)

Space saving

Twist type

Conventional type



The snap protrusion is greatly reduced

Compared to conventional snap, the protrusion of snap is greatly lowered for application in limited spaces.

Easy Operation!

For installation and removal, simply turn the body

Can be removed from mounting side with no tool needed, while conventional snap requires cutting by nippers etc from the backside of the panel.





Releasable spacer for easy access and maintenance of PCB and panel (not hinged)

Features

- PCB can be mounted and opened for access to the backside for maintenance.
- Removed by one hand no tools required.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

[Specification drawing](#)


Twist Type

Top



Round hole

Bottom

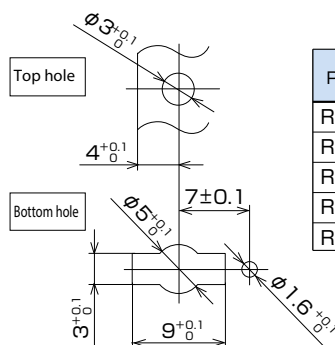
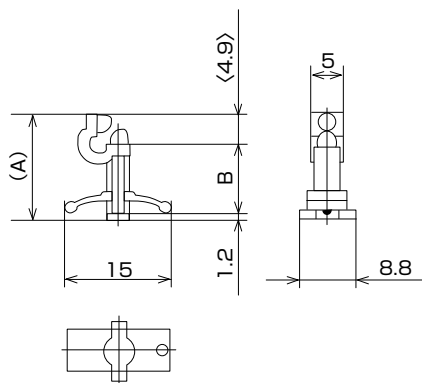


Odd-shaped hole

Can be used with RES series

Mount and dismount of PCB by pushing down the lever.

P16



Part No.	(A)	B	Mounting hole size	Panel thickness	Std. Package
RPH-6	12.1	6	Refer to Specification drawing	Top 1.6±0.1	100 pcs.
RPH-8	14.1	8		Bottom 0.8~1.6	
RPH-10	16.1	10			
RPH-12	18.1	12			
RPH-14	20.1	14			

(Unit : mm)

TAPPING CARD SPACER / KGTS-T, K

Spacer of PCB that allows for screw mount onto the chassis

Features

- Provides simultaneous functions of spacing and supporting for PCB and chassis.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



Top : Snap Mounting



Round hole

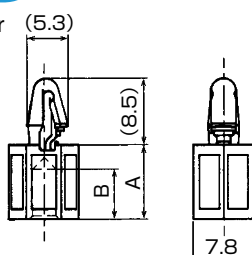


Bottom : Screw Mounting



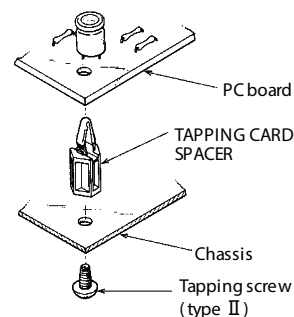
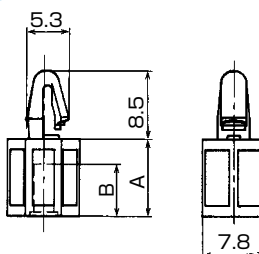
KGTS-T type

(Nominal diameter 3.5mm type)



KGTS-K type

(Nominal diameter 3mm type)



Part No.	A	(Depth of screw hole)	Mounting hole size	Panel thickness	Std. Package
KGTS-4T	6.4	5.2	$\phi 4^{+0.1}_0$	1.6~2.0	100 pcs.
KGTS-5T	7.5	6.4			
KGTS-6T	9.5	6.4			
KGTS-8T	12.7	9.6			
KGTS-10T	15.9	12.8			
KGTS-12T	19.1	16.0			
KGTS-14T	22.2	19.1			
KGTS-18T	28.6	25.5			
KGTS-22T	35.7	32.6			

(Unit : mm)

Part No.	A	(Depth of screw hole)	Mounting hole size	Panel thickness	Std. Package
KGTS-4K	6.4	5.2	$\phi 4^{+0.2}_0$	1.6~2.0	100 pcs.
KGTS-5K	7.5	6.4			
KGTS-6K	9.5	6.4			
KGTS-8K	12.7	9.6			
KGTS-10K	15.9	12.8			
KGTS-12K	19.1	16.0			
KGTS-14K	22.2	19.1			
KGTS-18K	28.6	19.1			
KGTS-22K	35.7	19.1			

(Unit : mm)



Height adjustable collar bushing for PCB protection

Features

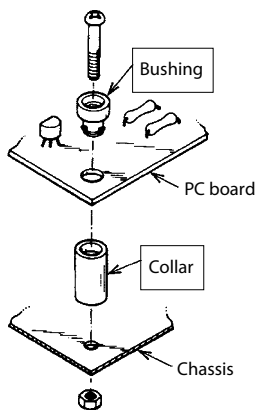
- Combination of a bushing and a collar provides various spacing height.



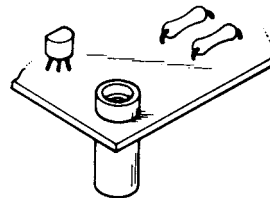
Screw Mounting

Material

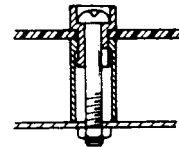
- ABS (Color : Natural) **UL94 HB**
- Poly-carbonate ※ (Color : Black) **UL94 V-O**



〈When temporary mounted on PCB〉

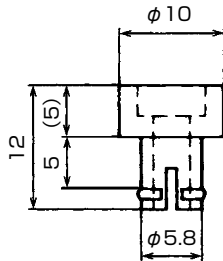


〈When screw is tightened〉



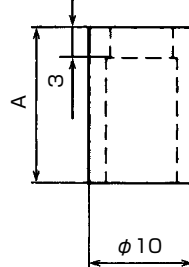
Bushing for 3mm screw

NB-300



Collar for 3mm screw

NA-3 ※※

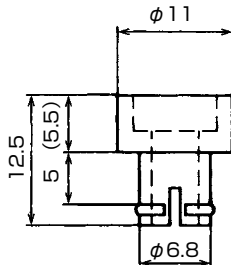


Collar No	Spacing height A	Mounting hole size	Std. Package
NA-305	5.7	φ 6.5	200 pcs.
NA-307	7.5		
NA-310	10.0		
NA-315	15.0		
NA-320	20.0		100 pcs.

(Unit : mm)

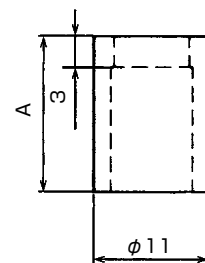
Bushing for 4mm screw

NB-400



Collar for 4mm screw

NA-4 ※※

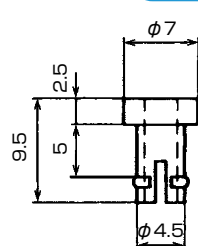


Collar No	Spacing height A	Mounting hole size	Std. Package
NA-405	5.7	φ 7.5	200 pcs.
NA-407	7.5		
NA-410	10.0		
NA-415	15.0		
NA-420	20.0		100 pcs.

(Unit : mm)

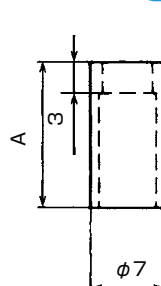
Bushing for 3mm screw

TB-300



Collar for 3mm screw

TA-3 ※※



Collar No	Spacing height A	Mounting hole size	Std. Package
TA-305	5.7	φ 5.2	200 pcs.
TA-306.4	6.4		
TA-307	7.5		
TA-308	8.0		
TA-309	9.0		
TA-310	10.0		
TA-314	14.0		
TA-320	20.0		
TA-329	29.0		

(Unit : mm)

※ Please order in unit of a bushing and collar set.



Screw mount PCB spacer that keeps components and panel in place

Features

- Provides fixation of panel to panel and component to panel, as well as spacing between them.
- Tightening screw provides secure fixation by swelling of the middle part of the nut.
- Plastic nut surrounds the screw for high insulation and corrosion protection.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



Screw Mounting

(Applicable screw:
φ4.5mm Tapping screw Type 1)

Top

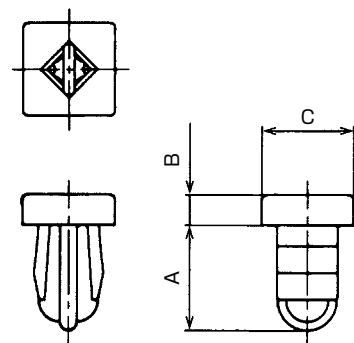


Round hole

Bottom

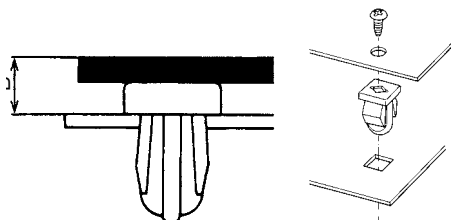


Square hole



Part No.	A	B	□C	Mounting hole size	Panel thickness	Screw diameter	Screw length (Nominal length)	Std. Package
ES-1K	11.0	0.8	9.7	□6.7 ^{+0.3} ₀	0.5~2.0	4.5	D+9.5	500 pcs.
ES-2K		1.6						
ES-3K		3.2						
ES-4K		4.8						
ES-5K		6.4						

(Unit : mm)



TOGGLE FIXER / TFR

Screw mount PCB spacer that keeps components and panel in place

Features

- Spacing and fixation for panels and components.
- Locking tabs open to secure by tightening the screw.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



Screw Mounting

(Applicable screw:
φ4mm Tapping screw Type 1)

Top

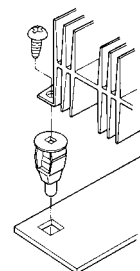
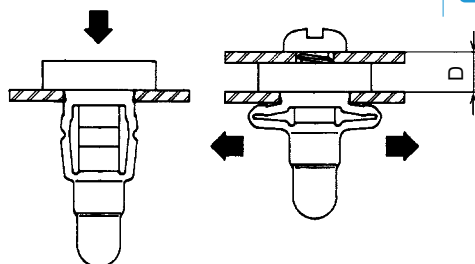
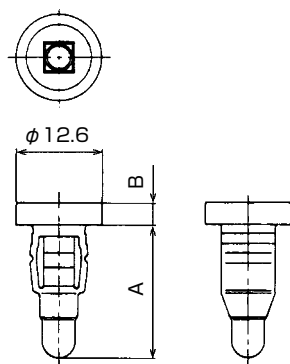


Round hole

Bottom



Square hole



Part No.	Screw diameter	Screw length (Nominal length)	A	B	Mounting hole size	Panel thickness	Std. Package
TFR-1	φ4	D +12.5	19.4	0.8	□7.9 ^{+0.2} ₀	0.5~ 2.8	500 pcs.
TFR-3				3.2			
TFR-4				4.8			

(Unit : mm)

NYLON RIVET / P·NR·NRP·P-SN



Snap-mount rivet series to fix 2 chassis plates together

Features

- Permanent fixation of two chassis by simply pushing down the rivet.

Material

- Nylon 6 (Color: Black, White ※) **UL94 V-2**
- Nylon 46 (Color: Beige) **UL94 V-2**

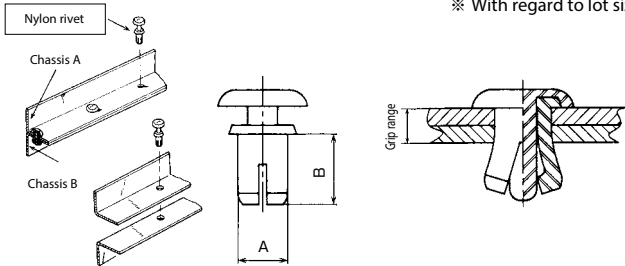


Snap Mounting (by Pushing rivet)



Round hole

※ With regard to lot size and lead time for the white type, please contact us.



Made of Nylon 46

Part No.	Axis diameter A	Length B	Grip range	Mounting hole size	Std. Package
P3045SN	3	4.5	2.0~3.0	φ 3.1	1,000 pcs.
P3055SN		5.5	3.0~4.0		
P4060SN	4	6.0	3.5~4.5	φ 4.1	

(Unit : mm)

Made of Nylon 6

Part No.	Axis diameter A	Length B	Grip range	Mounting hole size	Std. Package
P2024	2.0	2.4	0.6~1.2	φ 2.1	1,000 pcs.
P2032		3.2	1.3~2.0		
P2040		4.0	2.1~2.8		
P2048		4.8	2.9~3.6		
NRP-232	2.6	3.2	1.0~2.0	φ 2.7	
NRP-242		4.2	2.1~3.0		
NRP-335	3.0	3.5	1.0~2.0	φ 3.1	
NRP-345		4.5	2.0~3.0		
NRP-355		5.5	3.0~4.0		
NRP-365		6.5	4.0~5.0		
NRP-380		8.0	5.5~6.5		
NR-354	3.5	5.5	3.2~4.1	φ 3.6	

Part No.	Axis diameter A	Length B	Grip range	Mounting hole size	Std. Package
NRP-450	4.0	5.0	2.5~3.5	φ4.1	1,000 pcs.
NRP-460		6.0	3.5~4.5		
NRP-470		7.0	4.5~5.5		
NRP-480		8.0	5.5~6.5		
NRP-504	5.0	4.5	1.5~2.5	φ5.1	
NRP-505		5.5	2.5~3.5		
NRP-506		6.5	3.5~4.5		
NRP-507		7.5	4.5~5.5		
NRP-508		8.5	5.5~6.5		
NRP-509		9.5	6.5~7.5		
NRP-510		10.5	7.5~8.5		

(Unit : mm)

RIVET / RVT



Resin rivet to provide vibration damping

Features

- Quick insertion in mounting holes in flanges of fans etc with no screw needed.
- Elastomeric material provides effective vibration control.



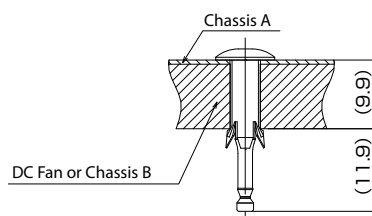
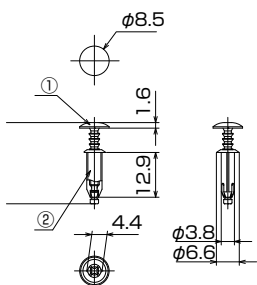
Snap Mounting (by Pushing rivet)



Round hole

Material

- Left photo ① Nylon 66 (Color : Black) **UL94 V-O**
- Left photo ② TPEE (Color : Natural) **UL94 HB**



Part No.	Mounting hole size	Panel thickness	Std. Package
RVT-9943	φ 4.3±0.2	9.9±0.3	100 pcs.



Resin push mount rivet that snaps into a hole with low insertion force

Features

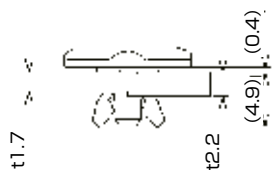
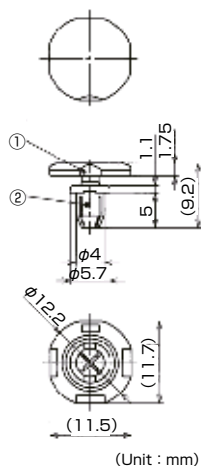
- Insertion forces realized in consideration of assembly.
- Structure easier to remove from mounting side for rework.
- Use Materials having a high reflectance in the visible light region on the top surface.
- Corresponding structure even if you use a reflection sheet on the PCB.

Material

- PC (Color : Natural)
- Nylon 6 (Color : Natural)

UL94 V-0

UL94 V-0



Part No.	Mounting hole size	Panel thickness	Std. Package
NRK-450L WT	$\phi 4.1^{+0.1}_0$	t1.7~2.2mm	500 pcs.

(Unit : mm)

Mounting hole size : $4.1^{+0.1}_0$
Panel thickness : t1.7~2.2mm

Std. Package : 500pcs.

CARD CORNER HOLDER / KGCH

Sub-PCB holder to mount onto chassis or main PCB

Features

- Space-saving holder allows mounting of sub-PCB onto chassis or main-PCB.
- Sub-PCB can be removed due to the locking mechanism.



Snap Mounting



Odd-shaped hole

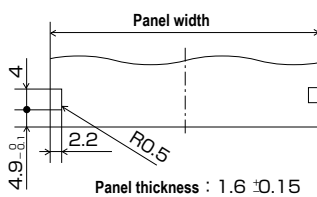
Material

- Nylon 6 (Color : Natural)

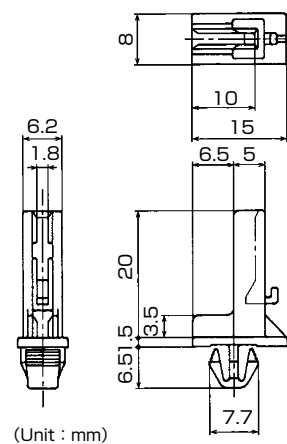
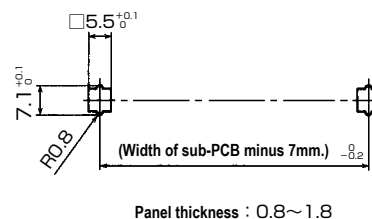
UL94 V-2 (V-0*)

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

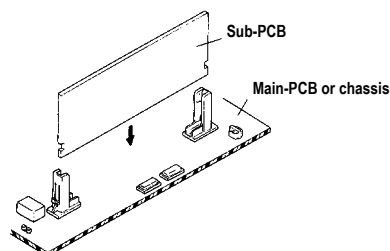
Specification drawing for sub-PCB



Specification drawing

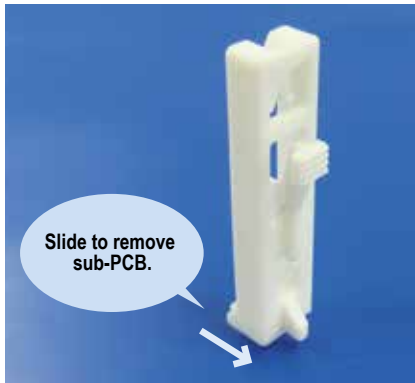


Std. Package : 1000pcs.



Part No.	Mounting hole size	Std. Package
KGCH-20-OT	refer to the specification drawing	1000 pcs.

(Unit : mm)



PCB spacer that enables easy PCB / chassis release

Features

- Space-saving, sub-PCB holder for installation on chassis or main-PCB.
- Sub-PCB can be removed due to the locking mechanism.
- Detachable holder requires no tools for maintenance and disassembling.



Slide Type



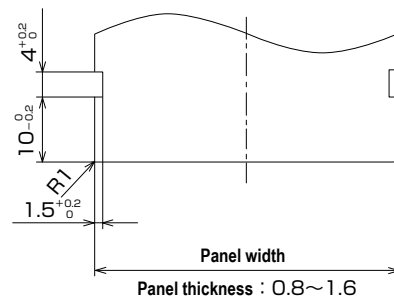
Odd-shaped hole

Material

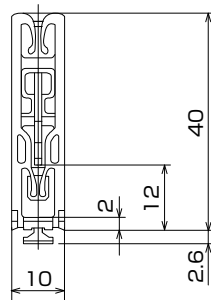
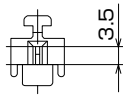
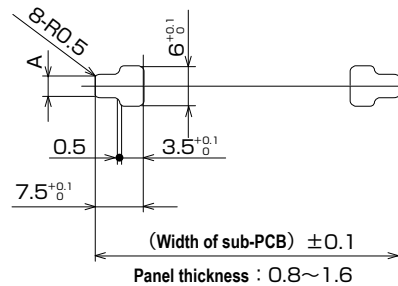
- Nylon 66 (Color : Natural)

UL94 V-0

Specification drawing for sub-PCB

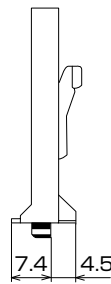


Specification drawing



(Unit : mm)

Std. Package : 250pcs.



Part No.	Panel thickness	A	Std. Package
RCH-40-V0	$0.8^{+0.1}_0$	$2.0^{+0.1}_0$	250 pcs.
	1 ± 0.1	$2.6^{+0.1}_0$	
	1.2 ± 0.1	$3.2^{+0.1}_0$	
	1.4 ± 0.1	$3.8^{+0.1}_0$	
	$1.6^{+0.1}_0$	$4.4^{+0.1}_0$	

(Unit : mm)



PCB guide for limited space

Features

- Low-cost and space saving card guide.
- Reusable type, requires no tools for mount/dis-mounting.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 : UEGR-※※-0

UL94 V-0 : UEGR-08Y, RUEGR-08Y-V0

Specification drawing



Snap Mounting
UEGR-※※-0
UEGR-08Y, RUEGR-08Y-V0



Round hole



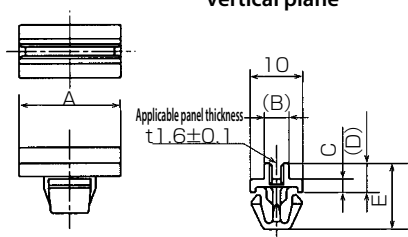
Slide Type
RUEGR-08Y-V0



Odd-shaped hole

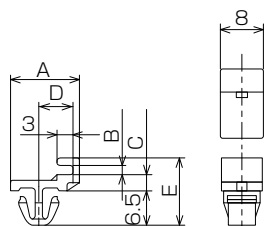
UEGR-※※-0

For mounting on
vertical plane



UEGR-08Y

For mounting on
horizontal plane



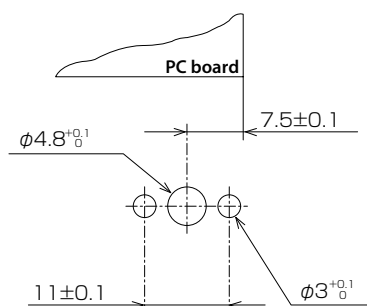
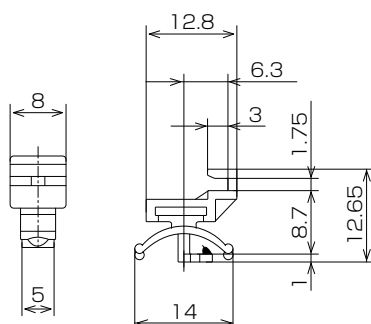
Part No.	A	B	C	D	E	F	G	H	Panel thickness	Std. Package
UEGR-08-0	8	5.5	1.6	4.6	10.1	7.1 ^{+0.1} ₀	5.5 ^{+0.1} ₀	R0.8	1~2	1,000 pcs.
UEGR-19-0	19	4.7	2.5	5.5	12.5	9.8 ^{+0.1} ₀	8 ^{+0.1} ₀	R0.9	0.8~1.2	
UEGR-08Y	12.8	1.6	3.0	6.3	12.5	7.1 ^{+0.1} ₀	5.5 ^{+0.1} ₀	R0.8	1.5±0.1	500 pcs.

(Unit : mm)

RUEGR-08Y-V0



Specification drawing



Part No.	Panel thickness	Std. Package
RUEGR-08Y-V0	0.8~2.0	1,000 pcs.

(Unit : mm)



Slide and remove

Reusable Snap (Slide type)



Easy Operation!

Simply slide the body to install and remove.

Space saving

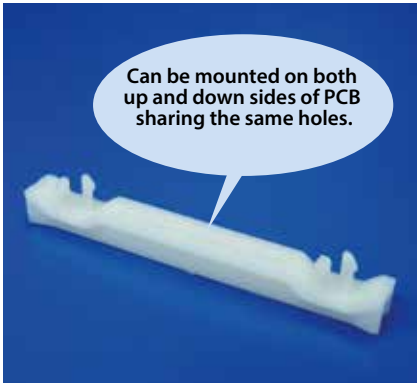
Greatly reduces the snap protrusion on the underside of PCB

Also suitable for application in limited spaces.

Round hole mounting



No odd-shaped hole required
Drilling 3 holes only.



Compact guide rail to 1mm thick PCB

Features

- Space-saving card guide can be installed on both sides of PCB by using the same holes.
- Card guide for 1mm thick PCB, improved stable holding without making clattering of PC board.



Snap Mounting



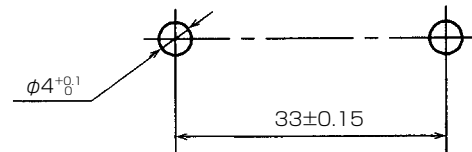
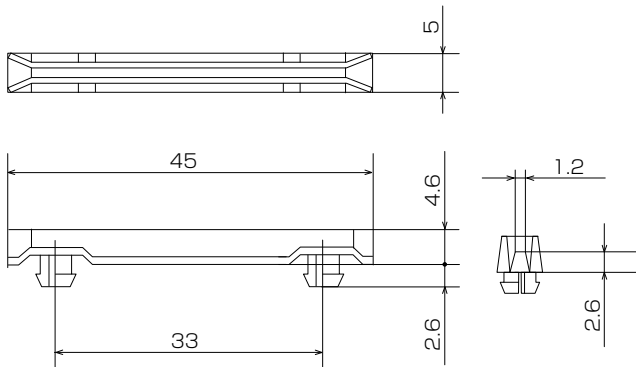
Round hole

Material

- Nylon 66 (Color : Natural)

UL94 V-0

Specification drawing



Part No.	Mounting hole size	Panel thickness	Applicable panel thickness	Std. Package
GR-45A	Refer to Specification drawing	$1^{+0}_{-0.1}$	1 ± 0.2	100 pcs.

(Unit : mm)



Standard PCB guide rail

Features

- Slim PCB guide.

Material

- Poly-carbonate (Color : Black)

UL94 V-2

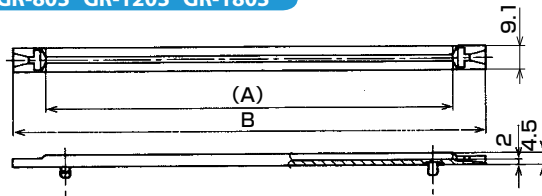


Snap Mounting

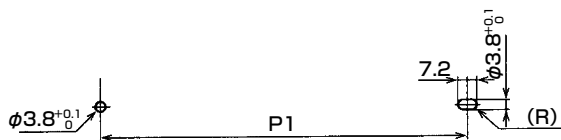


Round hole

GR-80S • GR-120S • GR-180S



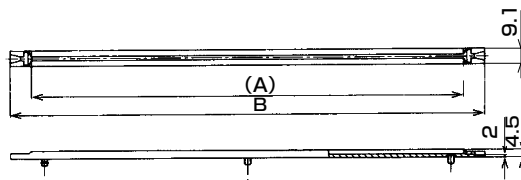
Specification drawing



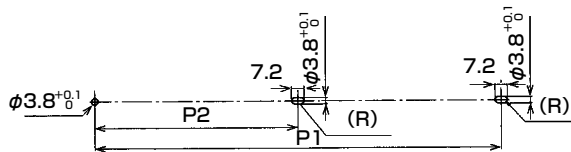
Part No.	(A)	B	Pitch of mounting hole	Panel thickness	Std. Package
			P1		
GR-80S	55	80	40±1	1.6±0.1	100 pcs.
GR-120S	95	120	80±1		
GR-180S	155	180	140±1		

(Unit : mm)

GR-280S

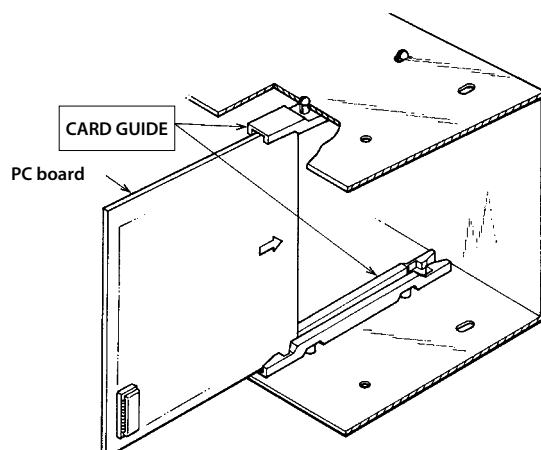


Specification drawing



Part No.	(A)	B	Pitch of mounting hole		Panel thickness	Std. Package
			P1	P2		
GR-280S	255	280	240±1	120±1	1.6±0.1	100 pcs.

(Unit : mm)





PCB guide with end-stopper that prevents sliding

Features

- Stopper prevents PCB from undesired removal.
- Can hold 60 and 110 mm PCB by using NYLON RIVET (P30) in the middle of the guide.
- PCB can be removed with one hand using a special ejector.

Material

- Noryl (Color : Black)

UL94 V-0



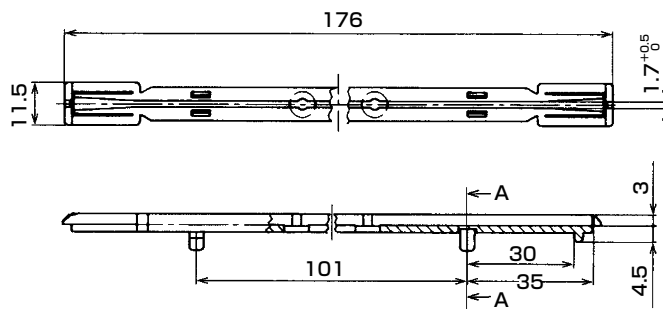
Snap Mounting



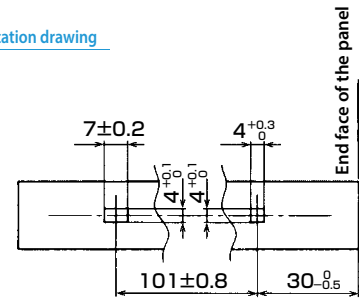
Odd-shaped hole

CBE-15
Special ejector for
the guide

Refer to the bottom column



Specification drawing



Part No.	Mounting hole size	Panel thickness	Std. Package
GR-170SS	Refer to Specification drawing	1.6±0.1	200 pcs.

(Unit : mm)

EJECTOR / CBE-15



PCB card ejector for GR-170SS

Features

- Special ejector for CARD GUIDE WITH STOPPER Easy extraction of PCB.

Material

- Noryl (Color : Black)

UL94 5VA

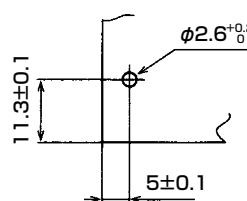
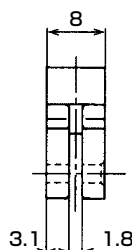
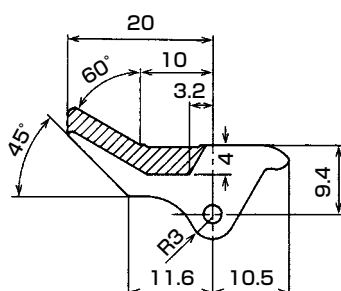
Spring pin mounting
(JIS B2808 2.5×8BW)Round hole
Special guide for
the ejector

Refer to the top column



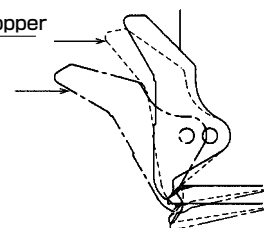
GR-170SS

Specification drawing



Unlock the stopper

② Extract PCB



Applicable panel thickness=t1.6

Part No.	Mounting hole size	Panel thickness	Std. Package
CBE-15	$\phi 2.6^{+0.2}_0$	1.6±0.1	500 pcs.

(Unit : mm)



PCB card ejector for the 1-mm thick PCB that uses no spring pins

Features

- Compact ejector for 1mm thick PCB.
- Quick, snap in installation without using spring pin.

Material

■ PPHOX (Black)

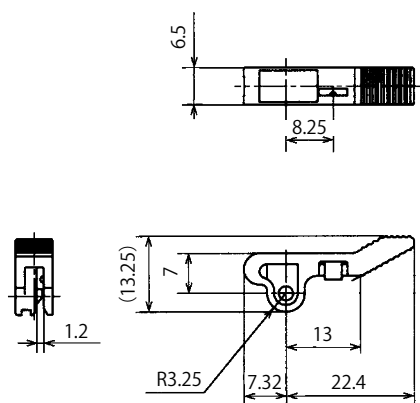
UL94 V-O



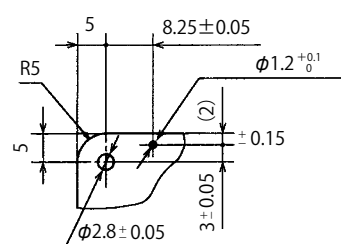
Snap Mounting



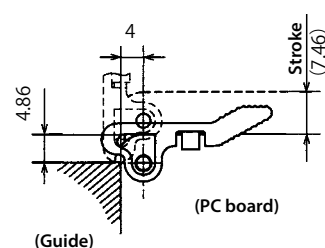
Round hole



Specification drawing



Panel thickness : 1±0.2



(Unit : mm)

Std. Package : 500pcs.

EJECTOR / CBE-18

PCB card ejector for center mount

Features

- CBE-18 provides easy dismounting of PCB for maintenance.
- Quick, snap in installation without using spring pin.

Material

• Nylon 66 (Color : Natural)

UL94 V-2



Snap Mounting

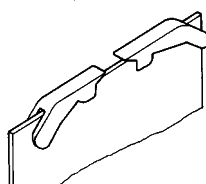
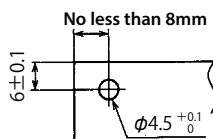


Round hole



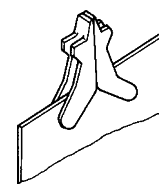
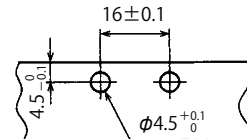
Specification drawing

■ A type

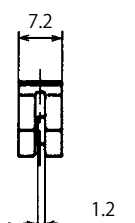
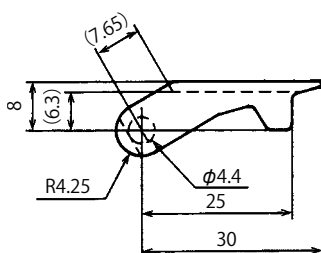


Mounting example of A type

■ B type



Mounting example of B type



Part No.	Mounting hole size	Panel thickness	Std. Package
CBE-18	$\phi 4.5^{+0.1}_0$	1.6±0.1	500 pcs.

(Unit : mm)

- Can be used as a handle for transport, when mounted on the middle edge of PCB.



Standard PCB card ejector



Round hole



Spring pin mounting

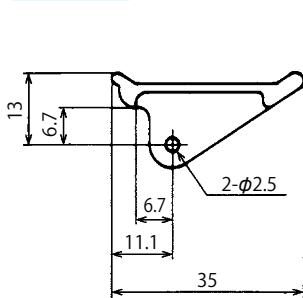
Features

- Provides easy extraction of a connected PCB by using leverage.

Material

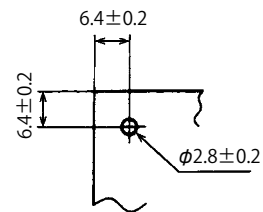
- Nylon 6 (Color : Natural) **UL94 V-2** : CBE-12
- Polyacetal (Color : Natural) **UL94 HB** : CBE-14
- Polyethylene terephthalate (Color : Natural) **UL94 V-0** : CBE-2P

CBE-12



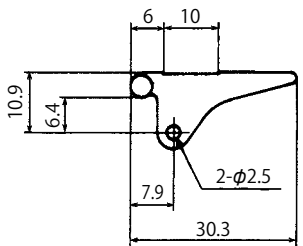
Std. Package :100pcs.

Specification drawing



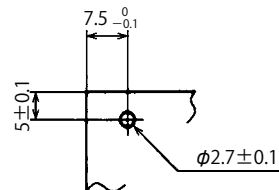
Applicable panel thickness : =1.6

CBE-14



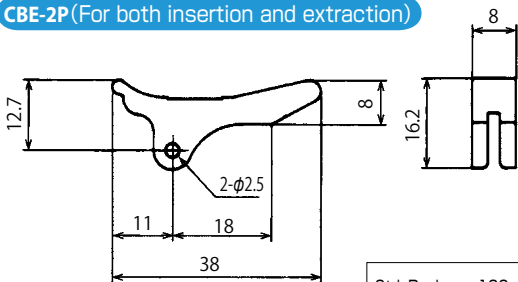
Std. Package :100pcs.

Specification drawing



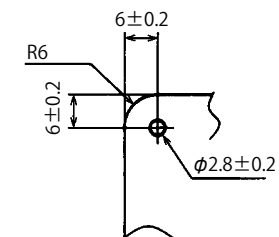
Applicable panel thickness : =1.6

CBE-2P(For both insertion and extraction)



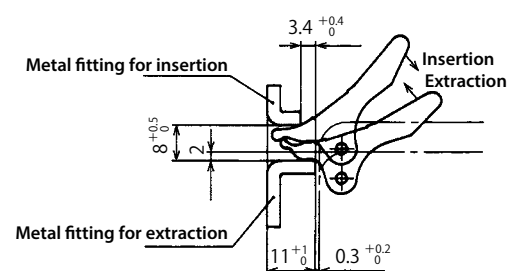
Std. Package :100pcs.

Specification drawing



Applicable panel thickness : =1.6

Specification drawing for metal fitting



(Unit

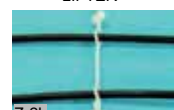
For Cables

and Tubing, Optic fibers, etc.

Binding and fastening

Snap
MountingP31
RE-USE CLAMPP31
RE-USE CLAMPP32
RE-USE CLAMPP33
RE-USE CLAMPP34
RE-USE CLAMPP35
TENSION MINI CLAMPP35
RE-USE CLAMPP36
RE-USE CLAMPP37
LOCKING CLAMPP37
LOCKING MINI CLAMPP38
LOCKING WIRE SADDLEP39
SCREW-LESS CLAMPP39
SCREW-LESS CLAMPP43
MINI CLAMPP43
MINI CLAMPP44
WIRE MOUNTP45
WIRE MOUNTP46
RE-USE WIRE SADDLEP47
SIDE SLOT
MINI CLAMPP47
SPEED CLAMPP50
KS CLAMPP52
WIRE MOUNTP53
WIRE HOLDERP53
WIRE MOUNTP54
WIRE HOLDERP54
WOOD-USE CLAMPP55
CKT CLAMPP56
FREE CLAMPP56
SCREW-LESS CLAMPP57
CKS CLAMPAdhesive Tape
MountingP32
LOCKING WIRE
SADDLEP41
LOCKING WIRE
SADDLEP42
MINI CLAMPP48
CORD KEEPP51
WIRE MOUNTP52
WIRE MOUNTP58
CKN CLAMPP58
CKN CLAMP WITH
CUSHION PADP59
ADJUSTABLE CLAMPP40
OMEGA HOLDERP49
NYLON CLAMPP50
HEAT RESISTANT
CABLE CLAMPP60
FLEXIBLE CLAMPP60
CABLE CLAMPAdhesive Tape
and Screw
MountingP41
LOCKING WIRE SADDLEP42
MINI CLAMPP59
CLINCHERSnap
MountingP61
RE-USE HARNESS
LIFTERP61
HARNESS LIFTERP62
SPACING CLIPP62
HARNESS LOCK
SPACERP63
NIPLOCKERP40
OMEGA HOLDER

Others

P63
WIRE LOCK SPACER

Wiring Clamps

For Cables
















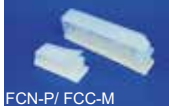




For Flat cables

Removal prevention for
connectors

For Optical fibres

For Flat Cables

and Flexible Printed Circuits, etc.

 Snap Mounting	 P64 FLAT CABLE CLAMP	 P64 FLAT CABLE CLAMP	 P65 MINI FLAT CABLE CLIP	 P65 RE-USE FLAT CABLE CLAMP	 P69 FLAT CLAMP	 P69 THIN TYPE CLAMP	
	 P70 FLAT CABLE CLAMP	 P70 FLAT CABLE CLAMP	 Adhesive Tape Mounting	 P67 FLAT CABLE CLIP	 P67 FLAT CABLE CLIP	 P68 FLAT CABLE CLAMP	 P68 FLAT CABLE CLAMP
	 P71 FLAT CABLE CLAMP	 P71 FLAT CABLE CLAMP		 Adhesive Tape and Screw Mounting	 P66 FCW CLAMP	 Screw Mounting	 P66 FLAT CABLE MOUNTING SYSTEM






Removal prevention for connectors

Prevention against undesired removal of cable from equipment

 Snap Mounting	 P72 USB CONNECTOR COVER	 P73 USB CONNECTOR COVER	 P73 A.C. CORD CLAMP	 P74 RE-USE A.C. CORD CLAMP	 P74 CONNECTOR CLAMP
--	---	---	---	---	---

For Aluminium electrolytic capacitor holder

for horizontal mount

 Flow Soldering	 P75 CAPACITOR HOLDER	 P75 CAPACITOR HOLDER	 Snap Mounting	 P77 CAPACITOR HOLDER
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For Optical Fibers

and General cables as well

Holding and fastening

 Snap Mounting	 P78 FIBER HOLDER	 P79 FIBER HOLDER	 Adhesive Tape Mounting	 P77 SLEEVE HOLDER	 P78 FIBER CLAMP	 P79 DIVERGE MODULE HOLDER
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Holding and maintaining curvature of cables

 Snap Mounting	 P80 WIRE SADDLE WING	 P60 FXC WING	 Snap Mounting	 P80 STORAGE BOBBIN	 Fiber optics guide	 P76 FIBER GUIDE
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Releasable chassis clamp

Features

- Can be removed from mounting side for easy disassembly.
- Round mounting hole allows easy fastening and unfastening of clamp.
- Original structure enables stable securing.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

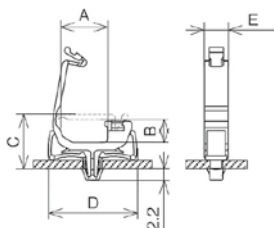


Push Type

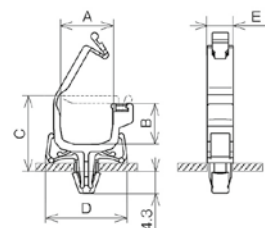


Round hole

type I



type II



Part No.	Type	A	B	C	D	E	Mounting hole size	Panel thickness
UL GRBWS-0306E-V0	I	5.7	2.5	(8.3)	(12.4)	4.5	$\phi 3.5 \pm 0.1$	t0.5~1.6
UL GRBWS-0409E-V0		9.0	4.0	(10.4)	(16.2)	4.5		

UL ...UL1565 recognized product

(Unit : mm)

Part No.	Type	A	B	C	D	E	Mounting hole size	Panel thickness
UL GRBWS-0610E-V0	II	10.0	6.0	(13.9)	(17.4)	5.5	$\phi 4.8 \pm 0.1$	t0.5~2.0
UL GRBWS-0911E-V0		11.0	8.5	(16.4)	(17.0)	5.5		
UL GRBWS-1212E-V0		12.0	12.0	(20.3)	(17.0)	5.5		
UL GRBWS-1416E-V0		16.0	14.0	(22.6)	(21.2)	5.5		
UL GRBWS-2020E-V0		20.0	20.0	(28.7)	(25.2)	5.8		

UL ...UL1565 recognized product

(Unit : mm)

RE-USE CLAMP / RBWS-E-F



Releasable fluoro resin clamp

Features

- The use of Fluoro resin material has excellent heat resistance and cold resistance. And therefore ideal for use in Outdoors, food processing machinery, medical equipment
- The lock, the snap malfunction prevention structure that does not come off easily.

Material

- PVDF (Color : Natural)

UL94 V-0

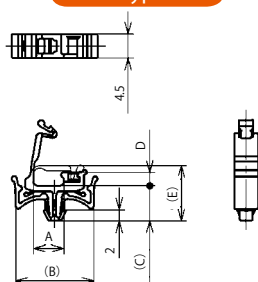


Push Type

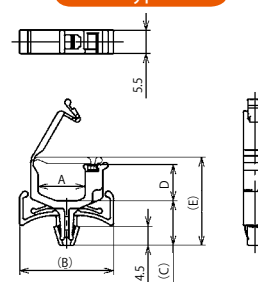


Round hole

A type



B type



Part No.	Type	A	(B)	(C)	D	(E)	Mounting hole size	Panel thickness
RBWS-0306E-F	A	5.7	14.6	6.5	2.5	10.3	$\phi 3.5^{+0.2}_0$	t0.5~1.6
RBWS-0409E-F		9.0	19.2	7.2	4.0	12.5		

Part No.	Type	A	(B)	(C)	D	(E)	Mounting hole size	Panel thickness
RBWS-0610E-F	B	10.0	21.2	10.5	6.0	18.3	$\phi 4.8^{+0.2}_0$	t0.8~2.0
RBWS-0911E-F		11.0	22.2	10.5	8.5	20.8		
RBWS-1212E-F		12.0	20.6	10.8	12.0	24.6		
RBWS-1416E-F		16.0	25.8	11.0	14.0	26.8		
RBWS-2020E-F		20.0	30.0	12.5	20.0	34.3		

(Unit : mm)



Releasable chassis clamp

Features

- Can be removed from mounting side for easy disassembly.
- Round mounting hole allows easy fastening and unfastening of clamp.

Material

- Nylon 66 (Color : Natural)

UL94 V-0



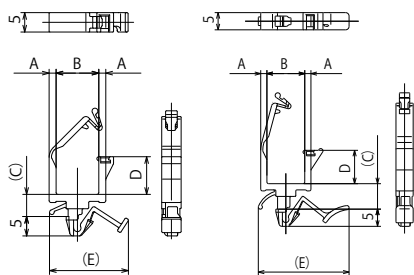
Push Type



Round hole

RBWS-S

RBWS-N



UL
UL
UL
UL

Part No.	A	B	(C)	D	(E)	Mounting hole size	Panel thickness	Std. Package
RBWS-3S VO	1.8	11	5.7	9.7	20.4	$\phi 4.8^{+0.2}_0$	0.5~1.6	1,000 pcs.
RBWS-1N VO	1.5		7.1	(5.2)	26.51		0.5~3.2	
RBWS-3N VO	1.8	16.5	7.4	9.7	26.39			
RBWS-5N VO				(15.5)	29.97			
RBWS-8N VO	2.0			(22.5)	30.17		500 pcs.	

UL ...UL1565 recognized product

(Unit : mm)

LOCKING WIRE SADDLE / RBWS-M



Adhesive locking cable clamp

Features

- Lock fastens and releases cables quickly.
- Round inner corners also suitable for halogen-free cables

Material

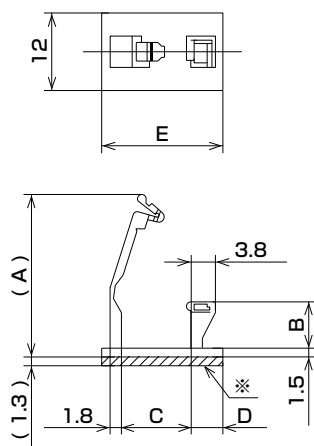
- Nylon 66 (Color : Black)

UL94 V-0



Adhesive tape mounting

※With regard to adhered body which is covered by UL1565, please contact our sales department.



※ Double sided adhesive tape

UL
UL
UL
UL

Part No.	(A)	B	C	D	E	Std. Package
RBWS-05M-VO BK-R	18.3	4.9	7.0	3.7	13.0	100 pcs.
RBWS-1M-VO BK-R	23.1		11.0	5.0	19.0	
RBWS-2M-VO BK-R	25.6	7.4				
RBWS-3M-VO BK-R	28.1	9.9				

UL
UL

Part No.	(A)	B	C	D	E	Std. Package
RBWS-1WM-VO BK-R	27.0	4.9	15.0	4.2	22.0	100 pcs.
RBWS-2WM-VO BK-R	29.5	7.4				

UL ...UL1565 recognized product

(Unit : mm)



Easy fastening lock

Releasable cable clamp with minimum protrusion on panel

Features

- Equipped with a new lock for easy fastening and unfastening.
- Dismounted without any tools required.

Material

- Nylon 66 (Color : Natural[※])

UL94 V-0

※ Color of RBWS-1TD-V0BK is black.



Slide type



Round hole

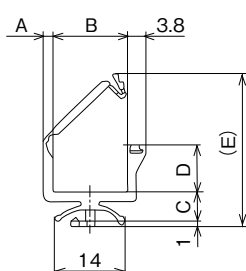
RBWS-D



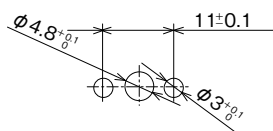
Odd-shaped hole

RBWS-TD

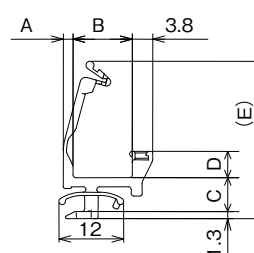
RBWS-D



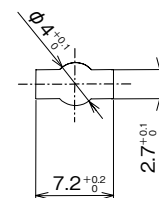
Specification drawing



RBWS-1TD-V0 BK



Specification drawing



	Part No.	A	B	C	D	(E)	Mounting hole size	Panel thickness	Std. Package
UL	RBWS-0406D V0	1.5	6	4.5	3.7	17.13	Refer to Specification drawing	0.5~1.6	500 pcs.
UL	RBWS-0510D V0		10	5.0	4.7	21.61			
UL	RBWS-1015D V0	1.8	15	6.0	9.7	31.35			
UL	RBWS-1515D V0				14.7	36.35			
UL	RBWS-2020D V0	2.0	20		19.7	45.03			
	RBWS-1TD-V0 BK	1.8	11	6.3	4.9	29.21		1.5~2.3	

UL ...UL1565 recognized product

(Unit : mm)



Slide and remove

Reusable Snap (Slide type)

Easy Operation!

Simply slide the body to install and remove.
(Above photo is D type)

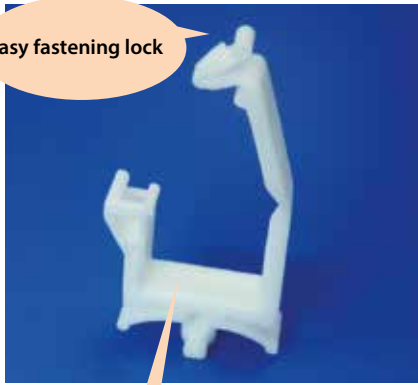
Space saving

Greatly reduces the snap protrusion on the underside of PCB
Also suitable for application in limited spaces.

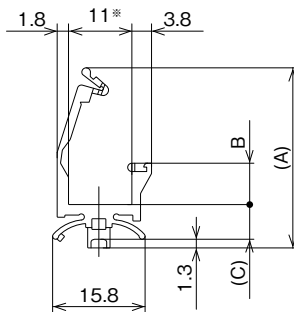
Round hole mounting

No odd-shaped hole required
Drilling 3 holes only.

Easy fastening lock



Round inner corners also suitable for halogen-free cables



※ 13mm for RBWS-1.5TL-VO BK

Releasable cable clamp with minimum protrusion on panel

Features

- Lock fastens and releases cables quickly.
- Detachable with no tools required.

Material

- Nylon 66 (Color : Natural, Black※)

※ Black product has "BK" at the end of the part No.



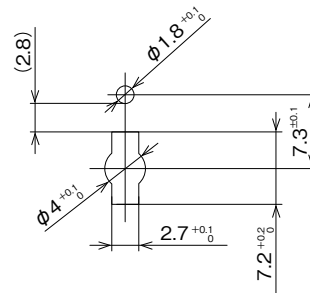
Twist Type



Odd-shaped hole

UL94 V-0

Specification drawing



Part No.	(A)	B	(C)	Mounting hole size	Panel thickness	Std. Package
RBWS-1T-VO	28.2	4.9	5.3	Refer to Specification drawing	0.8~1.6	500 pcs.
RBWS-3T-VO	33.7	9.9	5.8			

Part No.	(A)	B	(C)	Mounting hole size	Panel thickness	Std. Package
RBWS-1TL-VO BK	28.6	4.9	5.7	Refer to Specification drawing	0.8~2.0	500 pcs.
RBWS-1.5TL-VO BK	32.0	6.4	5.7			
RBWS-2TL-VO BK	31.6	7.4	6.2			
RBWS-3TL-VO BK	34.1	9.9	6.2			

(Unit : mm)



Turn and remove

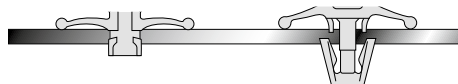
Reusable Snap (Twist type)



Space saving

Twist type

Conventional type



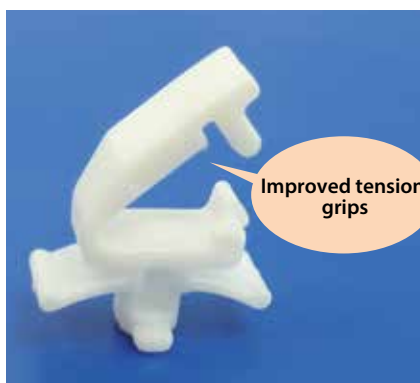
The snap protrusion is greatly reduced

Compared to conventional snap, the protrusion of snap is greatly lowered for application in limited spaces.

Easy Operation!

For installation and removal, simply turn the body

Can be removed from mounting side with no tool needed, while conventional snap requires cutting by nippers etc from the backside of the panel.



Improved tension grips

Releasable mini clamp that grips thin cables

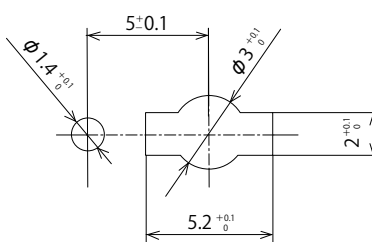
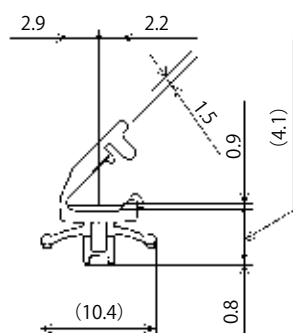
Features

- Tensioning clamp grips even thin cables firmly.
- Removed with no tools required for easy maintenance and disassembling.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

Specification drawing

Part No.	Mounting hole size	Panel thickness	Std. Package
RTMC-01TV0	Refer to Specification drawing	1.2~1.6	1,000 pcs.



UL ...UL1565 recognized product

(Unit : mm)



Twist Type



Odd-shaped hole

Reusable Snap

For twist type, refer to

◀P36

RE-USE LOCK MINI CLAMP / RLMC



Releasable mini clamp with minimum protrusion on panel

Features

- Fast dismount without any tools for easy maintenance and disassembling.

Material

- Nylon 66 (Color : Natural)

UL94 V-0



Twist Type

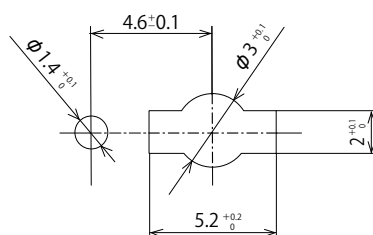
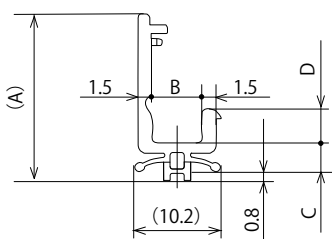


Odd-shaped hole

Reusable Snap

For twist type, refer to

◀P36

Specification drawing

Part No.	(A)	B	C	D	Mounting hole size	Panel thickness	Std. Package
RLMC-01T V0	17.3	5.6	3.8	1.7	Refer to Specification drawing	0.8~1.2	1,000 pcs.
RLMC-05T V0	19.8	6.0	3.7	4.0			



UL ...UL1565 recognized product

(Unit : mm)



Releasable cable clamp that provides a secure lock

Features

- Snap mounting provides easy maintenance and disassembling with no tools required.
- Both twist type and push type are available for easy dismount.

Material

- Nylon 66 (Color : Natural)

UL94 V-0



Twist Type



Odd-shaped hole

RLWS-T, TL



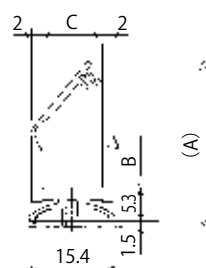
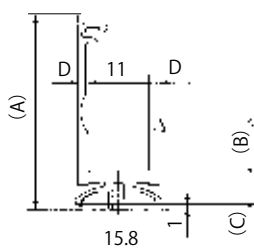
Push Type



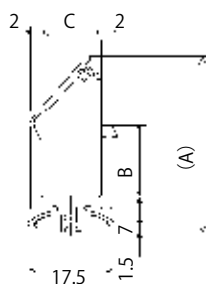
Round hole

RLWS-S

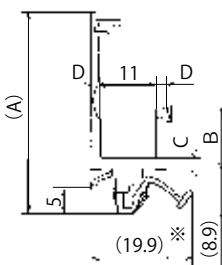
RLWS-T



RLWS-TL

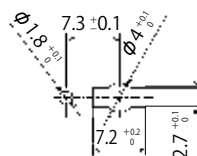


RLWS-S



※ (19.9)mm for RLWS-IS V0

Specification drawing

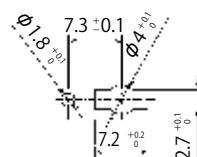


	Part No.	(A)	(B)	(C)	D	Mounting hole size	Panel thickness	Std. Package
UL	RLWS-1T VO	29.1	4.9	5.3	1.5	Refer to Specification drawing	0.8~1.6	1,000 pcs.
UL	RLWS-2T VO	32.8	7.4	5.7	2			500 pcs.
UL	RLWS-3T VO	35.6	9.9	5.8				

UL ...UL1565 recognized product

(Unit : mm)

Specification drawing

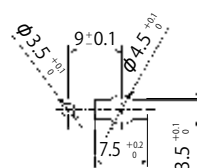


	Part No.	(A)	B	C	Mounting hole size	Panel thickness	Std. Package
UL	RLWS-1015T V0	32.84	10.4	15	Refer to Specification drawing	0.8~1.6	500 pcs.
UL	RLWS-1515T V0	37.84	15.4				
UL	RLWS-2020T V0	46.37	20.4				

UL ...UL1565 recognized product

(Unit : mm)

Specification drawing



	Part No.	(A)	B	C	Mounting hole size	Panel thickness	Std. Package
UL	RLWS-0510TL V0	26.00	5.4	10	Refer to Specification drawing	0.8~3.2	500 pcs.
UL	RLWS-1010TL V0	31.00	10.4				
UL	RLWS-1515TL V0	39.54	15.4				
UL	RLWS-2020TL V0	48.07	20.4				

UL ...UL1565 recognized product

(Unit : mm)

	Part No.	(A)	B	C	D	Mounting hole size	Panel thickness	Std. Package
UL	RLWS-1S V0	32.8	6.4	1.5	1.5	$\phi 4.8^{+0.1}_0$	0.5~1.6	1,000 pcs.
UL	RLWS-3S V0	39.4	11.9	2.0	2.0			

UL ...UL1565 recognized product

(Unit : mm)



Push mount, locking clamp

Features

- Compact, space-saving clamp.
- Clamp is open for cable insertion without causing any damage to cables such as optical fibers.



Snap Mounting



Round hole

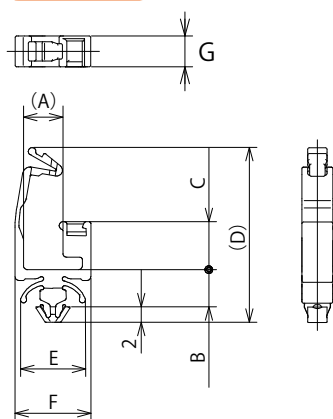
Material

- Nylon 66 (Color : Natural / LBWS-0206S, 0605S, 0511S-V0)
- Nylon 66 (Color : Natural / LBWS-0206S-AM-HT-NC)

UL94 V-0

UL94 V-2

LBWS



Part No.	A	B	C	(D)	E	F	G	Mounting hole size	Panel thickness	Std. Package
LBWS-0206S-V0	6.0	3.9	2.1	18.3	10.5	11.4	4.0	$\phi 3.5^{+0.2}_0$	0.5~1.6	1,000 pcs.
LBWS-0206S-AM-HT-NC	6.0	3.9	2.1	18.3	10.5	11.4	4.0		0.5~1.6	500 pcs.
LBWS-0605S-V0	5.1	4.8	6.2	22.6	8.4	9.8	4.0		0.8~2.0	1,000 pcs.
LBWS-0511S-V0	11.7	3.9	5.0	26.8	12.5	16.4	4.5		0.5~1.6	

UL ...UL1565 recognized product

(Unit : mm)

※Operating temperature range : -40°C ~ 125°C (LBWS-0206S-AM-HT-NC)

LOCKING MINI CLAMP / LAMS-05・LMC-05N



Mini push mount clamp for space saving

Features

- Compact, space-saving clamp.
- Clamp is open for cable insertion without causing any damage to cables such as optical fibers.



Snap Mounting



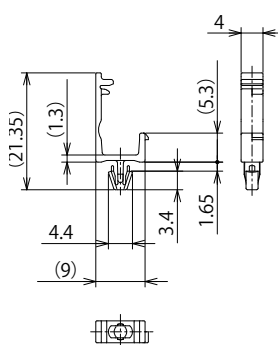
Round hole

Material

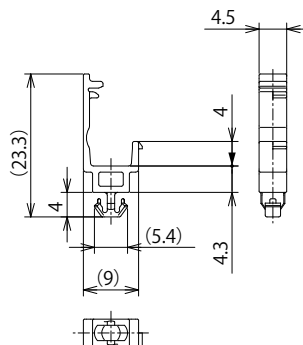
- Nylon 66 (Color : Natural)

UL94 V-0

LAMS-05



LMC-05N



UL

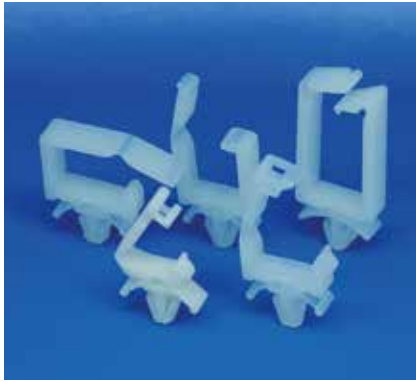
Part No.	Mounting hole size	Panel thickness	Std. Package
LAMS-05	$\phi 3^{+0.1}_0$	1.6 ± 0.1	1,000 / pcs.

UL ...UL1565 recognized product

(Unit : mm)

Part No.	Mounting hole size	Panel thickness	Std. Package
LMC-05N	$\phi 4^{+0.1}_0$	1.6 ± 0.1	100 / pcs.

(Unit : mm)



Locking snap-mount clamp

Features

- Secure lock prevents wire/cable bundles from accidental release.

Material

- Nylon 66 (Color : Natural, Black^{*1})



Snap Mounting



Round hole

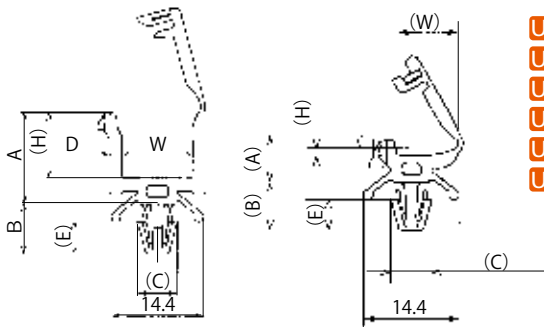
UL94 V-2 (V-0^{*2})

^{*1} Black product has "BK" at the end of the part No. For natural color, please contact us.

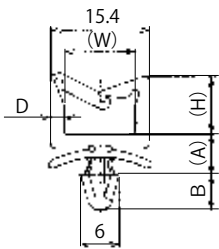
^{*2} For V-0 type, "V0" is added to the end of the part No.(LWS-05 is also V-0 type).

LWS-S,SL

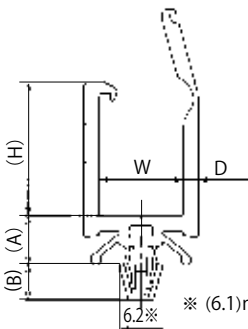
LWS-05



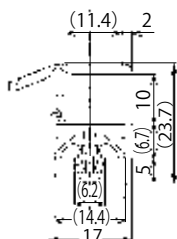
LWS-NS



LWS-S



LWS-Y



Part No.	(H)	(A)	(B)	(C)	D	(E)	(W)	Mounting hole size	Panel thickness	Std. Package
LWS-05	1	7.2	7	6.2	—	4.5	9.2	$\phi 4.8^{+0.1}_0$	0.5~2	200 pcs.
LWS-1S	5.2	9.2	6	—	—	—	11	—	—	100 pcs.
LWS-3S V0	10.2	14.2	7.7	6.1	2.0	4.9	16.5	$\phi 4.8^{+0.2}_0$	0.5~2.3	500 pcs.
LWS-5S-2W V0	15.2	19.2	—	—	—	—	—	—	—	1,000 pcs.
LWS-8S-2.5W V0 BK	22.7	27.2	—	—	2.5	—	18	—	—	500 pcs.

UL...UL1565 recognized product

(Unit : mm)

Part No.	(H)	A	B	(C)	D	(E)	W	Mounting hole size	Panel thickness	Std. Package
LWS-1SL V0 BK	4.2	9.4	8.6	6.2	2.0	5	11	$\phi 4.8^{+0.2}_0$	1.6~3.2	500 pcs.
LWS-1.5SL V0 BK	12.5	16.7	—	—	—	—	—	—	—	—
LWS-5SL-2W V0 BK	15.2	19.4	6	—	—	—	—	—	—	—
LWS-8SL-2.5W V0 BK	22.7	27.4	—	—	2.5	—	18	—	—	—

(Unit : mm)

Part No.	(H)	(A)	B	D	(W)	Mounting hole size	Panel thickness	Std. Package
LWS-1NS	9.2	—	—	—	—	—	0.5~2.3	100 pcs.
LWS-2NS	14.4	6.2	5.5	2.2	11	$\phi 4.8^{+0.2}_0$	0.5~2	—
LWS-3NS	23.4	—	—	—	—	—	0.5~2.3	—
LWS-4NS	31.3	—	—	—	—	—	—	—

UL...UL1565 recognized product

(Unit : mm)

Part No.	(H)	(A)	(B)	D	W	Mounting hole size	Panel thickness	Std. Package
LWS-1.5S	14.5	6.7	5.0	2.0	10.4	$\phi 4.8^{+0.2}_0$	0.5~2.3	500 pcs.
LWS-2.5S	19.2	6.9	4.5	2.2	12	—	—	—

(Unit : mm)

Part No.	Mounting hole size	Panel thickness	Std. Package
LWS-2Y	$\phi 4.8^{+0.2}_0$	0.5~2.3	1,000 pcs.

(Unit : mm)

Wiring Clamps

For Cables

For Flat Cables

Removal prevention for
connectors

For Optical fibers



Plug-in-mount mini clamp that easily inserts into screw holes

Features

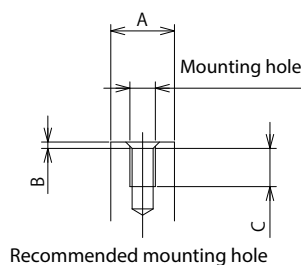
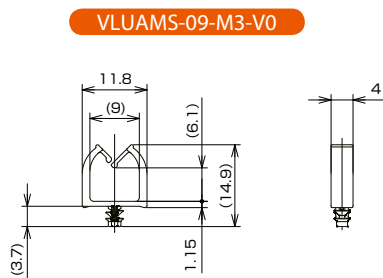
- Plug-in mounting in screw hole is available without tool.
- Compact, space-saving clamp.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

Installation specifications



Part No.	A	B	C	Mounting hole size	Std. Package
VLUAMS-09-M3-V0	$\geq \phi 12$	≤ 1	≥ 5	M3 screw hole (Thread pitch:0.5)	500 pcs.

(Unit : mm)

SCREW-LESS CLAMP / VLBWS

Plug-in-mount, mini locking clamp

Features

- Plug-in mounting in screw hole is available without tool.
- Compact, space-saving clamp.

Material

- Nylon 66 (Color : Natural)

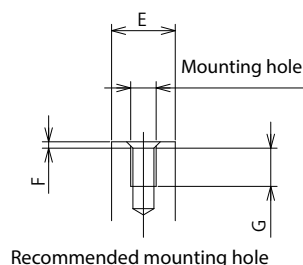
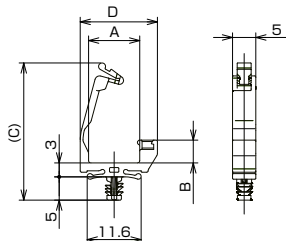
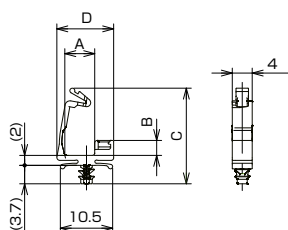
UL94 V-0

Installation specifications



VLBWS-0306-M3-V0

VLBWS-**-M4-V0



Part No.	A	B	(C)	D	E	F	G	Mounting hole size
VLBWS-0306-M3-V0	6	3	19.19	11.4	$\geq \phi 12$	≤ 1	≥ 5	M3 (0.5)
VLBWS-0511-M4-V0	11	4.9	29.49	16.6	$\geq \phi 15$	≤ 1	≥ 6	M4 (0.7)
VLBWS-1313-M4-V0	13	12.7	39.13	18.6				

(Unit : mm)

OMEGA HOLDER / LM



Adhesive-mount clamp with twist locking of cable

Features

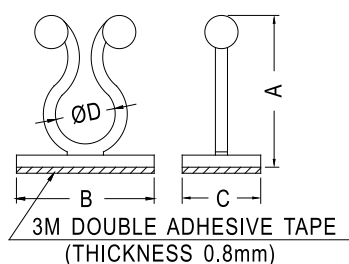
- Can be mounted with adhesive tape
- Cost saving and easy locking/un-locking

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

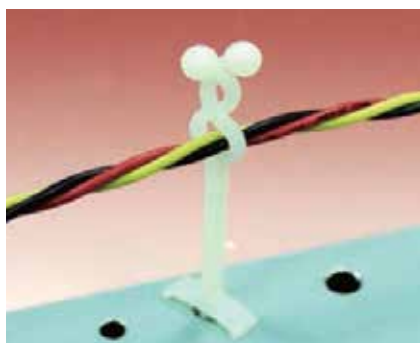
* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Part No.	A	B	C	D	CLOSED (D)	Std. Package
LM-1	31.9	20.0	20.0	15.0	13.8	250
LM-2	26.2	20.0	14.0	9.2	8.5	500
LM-2L	27.9	25.0	13.0	9.4	8.2	
LM-3	28.2	21.0	19.0	11.1	10.0	100
LM-5	56.2	38.0	20.0	36.0	34.0	500
LM-6	27.6	10.0	19.8	6.6	5.8	
LM-7	21.9	20.0	13.0	8.5	7.2	250
LM-16	37.0	25.0	13.0	18.0	17.0	
LM-19	39.0	25.0	13.0	21.0	20.0	
LM-22	41.0	28.0	15.0	24.0	23.0	

(Unit: mm)

OMEGA HOLDER / UIB



Snap-mount clamp with twist locking of cable

Features

- Can be mounted with snap
- Cost saving and easy locking/un-locking

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

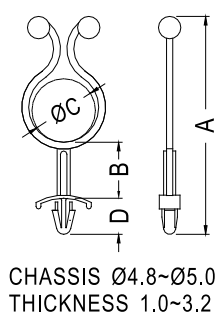


Snap Mounting



Round hole

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Part No.	A	B	C	D	CLOSED (D)	Std. Package
UIB-1	33.8	3.1	7.1	10.6	6.1	1000
UIB-2	51.0	20.0	7.1	10.6	6.1	500
UIB-3	66.0	35.3	7.1	10.6	6.1	
UIB-4	39.6	2.8	10.8	10.6	9.8	1000
UIB-5	56.8	20.0	10.8	10.6	9.8	500
UIB-6	71.5	35.2	10.8	10.6	9.8	
UIB-7	42.0	3.0	15.0	10.6	13.8	1000
UIB-8	59.3	20.4	15.0	10.6	13.8	
UIB-9	74.7	35.8	15.0	10.6	13.8	500
UIB-10	63.5	16.2	20.0	10.6	18.4	
UIB-11	56.8	3.0	24.3	9.8	22.3	
UIB-12	53.1	15.3	11.0	10.6	9.7	
UIB-14	55.3	5.0	20.3	10.6	18.7	
UIB-15	43.8	10.5	8.0	10.6	6.8	
UIB-16	34.7	5.6	8.8	10.0	7.0	

(Unit: mm)



Adhesive-mount locking clamp

Features

- Lock holds cables securely.
- Adhesive tape mounting with no drilling hole required.

Material

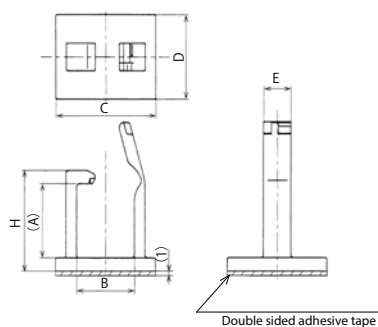
- Nylon 66 (Color : Natural)

UL94 V-2

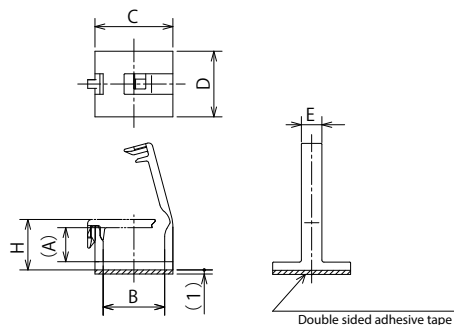


Adhesive tape mounting

LWS-M



LWS-1.5MS-R



Part No.	(A)	B	C	D	E	H	Std. Package
LWS-1M-R	8.0	11.7	19.0	16.0	4.8	12.5	100 pcs.
LWS-1.5MS-R	8.3	15.0	(19.0)		5.0	(12.3)	500 pcs.
LWS-2M-R	14.0	11.0	19.0	19.0	4.8	18.5	100 pcs.
LWS-3M-R	22.3		19.0		5.2	27.0	

(Unit : mm)

LOCKING WIRE SADDLE / LWS-H, -W



Screw mount locking clamp

Features

- Lock secures cables.

Material

- Nylon 66 (Color : Natural)

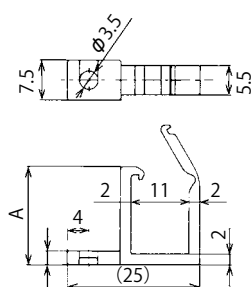
UL94 V-2 (V-0※)



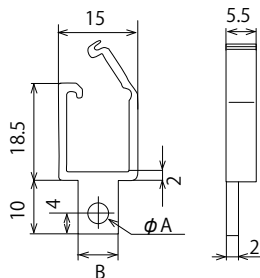
Screw mounting

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

LWS-H



LWS-W

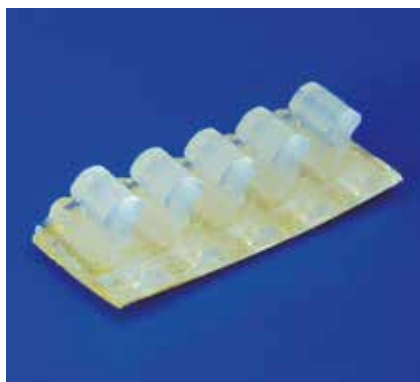


Part No.	A	Std. Package
LWS-2H	18.5	100 / pcs.
LWS-3H	27.5	1,000 / pcs.

(Unit : mm)

Part No.	φA	B	Std. Package
LWS-2W	3.5	8.5	100 / pcs.
LWS-2W-4	4.2		

(Unit : mm)



Mini cable clamp for 1 mm diam. cable

Features

- Low-profile of H 2.9 mm Can be sub-divided to desired number of mounts.
- 6 types are available from MU-01-1 capable of holding 1 cable of $\Phi 1-1.2\text{mm}$ to Mu-01-8 holding max 8 cables.

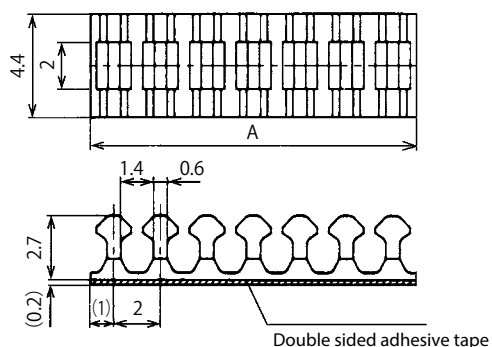
Material

- Nylon 6 (Color : Natural)

UL94 V-2



Adhesive tape mounting



Part No.	A	Std. Package
MU-01-1	4	1,000 pcs.
MU-01-2	6	
MU-01-3	8	
MU-01-4	10	
MU-01-5	12	
MU-01-8	18	

(Unit : mm)

MINI CLAMP / MN • MB • MNC-4



Mini cable clamp in a variety of shapes

Features

- Space-saving mini clamp.
- Employs easy-to-peel adhesive tape type, with two clamps aligned on one tape.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



Adhesive tape mounting

※ With regard to adhered body which is covered by UL1565, please contact our sales department.



Screw mounting

※ Specifications are described in the tables below.

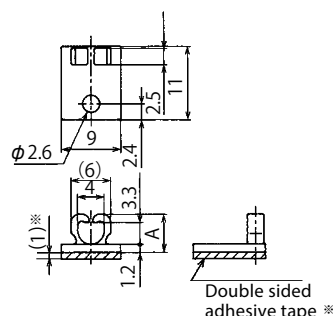
MN-1-R

MB-1

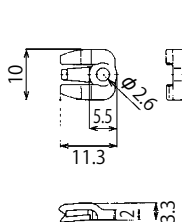
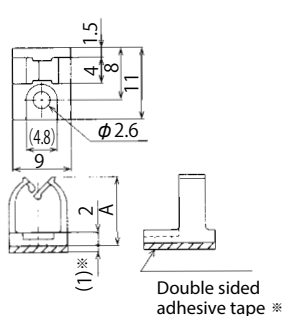
MN-2,3-R

MB-2,3

MNC-4



※ No adhesive backing for screw type



Tape mounting

Part No.	A	Std. Package
MN-1-R	5.7	500 pcs.
MN-2-R	8.5	
MN-3-R	10.5	1,000 pcs.

Screw mounting

Part No.	A	Screw	Std. Package
MB-1	5.7	M2.5	500 pcs.
MB-2	8.5		1,000 pcs.
MB-3	10.5		
MNC-4	—	M2.6	

UL ...UL1565 recognized product

(Unit : mm)

For Cables

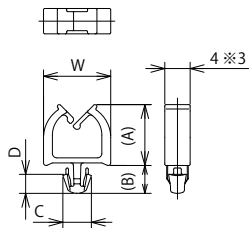
For Flat Cables

Removal prevention for connectors

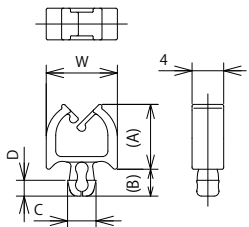
For Optical fibers



■ A type



■ B type



※3 UAMS-02WL-0, -02WH-2 : 3mm

Snap-mount mini clamp

Features

- Space-saving compact type.



Snap Mounting



Round hole

Material

- Nylon 66 (Color : Natural, Black※1)

UL94 V-2 (V-0※2)

※1 Black product has "-2" at the end of the part No.

※2 For V0 type, "V0" is added to the end of the part No.

(With regard to lot size and lead time, please contact us.)

Part No.	(A)	(B)	C	D	W	Snap type	Mounting hole size	Panel thickness	Std. Package
UAMS-02WL-0	4.4	3.2	4.0	2.5	8.2	A	$\phi 3^{+0.1}_{-0}$	0.8~1.2	1,000 pcs.
UAMS-02WH-2		3.6						1.2~1.6	
UAMS-02-0	3.9	3.0	2.2	1.5	7.0	B	$\phi 1.9^{+0.1}_{-0}$	1.6±0.1	
UAMS-03-0	6.0	3.1					$\phi 1.7^{+0.1}_{-0}$	1.2~1.6	
UAMS-03W		3.0					$\phi 3 \pm 0.05$	1~1.2	
UAMS-05-0	8.2	3.4	3.6	2.0	9.0	A	$\phi 3^{+0.05}_{-0}$	1.6±0.15	
UAMS-05-2	8.7	2.9		3.4				1±0.2	
UAMS-05S-2	7.7	5.0	4.4	3.0	11.0		$\phi 3.5^{+0.1}_{-0}$	1.6±0.1	
UAMS-05SN	7.9	3.9							
UAMS-05SN-W									
UAMS-05L-0	7.7	4.9	4.5	3.5	9.0	A	$\phi 3.5 \pm 0.1$	1.6±0.1	500 pcs.
UAMS-07-0	9.6				10.6				1,000 pcs.
UAMS-09-0	11.7	4.4		3.0	11.8				500 pcs.
UAMS-11-0	13.5								1,000 pcs.

UL ...UL1565 recognized product

(Unit : mm)

WIRE SADDLE / WS



Snap-mount clamp for easy insertion and bundle of cables

Features

- Easy insertion of wire/cable bundles.



Snap Mounting



Round hole

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0※2)

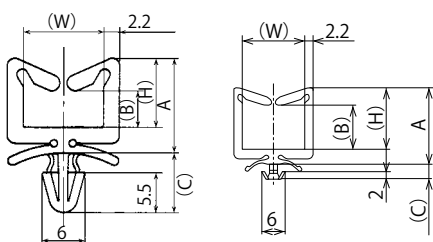
※ For V0 type, "V0" is added to the end of the part No.

(With regard to lot size and lead time, please contact us.)

WS

WS-2WC-V0

Space-saving snap



Part No.	(H)	A	(B)	(C)	(W)	Mounting hole size	Panel thickness	Std. Package
WS-1NS	9.5	13.0	5.0	8.2	11.1	$\phi 4.8^{+0.2}_{-0}$	0.5~2.0	100 pcs.
WS-2NS	14.7	18.2	10.2					
WS-3NS	23.7	27.2	19.2					
WS-4NS	31.6	35.1	27.1					
WS-2WS	15.5	19.0	11.2		16.0		2.3~4.1	500 pcs.
WS-2NS-L	14.7	18.2	10.2	9.9	11.1		0.8~1.3	
WS-2WC-V0	15.5	19.0	11.2	3.7	16.0			

UL ...UL1565 recognized product

(Unit : mm)



Snap-mount mini clamp

Features

- Space-saving compact type.

Material

- Nylon 66 (Color: Natural)

UL94 V-2

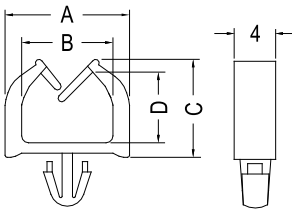


Snap Mounting



Round hole

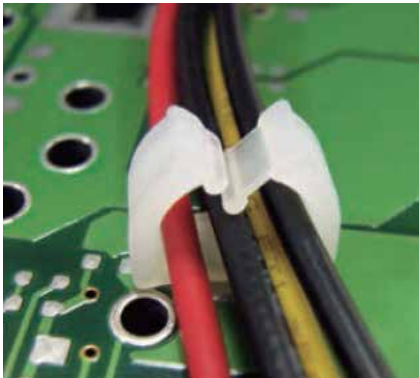
NXT-6/7



CHASSIS ØE
THICKNESS 1.0~1.6

Part No.	A	B	C	D	E	Std. Package
NXT-6	12.0	8.8	11.5	8.5	3.5	1000
NXT-7	9.2	6.8	7.6	5.0	3.0	2000

(Unit: mm)



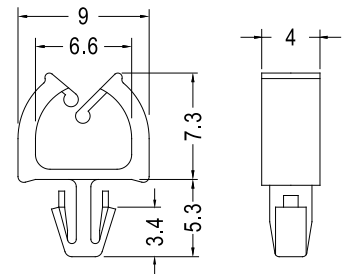
NXT-10

Material

- Nylon 66 (Color: Natural)

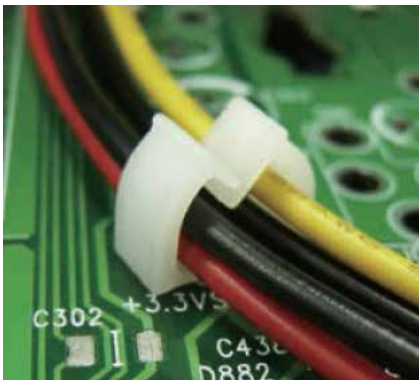
UL94 V-2

Std. Package: 1000 pcs.



CHASSIS Ø3
THICKNESS 1.6

(Unit: mm)

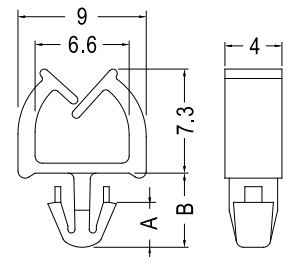


NXT-11

Material

- Nylon 66 (Color: Natural)

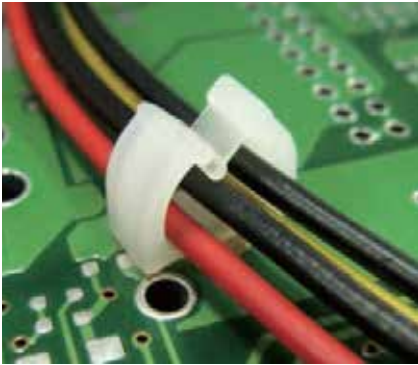
UL94 V-2



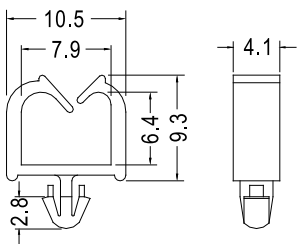
CHASSIS Ø3.5

Part No.	A	B	Chassis Thickness	Std. Package
NXT-11	3.2	5.2	1.6	1000
NXT-11S	2.8	4.15	1.0	

(Unit: mm)



NXT-12



CHASSIS Ø3.0
THICKNESS 0.8~1.6

Snap-mount mini clamp

Features

- Space-saving compact type.

Material

- Nylon 66 (Color: Natural)

UL94 V-2

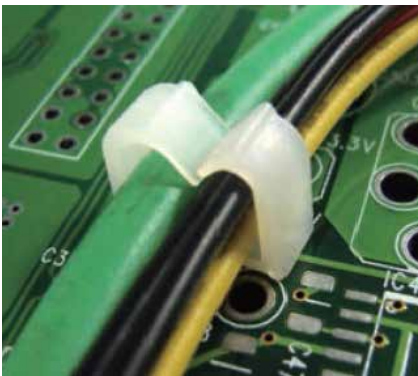
Std. Package: 1000 pcs.



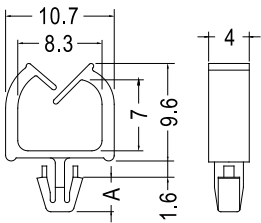
Snap Mounting



Round hole



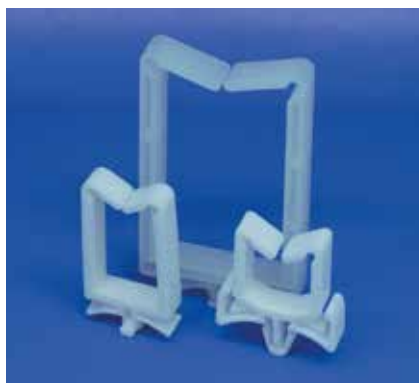
NXT-15



CHASSIS Ø3.0
THICKNESS 1.6

Part No.	A	Std. Package
NXT-15	3.4	1000
NXT-15S	2.4	

(Unit: mm)



Releasable M-shaped clamp

Features

- Snap mounting provides easy maintenance and disassembling with no tools required.

Material

- Nylon 66 (Color : Natural)
- **UL94 V-0 (V-2*)**
- ※ For V0 type, "V0" is added to the end of the part No.
- ※ With regard to lead time and lot size of V-2 type, please contact us.



Twist Type



Odd-shaped hole

RWS-T



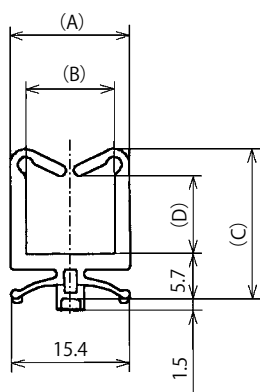
Push Type



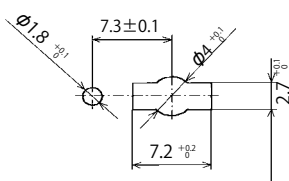
Round hole

RWS-E

RWS-T



Specification drawing

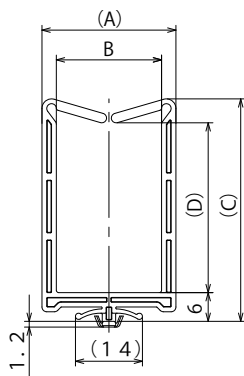


Part No.	(A)	(B)	(C)	(D)	Mounting hole size	Panel thickness	Std. Package
RWS-1T V0	15.5	11.5	14.2	5.0	Refer to Specification drawing	0.8~1.6	200 / pcs.
RWS-2T V0			19.2	10.0			
RWS-3T V0			28.2	19.0			
RWS-4T V0			36.2	27.0			
RWS-1015T-V0	20.0	16.0	20.4	11.2			500 / pcs.

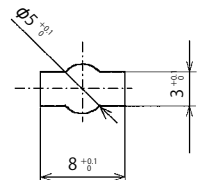
UL ...UL1565 recognized product

(Unit : mm)

RWS-3522T



Specification drawing

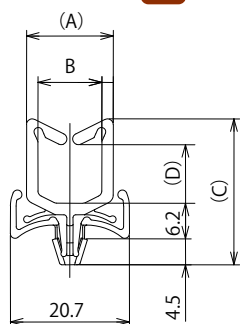


Part No.	(A)	B	(C)	(D)	Mounting hole size	Panel thickness	Std. Package
RWS-3522T	28.0	22.0	46.5	35.5	Refer to Specification drawing	0.8~1.6	100 / pcs.

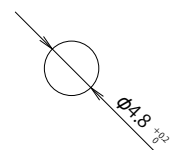
UL ...UL1565 recognized product

(Unit : mm)

RWS-E



Specification drawing



Part No.	(A)	B	(C)	(D)	Mounting hole size	Panel thickness	Std. Package
RWS-2E-V0	15.1	11.1	25.4	10.2	Refer to Specification drawing	0.5~2.0	500 / pcs.

UL ...UL1565 recognized product

(Unit : mm)



Snap-mount mini clamp with side slot

Features

- Easy insertion from the side slot and secure holding against accidental release of cables.

Material

- Nylon 6※ (Color : Natural)

UL94 V-0

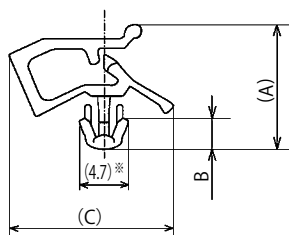


Snap Mounting



Round hole

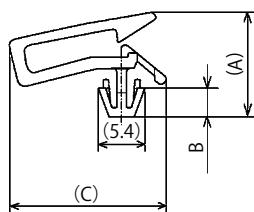
YMC



※ YMC-05-H-0 V0 is made of Nylon 66

※ 4.6mm for YMC-10-0V0

YMW



Part No.	(A)		(C)	Mounting hole size	Panel thickness	Std. Package
YMC-05-H-0 VO	10.7	3.0	11.8	$\phi 3.5^{+0.1}_0$	0.5~2	1,000 pcs.
YMC-05-0 VO	10.2		12.7		0.5~1.6	
YMC-10-0 VO	12.0		15.1			
YMC-15-0 VO	13.8		20.5			
YMW-16	12.2	3.5	17.9	$\phi 4^{+0.1}_0$	0.8~1.8	



UL...UL1565 recognized product

(Unit : mm)

SPEED CLAMP / NAD



Snap-mount cable clamp with flexible strap

Features

- Flexible strap fastens cables quickly.

- Nylon 6 (Color : Black)

UL94 V-2

Material

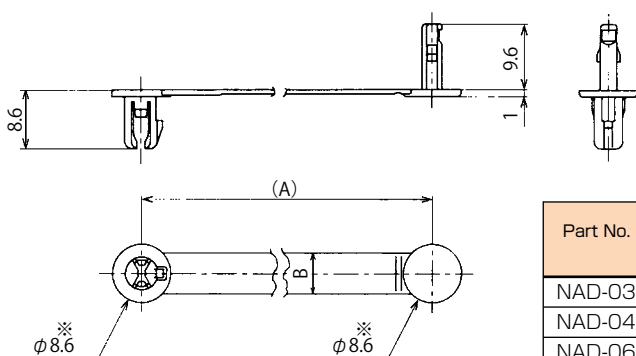
※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Snap Mounting



Round hole

※ $\phi 8.0$ mm for NAD-03

Part No.	(A)	B	Max bundle diameter	Mounting hole size	Panel thickness	Std. Package
NAD-03	28	4	φ5.5	φ4.8±0.1	0.8~2.3	1,000 pcs.
NAD-04	33	6	φ6.5		0.8~3.2	500 pcs.
NAD-06	43		φ9.5			
NAD-09	63		φ14		0.6~3.0	
NAD-13	89		φ22			

(Unit : mm)



Adhesive metal clamp with a foam layer that grips cables firmly and safely

Features

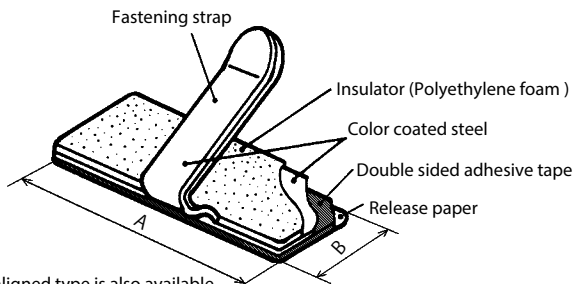
- Metal clamp with an electric insulating foam layer grips cables firmly and safely.



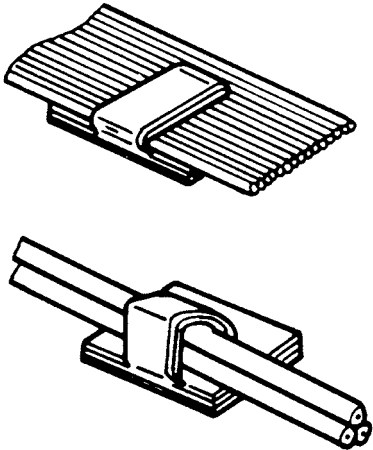
Adhesive tape mounting

Material

- Body / Color coated steel (Color : Grey)
- Insulator / Polyethylene foam (Color : White)



※ 50 clamp aligned type is also available.
5×10 components are on one adhesive tape.
(K-103G-50,K-105G-50)



Part No.	A	B	Length of binding strap	Std. Package
K-103G N	18	10	(23)	250 pcs.
K-104G N	23.8	9.2	(19)	
K-105G N		12.9	(25)	
K-106G N		14.7	(36)	

(Unit : mm)

All NK products are UL recognized.



Screw mount standard cable clamp

Features

- No slipping of screwed area when mounted, since the mating faces have slip stoppers.

Material

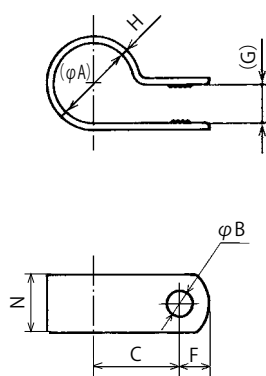
- Nylon 66 (Color : Natural)

UL94 V-2

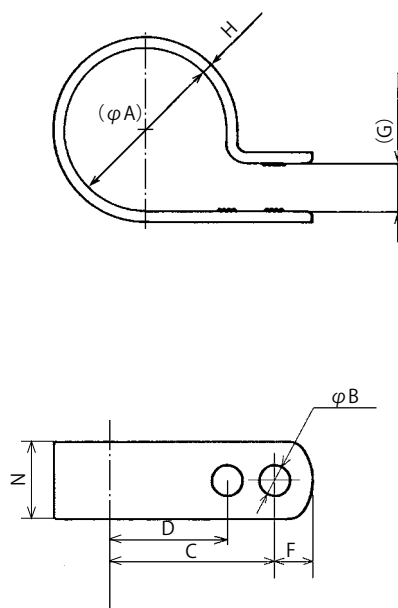


Screw mounting

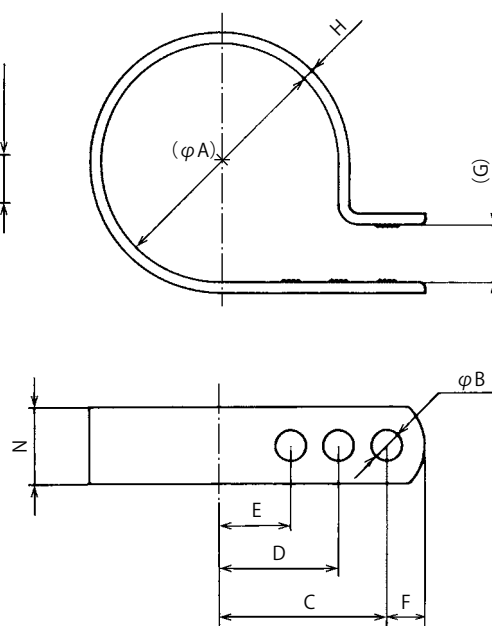
A type



B type



C type



For Cables

For Flat Cables

Removal prevention for connectors

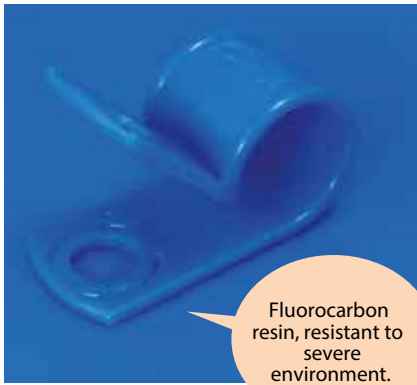
For Optical fibers

	Part No.	Type	Diameter and dimension								Inner diameter			Std. Package			
			(ϕ A)	ϕ B	C	D	E	F	(G)	H	N	Outer hole	Center hole		Inner hole		
UL	NK-2N	A	3.3	4.3	9.5	—	—	4.8	3.2	1.1	9.5	3.0	—	—	100 pcs.		
UL	NK-3N		5.3		10.3	—	—		4.8			4.6	—	—			
UL	NK-4N		6.8		11.1	—	—					5.6	—	—			
UL	NK-5N		8.4		11.9	—	—		6.3			7.4	—	—			
UL	NK-6N		10.6		12.7	—	—					10.0	—	—			
UL	NK-7N		12.2		13.5	—	—					10.7	—	—			
UL	NK-8N		13.2		14.3	—	—					11.9	—	—			
UL	NK-9N		15.2		15.1	—	—					13.5	—	—			
UL	NK-10N		16.0		15.9	—	—					14.0	—	—			
UL	NK-11N		19.0		5.1	17.5	—		—			6.3	7.9	1.8		12.7	16.8
UL	NK-12N	19.8	18.2	—		—	17.8	—	—								
UL	NK-13N	22.1	19.0	—		—	20.8	—	—								
UL	NK-14N	22.9	19.8	11.9		—	21.3	—	18.5								
UL	NK-16N	26.9	21.4	13.5		—	24.4	—	22.3								
UL	NK-18N	29.2	23.0	15.1		—	26.7	—	24.1								
UL	NK-24N	C	39.4	27.8		19.8	11.9	9.5			37.3				35.0		31.2
UL	NK-32N		52.1	34.1		24.6	13.5				51.0				46.2		43.7

UL ...UL1565 recognized product

(Unit : mm)

HEAT RESISTANT CABLE CLAMP / KCA



UV and heat resistant fluoro resin clamp

Features

- Made of heat, weather, chemical and radiation resistant fluorocarbon resin.

Material

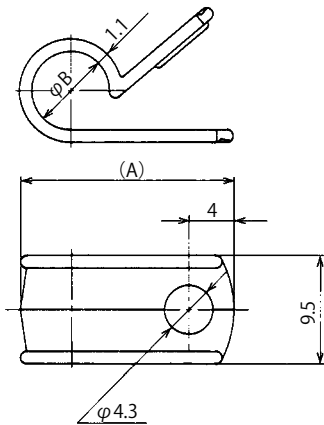
- ETFE (Color : Blue)



Screw mounting

(Applicable screw :
Nominal diameter 4mm)

UL94 V-0



Part No.	(A)	φB	Max bundle diameter	Std. Package
KCA-34	17.5	5.1	φ4.3	100 pcs.
KCA-44	19.0	6.9	φ5.9	
KCA-54	20.9	8.8	φ7.5	
KCA-64	23.7	10.8	φ9.1	

(Unit : mm)

KS CLAMP / KS



Snap-mount standard cable clamp

Features

- Binding and securing of cables by easy snap mounting.

Material

- Nylon 66 (Color : Natural)

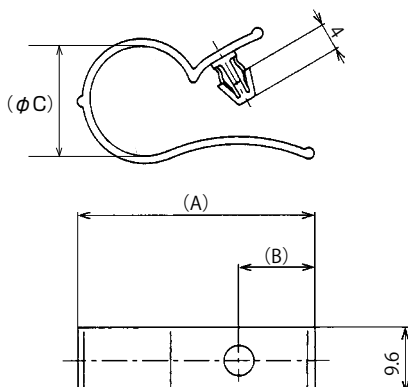


Snap Mounting



Round hole

UL94 V-2



Part No.	(A)	(B)	(φC)	Max bundle diameter	Mounting hole size	Panel thickness	Std. Package
KS-2S	18.9	8.0	3.8	φ2.6	φ4 ^{+0.2} ₀	0.5~2	100 pcs.
KS-5S	26.6	9.4	9.3	φ7.8			
KS-8S	34.7	10.5	15.0	φ13.0			
KS-10S	37.1	11.0	17.8	φ15.0			

(Unit : mm)



Clip with side slot for cable

Features

- Can be mounted with adhesive tape

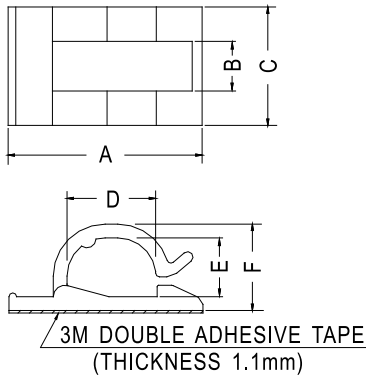
Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

XDM-8/9



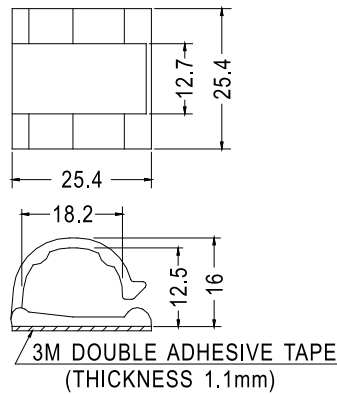
Part No.	A	B	C	D	E	F
XDM-8	25.4	6.5	15.5	11.6	7.8	11.3
XDM-9	25.2	12.7	25.2	11.6	7.6	11.0

(Unit: mm)

Std. Package: 500 pcs.



XDM-10

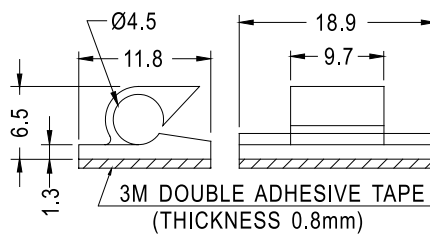


Std. Package: 500 pcs.

(Unit: mm)

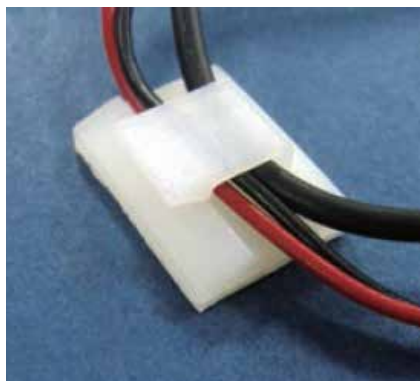


XDM-11



Std. Package: 1000 pcs.

(Unit: mm)



Clip with side slot for cable

Features

- Can be mounted with adhesive tape

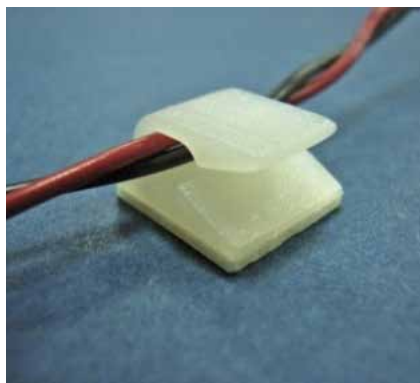
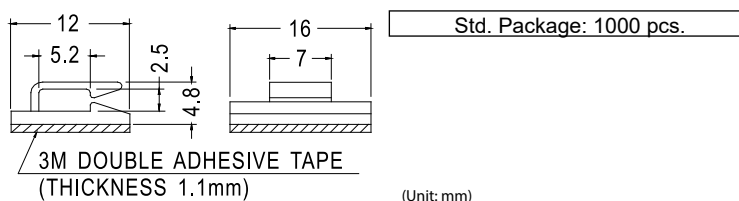
Material

- Nylon 66 (Color: Natural)

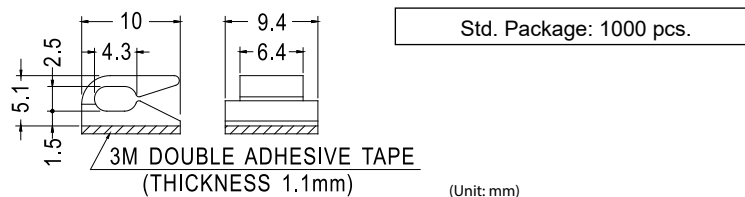
UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

XD-4



XD-6



WIRE MOUNT / DMI



Snap-mount standard cable clamp

Features

- Snapped on PCB

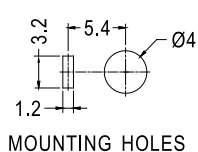
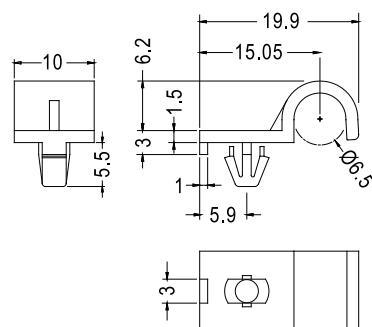
Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

Std. Package: 500 pcs.



(Unit: mm)

For Cables

For Flat Cables

Removal prevention for
connectors

For Optical fibers

WIRE MOUNT / DMN



Cable Clip with screw fixation

Features

- Fixed with 2 x M3 screw

Material

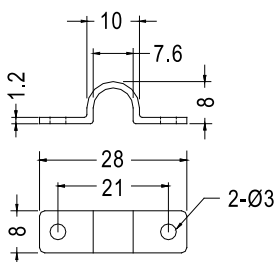
- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

DMN-7.5

Std. Package: 500 pcs.

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



THICKNESS 1.2~2.8

(Unit: mm)

WIREHOLDER / PDD



Snap-mount cable clip

Features

- Wireholder on PCB

Material

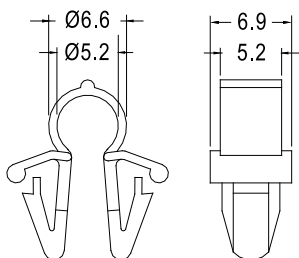
- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

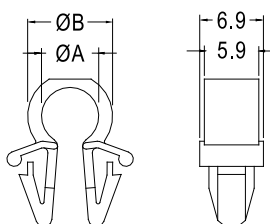
* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

PDD-5

PDD-6/8/10



CHASSIS Ø6.0
THICKNESS 2.0



CHASSIS Ø6.0
THICKNESS 2.0

(Unit: mm)

Part No.	A	B	Standard Package
PDD-5	5.2	6.6	1000
PDD-6	6.2	9.2	1000
PDD-8	8.2	11.2	500
PDD-10	10.2	13.2	500

(Unit: mm)

WIREHOLDER / PDDC



PDDC-15

Snap-mount cable clip

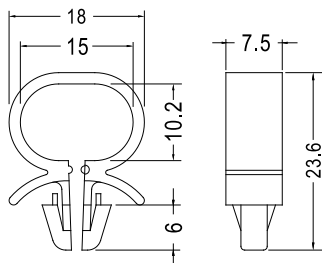
Features

- Wireholder on PCB

Material

- Nylon 66 (Color: Natural, Black) **UL94 V-2 (V-0*)**

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Std. Package: 500 pcs.

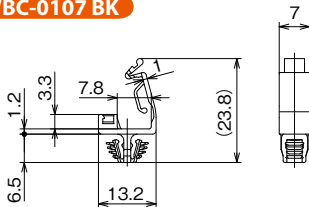
CHASSIS $\varnothing 6.0 \sim \varnothing 6.5$
THICKNESS 0.8~2.5

(Unit: mm)

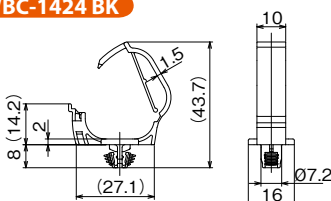
WOOD-USE CLAMP / WBC



WBC-0107 BK



WBC-1424 BK



Snap-mount locking clamp to insert into wooden panel

Features

- Snap-in structure enables one-touch installation which reduces workload.
- Unique snap structure holds securely onto wooden board.
- Round mounting hole



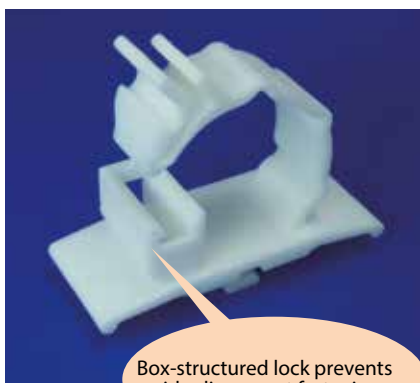
Material

- Nylon 66 (Color : Black)

UL94 V-2

Part No.	Mounting	Mounting hole depth	Max number/diameter of bundle
WBC-0107 BK	$\varnothing 6.7 \pm 0.1$	≥ 8	$\varnothing 1 \times 5 \text{ pcs.} \geq$
WBC-1424 BK	$\varnothing 7.7 \pm 0.2$	≥ 9	$\leq \varnothing 17$

(Unit : mm)



Box-structured lock prevents side slippage at fastening

Releasable cable clamp with minimum protrusion on panel

Features

- Space-saving snap has a very low 1mm protrusion on the underside of PCB.
- Easy maintenance and recyclable. Snap is detachable from mounting side with no tools required.



Twist Type



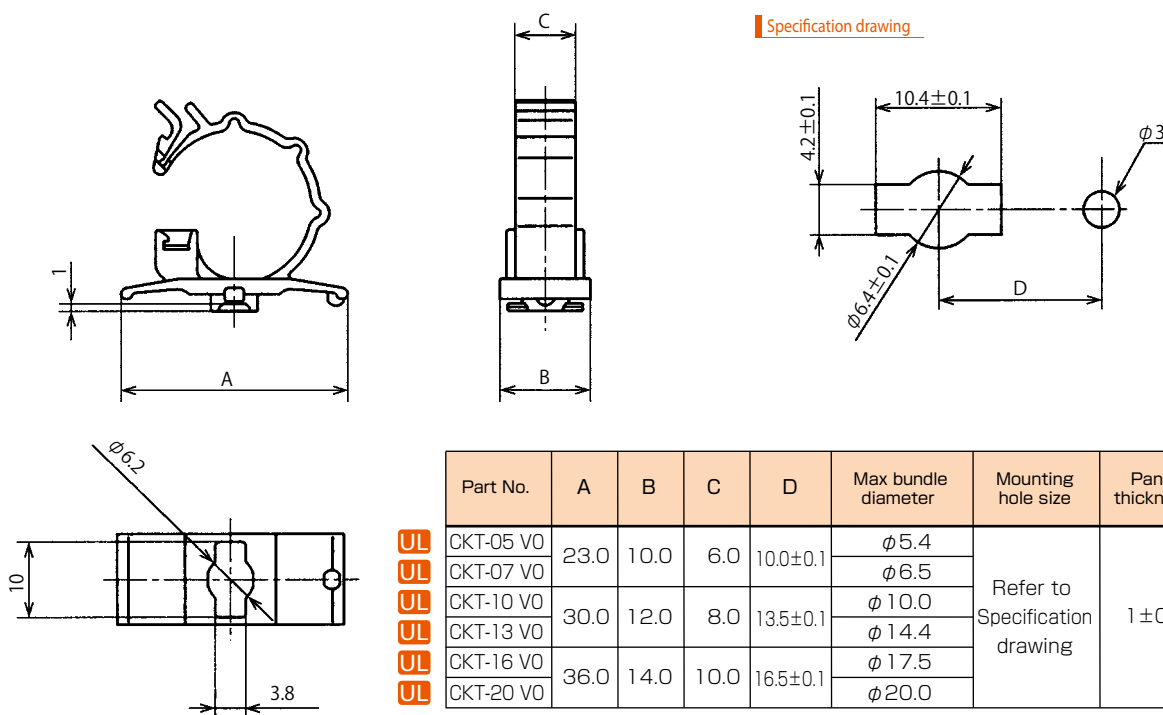
Odd-shaped hole

Material

- Nylon 66 (Color : Natural)

UL94 V-0

Specification drawing



Part No.	A	B	C	D	Max bundle diameter	Mounting hole size	Panel thickness	Std. Package
CKT-05 V0	23.0	10.0	6.0	10.0±0.1	φ 5.4	Refer to Specification drawing	1±0.2	100 pcs.
CKT-07 V0					φ 6.5			
CKT-10 V0	30.0	12.0	8.0	13.5±0.1	φ 10.0			
CKT-13 V0					φ 14.4			
CKT-16 V0	36.0	14.0	10.0	16.5±0.1	φ 17.5			
CKT-20 V0					φ 20.0			

UL ...UL1565 recognized product

(Unit : mm)

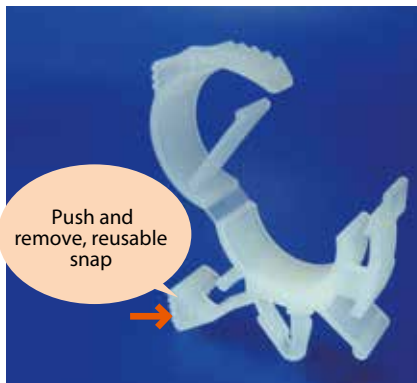
For Cables

For Flat Cables

Removal prevention for connectors

For Optical fibers

FREE CLAMP / FLC



Adjustable, releasable snap-mount clamp

Features

- Clamp diameter can be adjusted to wire bundle. Easy release of cables.
- Dismounted with one hand. Reusable snap is employed for maintenance and recycling.

Material

- Nylon 66 (Color : Natural)

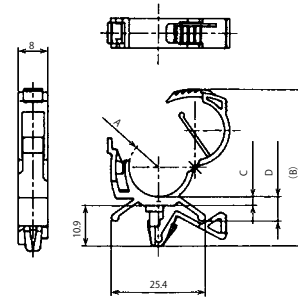
UL94 V-2



Push Type



Round hole



Part No.	A	(B)	C	D	Bundle diameter	Mounting hole size	Panel thickness	Std. Package
FLC-10S	R8	42.2	2.4	6.6	$\phi 7 \sim 14$	$\phi 4.8^{+0.2}_0$	0.8~2	500 pcs.
FLC-20S	R13	59.4	3.4	7.6	$\phi 14 \sim 22$			100 pcs.

(Unit : mm)

SCREW-LESS CLAMP / VLC



Adjustable plug-in-mount clamp that easily inserts into screw hole

Features

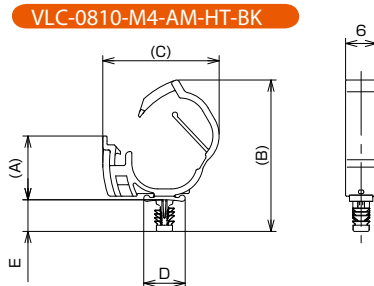
- Plug-in mounting in screw hole is available without tool.
- Clamp porting has locking mechanisms with harness holder.
- Applying heat resistant aging material, both heat resistance and durability are performed.

Material

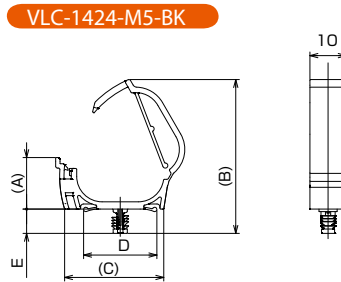
- Nylon 66 (Color : Black)

UL94 V-2

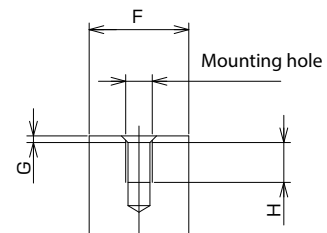
Installation specifications



VLC-0810-M4-AM-HT-BK



VLC-1424-M5-BK



Recommended mounting hole

Part No.	(A)	(B)	(C)	D	E	F	G	H	Max bundle diameter	Mounting hole size	Std. Package
VLC-0810-M4-AM-HT-BK*	12.3	28.2	22.5	8	(6.1)	$\geq \phi 10$	≤ 1	≥ 7	$\phi 10$	M4 screw hole (Thread pitch:0.7)	100 pcs.
VLC-1424-M5-BK	14.2	42.4	27.3	(20.2)	6.7	$\geq \phi 22$	≤ 1	≥ 8	$\phi 17$	M5 screw hole (Thread pitch:0.8)	100 pcs.

*Operating temperature range: -40°C to +125°C.

(Unit : mm)



Snap-mount clamp applicable for thick panles (0.5~4.1 mm)

Features

- Box-structured lock prevents side slippage at fastening.
- Applicable to panel thickness from 0.5mm (L-type) to 4.1mm (H-type).

Material

- Nylon 66 (Color : Grey)

UL94 V-2



Snap Mounting



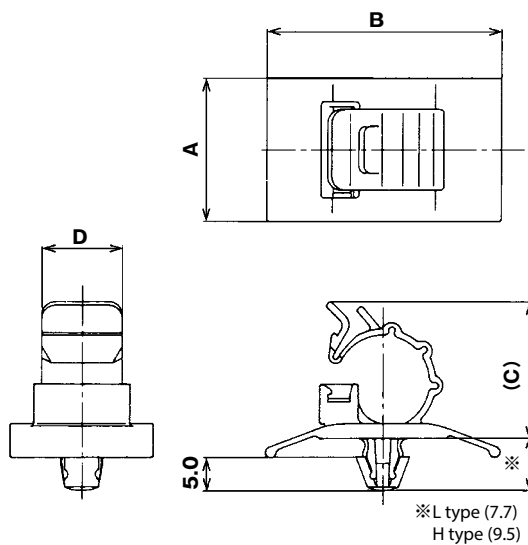
Round hole

CKN series



For adhesive backed type

Refer to the right page



Part No.	A	B	(C)	D	Max bundle diameter	Mounting hole size	Panel thickness	Std. Package
CKS-05-L	13.8	23.2	12.8	8.5	ϕ5.4	ϕ6.4 ^{+0.2} ₀	-L type 0.5~2.3 -H type 2.3~4.1	100 pcs.
CKS-05-H								
CKS-07-L	15.1	25.0	15.1	9.8	ϕ6.2			
CKS-07-H								
CKS-10-L	17.3	28.4	19.7	12.0	ϕ9.8			
CKS-10-H								
CKS-13-L	19.3	32.0	25.6	14.0	ϕ14.4			
CKS-13-H								
CKS-16-L	21.3	35.0	26.2	16.0	ϕ17.5			
CKS-16-H								
CKS-20-L	23.3	37.0	30.8	18.0	ϕ20.0			
CKS-20-H								
CKS-26-L	31.4	46.0	40.75	24.0	ϕ28.0			

UL ...UL1565 recognized product

(Unit : mm)



Cable clamp with a box lock, for adhesive tape fixation

Features

- Box-structured lock prevents side slippage at fastening.

Material

- Nylon 66 (Color : Grey)

UL94 V-2



Adhesive tape mounting

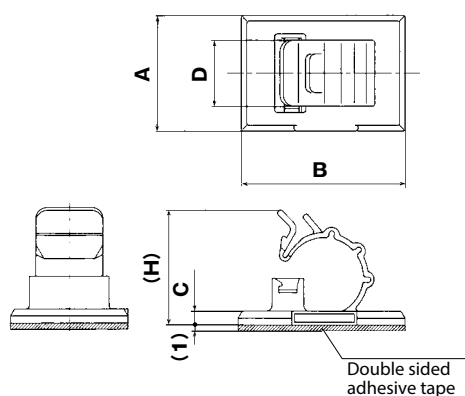
※ With regard to adhered body which is covered by UL1565, please contact our sales department.

CKS series



snap mounting type

Refer to the left page



Part No.	A	B	C	D	(H)	Max bundle diameter	Std. Package
CKN-05-R	20.5	17.5	2.0	8.5	13.4	φ 5.4	100 pcs
CKN-07-R	17.5	25.5	2.2	9.8	15.9	φ 6.2	
CKN-10-R	21.0	30.0	2.5	12.0	20.6	φ 10.0	
CKN-13-R	24.0	30.0	2.5	14.0	26.1	φ 14.4	
CKN-16-R	25.5	36.0	3.0	16.0	27.0	φ 17.4	
CKN-20-R	30.0	40.0	3.0	18.0	31.4	φ 20.0	20 pcs
CKN-28-R	43.0	56.0	3.5	24.0	41.7	φ 29.0	
CKN-38-R	56.0	76.0	4.1	30.0	57.2	φ 37.4	

UL ...UL1565 recognized product

(Unit : mm)

CKN CLAMP WITH CUSHION PAD / CKN-SP



Adhesive cable clamp with protective foam

Features

- CKN clamp with foam pad protects cables from vibration etc.

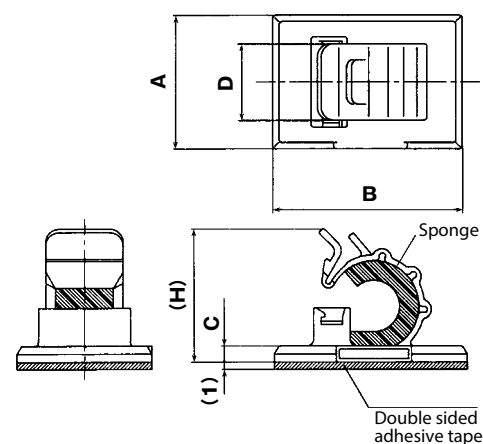
Material

- Body / Nylon 66 (Color : Grey)
- Sponge / Natural rubber foam (Color : Black)

UL94 V-2



Adhesive tape mounting



Part No.	A	B	C	D	(H)	Max bundle diameter	Std. Package
CKN-10SP-R	21.0	30.0	2.5	12.0	20.6	φ 8	100 pcs.
CKN-13SP-R	24.0	30.0	2.5	14.0	26.1	φ 10	
CKN-16SP-R	25.5	36.0	3.0	16.0	27.0	φ 13	
CKN-20SP-R	30.0	40.0	3.0	18.0	31.4	φ 14	

(Unit : mm)

For Cables

For Flat Cables

Removal prevention for connectors

For Optical fibers



Adjustable locking clamp

Features

- Bundle diameter is adjustable to cables. Easy fastening clamp.

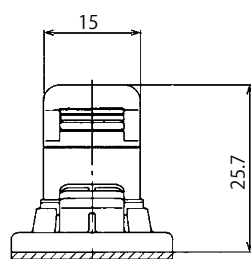
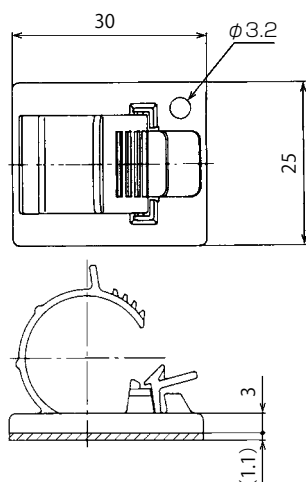
Material

- Body / Nylon 66 (Color : Black)

UL94 V-2



Adhesive tape mounting



Double sided adhesive tape

Part No.	Bundle diameter	Std. Package
AC-13-R	$\phi 12 \sim 13.5$	100 pcs.

(Unit : mm)

CLINCHER / ARC.68



Adjustable bundle diameter

Adjustable locking clamp

Features

- Easily releases cables. Bundle diameter is adjustable in wide range.

Material

- Polypropylene (Color: Grey)



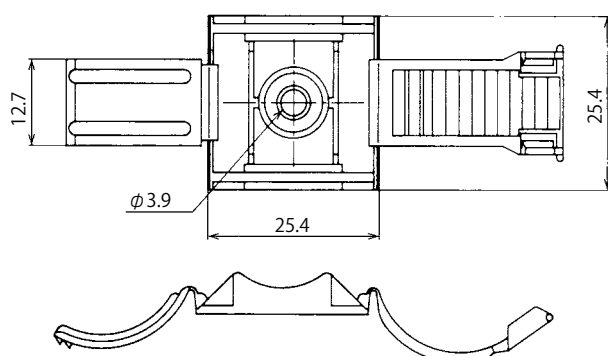
Adhesive tape mounting



Screw mounting

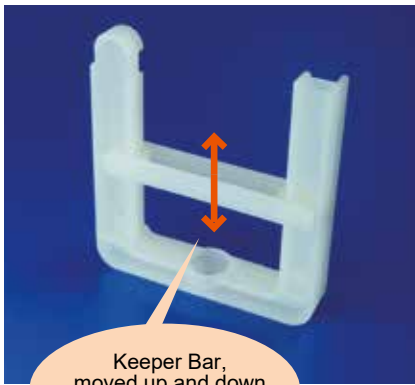
(Applicable screw: Nominal diameter 3.5mm Small flat head screw)

※ Specifications are described in the table below.

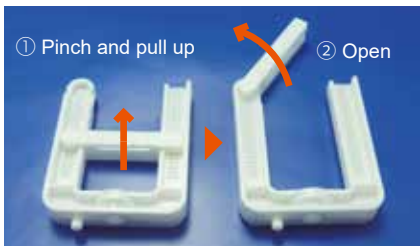
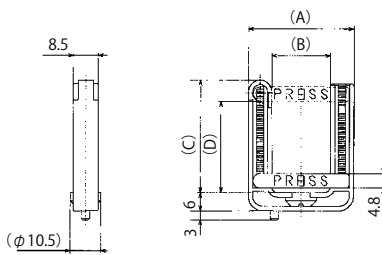


Part No.	Mounting method	Bundle diameter	Std. Package
ARC.68-A-14	Adhesive tape	$\phi 4.8 \sim 17.3$	100 pcs.
ARC.68-S6-14	Screw		

(Unit : mm)



Keeper Bar,
moved up and down
with one hand.



Large, screw mount clamp with an easy adjustable arm

Features

- Pushing down the keeper bar to secure wire bundles.
- Bar height is adjustable to cable volume by small pitch.
- Easily unlock the bar by pinching.



Screw mounting

(Applicable screw: Nominal diameter 4mm
Small flat head or oval head screw)



Round hole

FXCW-6040-V0



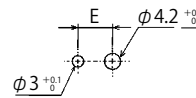
Dedicated accessories
for FXC

P81

Material

- Nylon 66 (Color : Natural)
 - UL94 V-0 : FXC-2030-V0
 - UL94 V-2 : FXC-3240

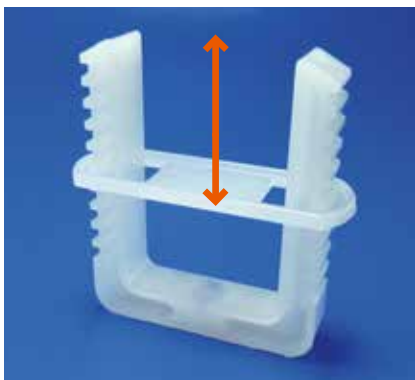
Specification drawing



Part No.	(A)	(B)	(C)	(D)	E	Mounting hole size	Std. Package
FXC-2030-V0	36	20	37	30	9±0.1	Refer to Specification drawing	100 pcs.
FXC-3240	48	32	46.3	39.3	15±0.1		

(Unit : mm)

CABLE CLAMP / KC



Large, screw mount clamp with an adjustable arm

Features

- U structured clamp holds cables from below with the keeper bar pushed down to fasten them. Adding or removing cables is easy.

Material

- Nylon 66 (Color : Natural)
 - UL94 V-2



Screw mounting

(Applicable screw: Nominal diameter 4mm
Small flat head or oval head screw)

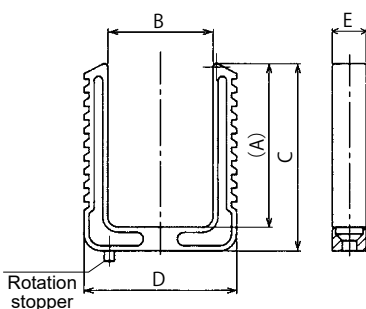


Round hole

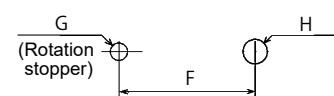
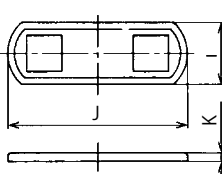
※ Specifications are described in the table below.

Specification drawing

Clamp



Keeper Bar



Part No.	(A)	B	C	D	E	F	G	H	I	J	K	Std. Package
KC-1830	30	18	37	31	8	9±0.1	$\phi 3.4^{+0.1}_0$	$\phi 4.3 \pm 0.1$	15	40	2.25	100
KC-3148	48	31	55	45	10	15±0.1	$\phi 3.1^{+0.1}_0$	$\phi 4.3 \pm 0.1$	18	53	2.5	pcs.

(Unit : mm)



Releasable snap-mount spacer clamp

Features

- Spacing and clamping of cables.
- Detachable snap for easy maintenance and disassembling.



Push Type

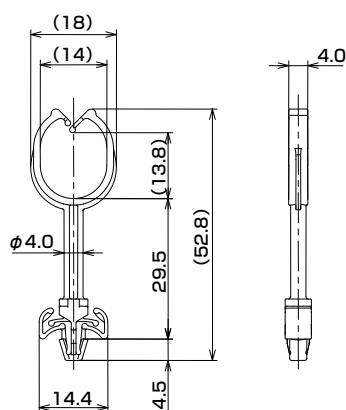


Round hole

Material

- Nylon 66 (Color : Natural)

UL94 V-0



Part No.	Mounting hole size	Panel thickness	Std. Package
RHL-28E-V0	$\phi 4.8^{+0.2}_0$	0.5~1.6	1,000 pcs.

(Unit : mm)

HARNESS LIFTER / HL



Snap-mount spacer clamp

Features

- Dual function, spacing and clamping.



Snap Mounting



Round hole

Material

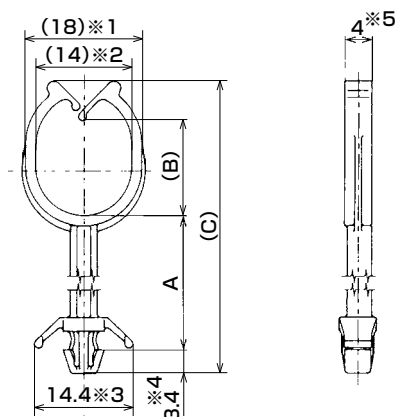
- Nylon 6^{*1} (Color : Natural)

UL94 V-2 (V-0^{*2})

*1 HL-26L is made of Nylon 66

*2 For V0 type, "V0" is added to the end of the part No.

(With regard to lot size and lead time, please contact us.)



Part No.	A	(B)	(C)	Mounting hole size	Panel thickness	Std. Package
HL-18-0	19.5	13.8	41.7	$\phi 4.8^{+0.1}_0$	0.5~2.3	1,000 pcs.
HL-28-0	29.5		51.7			100 pcs.
HL-38-0	39.5		62.4			1,000 pcs.
HL-26L*	27.7	16.9	57.2		0.8~2.0	100 pcs.

UL ...UL1565 recognized product

(Unit : mm)

* HL-26L has a slightly different configuration from the others.

*1 : (23) *2 : (14) *3 : 17.8 *4 : 4.9 *5 : 5



Snap-mount spacer and locking clamp

Features

- Lock secures wire/cable bundles.
- Inner spring fastens wires firmly.



Snap Mounting



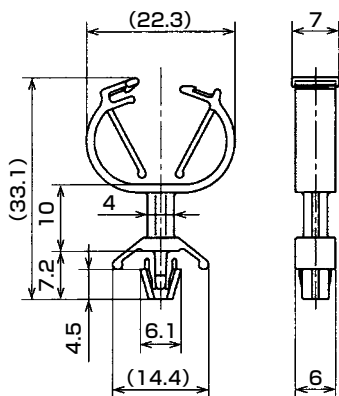
Round hole

Material

- Nylon 66 (Color : Natural)

UL94 V-2(V-0*)

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Part No.	Applicable bundle diameter	Mounting hole size	Panel thickness	Std. Package
VSC-10	$\phi 9 \sim 12$	$\phi 4.8^{+0.2}_0$	0.5~2.3	500 pcs.

UL ...UL1565 recognized product

(Unit : mm)

HARNESS LOCK SPACER / LHL-18



Snap-mount spacer and locking clamp for space saving

Features

- Space-saving spacer holds cables securely by the lock mechanism.



Snap Mounting

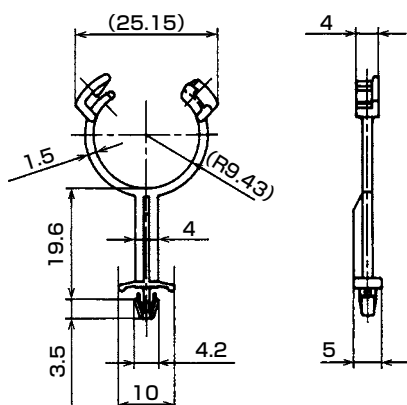


Round hole

Material

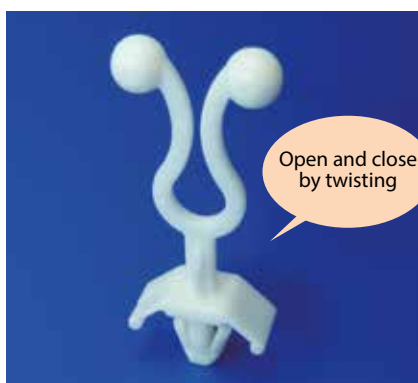
- Nylon 66 (Color : Natural)

UL94 V-2



Part No.	Applicable bundle diameter	Mounting hole size	Panel thickness	Std. Package
LHL-18	$\phi 13$	$\phi 3^{+0.1}_0$	1.6±0.15	1,000 pcs.

(Unit : mm)



Snap-mount clamp with twist locking of cable bundles

Features

- Twist lock secures wire/cable bundles.

Material

- Nylon 66 (Color : Natural)

UL94 V-2 (V-0*)



Snap Mounting



Round hole

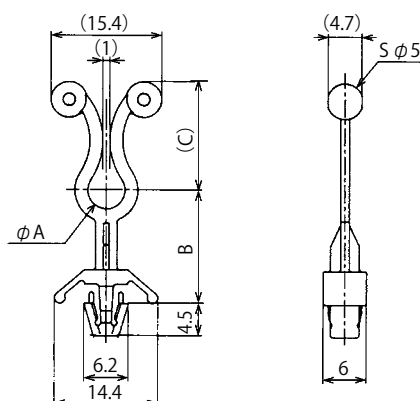
OLS series



For twist lock type binding, refer to

P86

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

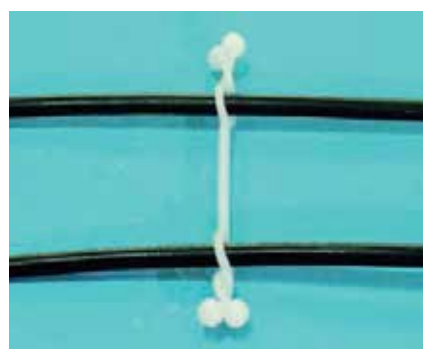


Part No.	ϕA	B	(C)	Mounting hole size	Panel thickness	Std. Package
UL NPL-320	3.0	15.8	15.2	$\phi 4.8^{+0.1}$	0.5~2	500 pcs.
UL NPL-510	5.2	8.9				
UL NPL-520VO	5.2	15.8				200 pcs.
UL NPL-1230	11.5	28.0	21.7			

UL ...UL1565 recognized product

(Unit : mm)

WIRE LOCK SPACER / Z-2L



Wire lock spacer snap-mount

Features

- Can be mounted with snap on PCB

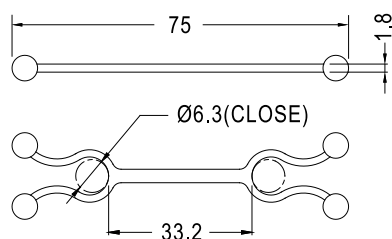
Material

- Nylon 66 (Color: Natural)

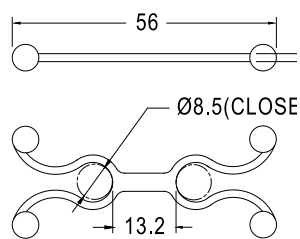
UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

Z 2L-7

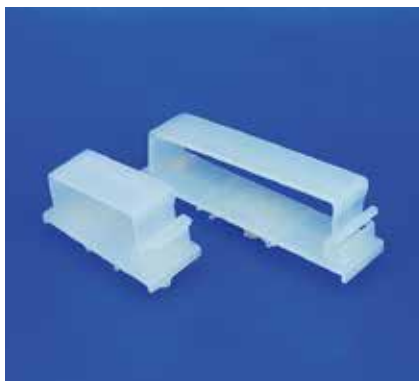


Z 2L-8



(Unit: mm)

Std. Package: 500 pcs.



Releasable snap-mount spacer clamp

Features

- Easy fastening/releasing of cables. Box-structured lock prevents side slippage at fastening.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

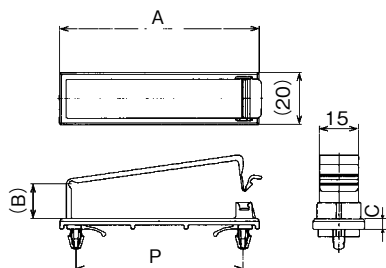


Snap Mounting

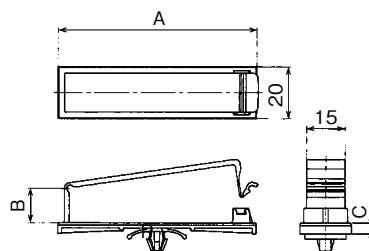


Round hole

FCS



FCSS



Part No.	Applicable cable		A	(B)	C	Mounting hole pitch	Mounting hole size	Panel thickness	Std. Package
	Max. width	Max. thickness							
FCS-3010	31.0	6.5	45.5	7.0	4.0	33.0±0.1	$\phi 4.8^{+0.2}_0$	0.5~2.3	100 pcs.
FCS-3015		13.0		13.4		64.5±0.1			
FCS-6010	63.0	6.5	77.0	7.0	4.2	—	$\phi 6.4^{+0.2}_0$	0.5~2.3	100 pcs.
FCS-6015		13.0		13.4					
FCSS-6010		6.5		7.0					
FCSS-6015		13.0		13.4					

UL ...UL1565 recognized product

(Unit : mm)

FLAT CABLE CLAMP / FCS-P



Snap-mount clamp with pantograph strip to hold down multiple flat cables

Features

- Pantograph structured strip holds down one to multiple flat cables securely.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

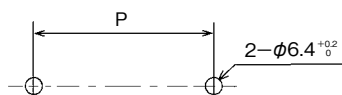
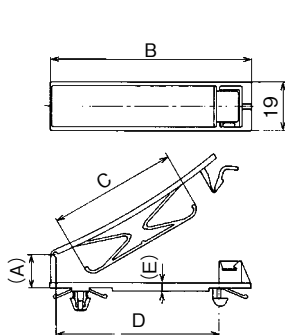


Snap Mounting



Round hole

Specification drawing



Part No.	Applicable cable		(A)	B	C	D	(E)	P	Mounting hole size	Panel thickness	Std. Package
	Max. width	Max. thickness									
FCS-25P	32.0	2.6	9.8	47	23	32	3	21 ^{+0.1} ₀	Refer to Specification drawing	0.8~2.3	100 pcs.
FCS-50P	63.5	7.0	13	79	50	64	3.2	52 ^{+0.7} ₀			

UL ...UL1565 recognized product

(Unit : mm)



Snap-mount clip for flat cables

Features

- Compact clip for flat cables.
- Rotation stopper secures cables even if they slip.



Snap Mounting

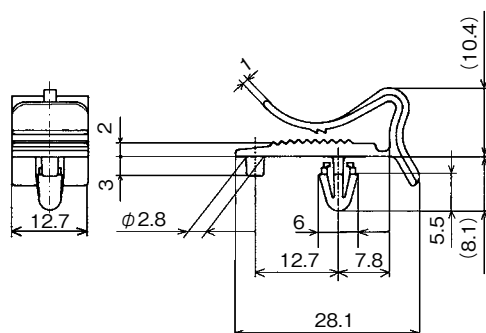


Round hole

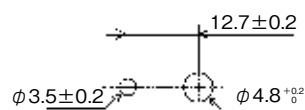
Material

- **Nylon 66 (Color : Natural)**

UL94 V-2

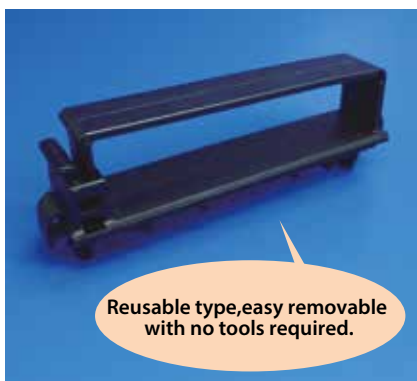


Specification drawing



Part No.	Mounting hole size	Panel thickness	Std. Package
MFS-1000	Refer to Specification drawing	0.5~2.3	100 pcs.

RE-USE FLAT CABLE CLAMP / RFCS-6015 BK



Releasable snap-mount, flat cable clamp

Features

- New lock employed for quick opening/closing of clamp.
- Reusable type,easy removable with no tools required.



Push Type

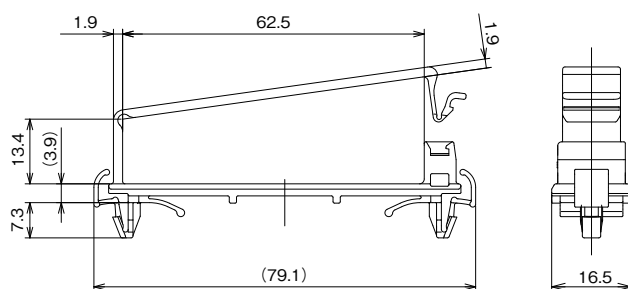


Round hole

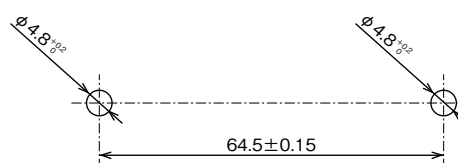
Material

- **Nylon 66 (Color : Black)**

UL94 V-2



■ Specification drawing



Part No.	Panel thickness	Std. Package
RFCS-6015 BK	0.5~2.3	100 pcs.

(Unit : mm)

FCW CLAMP / FCW



Adhesive flat cable clamp that secures one or two cables with a screw option

Features

- Height of approx. 12mm, applicable to limited spaces. Holds one or two flat cables firmly.

Material

- Nylon 66 (Color : Grey)

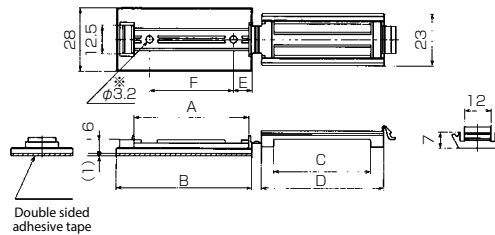
UL94 V-2



Adhesive tape mounting



Screw mounting



Part No.	A	B	C	D	E	F	Applicable cable		Std. Package
							Max. width	Max. thickness	
FCW-26-R	26	35.5	18	29.5	14.5	—※	25.5	2.4	100 pcs.
FCW-52-R	52	61.5	44	55.5	8.45	38.1	51.5		50 pcs.



※ FCW-26-R is one screw hole type.



UL1565 recognized product

(Unit : mm)

FLAT CABLE MOUNTING SYSTEM / FCPI-FCBI



Screw-mount clamp with cable tie that bundles flat cables

Features

- Secures and bundles flat cables in combination with a cable tie.



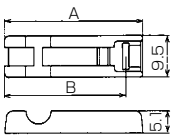
Screw mounting

Material

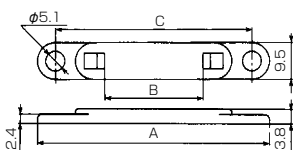
- Nylon 66 (Color : Black)

UL94 V-2

Top plate



Base



Part No.	A	B	Applicable cable width(Max.)	Std. Package
FCPI1	32.8	26.4	26.4	100 pcs.
FCPI2	58.7	51.8	51.8	
FCPI3	84.3	77.2	77.2	

(Unit : mm)

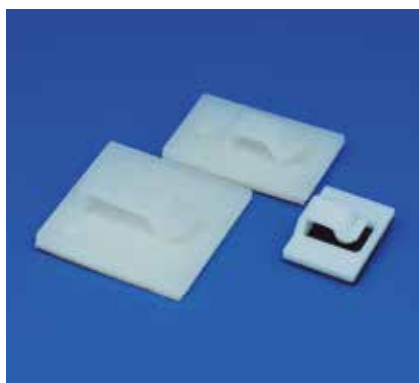
Part No.	A	B	C	Applicable cable width(Max.)	Std. Package
FCBI1-S10	63.5	26.4	52.8	26.4	100 pcs.
FCBI2-S10	88.9	51.8	78.7	51.8	
FCBI3-S10	114.8	77.2	104.6	77.2	

(Unit : mm)

Combination table

Cable width	Top plate+Base+Cable tie (1each)	2 top plates+1 cable tie	Cable ties part No. and Max. height of cable layer			
			PLT1.51	PLT21	PLT31	PLT41
Max 25.4	FCPI1, FCBI1-S10	FCPI1	20.3	50.8	94.0	132.1
Max 50.8	FCPI2, FCBI2-S10	FCPI2	—	25.4	68.6	106.7
Max 76.2	FCPI1, FCBI3-S10	FCPI3	—	—	43.2	81.3

(Unit : mm)



Clip with side slot for cable

Features

- Compact clamp for flat cables.

Material

- Nylon 66 (Color : Natural)



Adhesive tape mounting



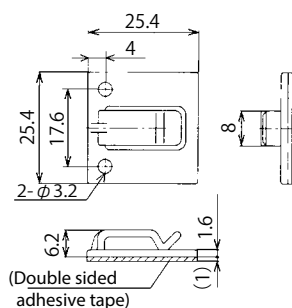
Screw mounting

※Specifications are described.

UL94 V-0 : FCA-07-V0-R

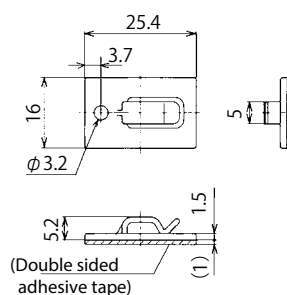
UL94 V-2 : FCA-10, -16-R

FCA-16-R (Both adhesive tape and screw employed)



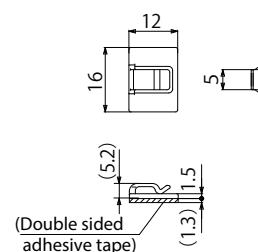
Std. Package : 100 pcs.

FCA-10-R (Both adhesive tape and screw employed)



Std. Package : 100 pcs.

FCA-07-V0-R (Adhesive tape)



Std. Package : 100 pcs.

(Unit : mm)

MINI FLAT CABLE CLIP / MFC



Mini clip with side slot for flat cable

Features

- Compact clamp for flat cables.

Material

- Nylon 66 (Color : Natural)

UL94 V-2



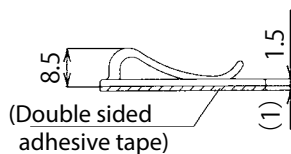
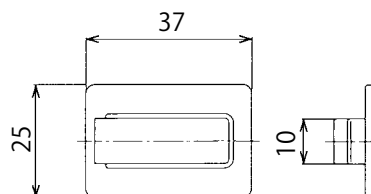
Adhesive tape mounting

※Specifications are described.

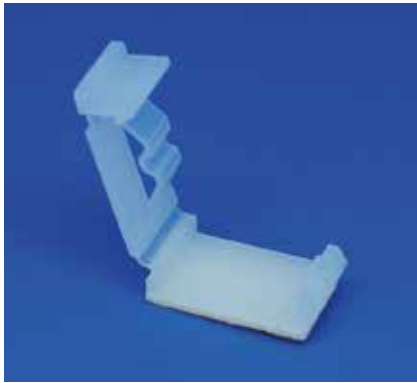
MFC-2000 (No adhesive backing)

MFC-3000-R (With adhesive tape)

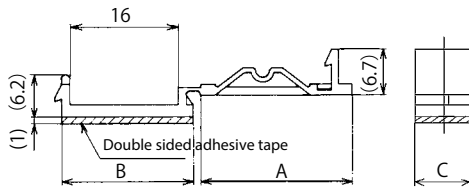
Std. Package : 100 pcs.



(Unit : mm)



LFC-16N-O-R



Adhesive-mount clamp with side locking slot for flat cable

Features

- Space-saving clamp holds down cables safely.

Material

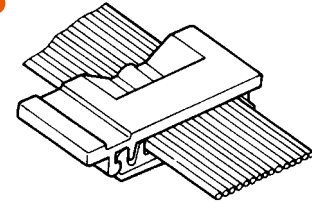
- Nylon 66 (Color : Natural)

UL94 V-2



Adhesive tape mounting

※ With regard to adhered body which is covered by UL1565, please contact our sales department.

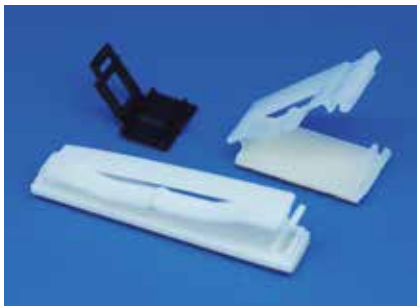


Part No.	A	B	C	Applicable cable		Std. Package
				Max. width	Max. thickness	
LFC-16N-O-R	22.4	19.4	10.0	16	2.7	1,000 pcs.

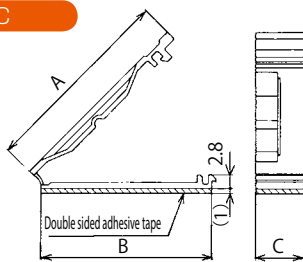
UL...UL1565 recognized product

(Unit : mm)

THIN TYPE CLAMP / LFC · LBFC



LFC



Features

- Space-saving clamp holds down cables safely.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

UL94 V-0 : LBFC-45N-V0-R



Adhesive tape mounting

※ With regard to adhered body which is covered by UL1565, please contact our sales department.

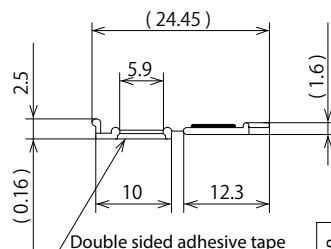
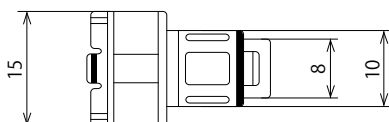


Part No.	A	B	C	Applicable cable		Std. Package
				Max. width	Max. thickness	
LFC-20W-R	30.4	25.6	14.0	21	1.2	500 pcs.
LFC-27W-R	37.4	32.6		28		
LFC-30N-O-R	40.0	35.1	10.0	30	1.0	

UL...UL1565 recognized product

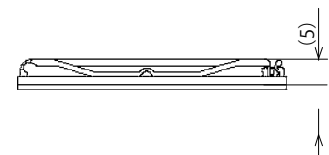
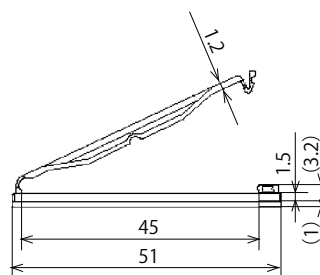
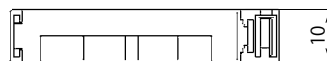
(Unit : mm)

LFC-05BK



Std. Package : 500 pcs.

LBFC-45N-V0-R



Double sided adhesive tape

Std. Package : 1000 pcs.



Snap-mount flat clamp to secure cables directly on panel

Features

- Low profile clamp secures flat cables directly on mounting panels.
- Reusable type, easy removable with no tools required.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

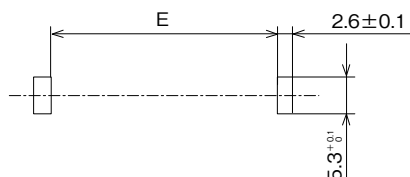
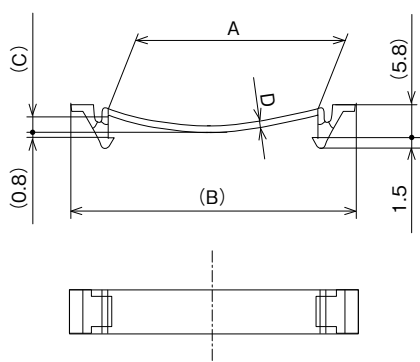


Push Type



Odd-shaped hole

Specification drawing



Part No.	A	(B)	(C)	D	E	Mounting hole size	Panel thickness	Std. Package
FCR-15 V0	15	27	2.6	0.8	15±0.1	Refer to Specification drawing	0.8~1.6	100 pcs.
FCR-30 V0	30	42	2.9	1.0	30±0.1			
FCR-35 V0	35	47		1.2	35±0.1			
FCR-45 V0	45	57		1.5	45±0.1			
FCR-60 V0	60	72		1.0	60±0.1			
FCR-30L V0	30	42	3.0	1.0	30±0.1		1.5~2.5	

UL ...UL1565 recognized product

(Unit : mm)

THIN TYPE CLAMP / LFCS-30



Snap-mount flat cable clamp with base to secure cables directly on panel

Features

- Space-saving clamp holds down cables safely.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

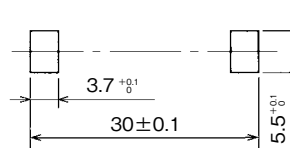
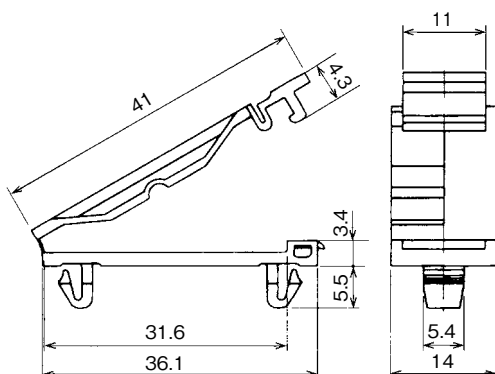


Snap Mounting



Odd-shaped hole

Specification drawing



Part No.	Mounting hole size	Panel thickness	Std. Package
LFCS-30	Refer to Specification drawing	1~1.8	100 pcs.

(Unit : mm)



Snap-mount clamp with side locking slot for flat cable

Features

- Super-low profile clamp.
- Arced fastening strap holds down flat cables.

Material

- Nylon 66 (Color : Natural)

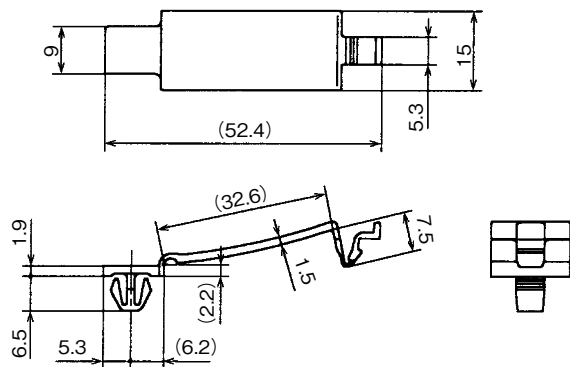
UL94 V-2



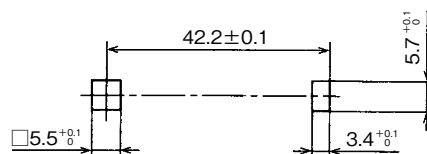
Snap Mounting



Odd-shaped hole



Specification drawing



Part No.	Mounting hole size	Panel thickness	Std. Package
KFCS-3002	Refer to Specification drawing	1~1.6	500 pcs.

UL

UL ...UL1565 recognized product

(Unit : mm)

FLAT CABLE CLAMP / FCT-6010



Snap-mount clamp with minimum protrusion on panel

Features

- Space-saving due to low protrusion on the underside of PCB.

Material

- Nylon 66 (Color : Natural)

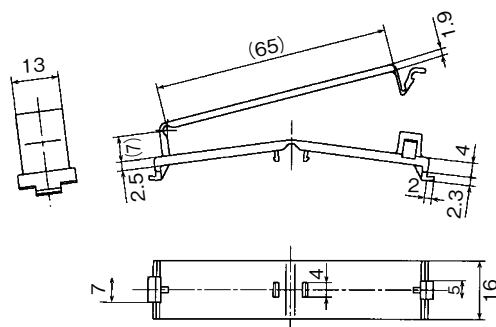
UL94 V-2



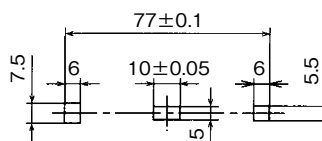
Snap Mounting



Odd-shaped hole



Specification drawing

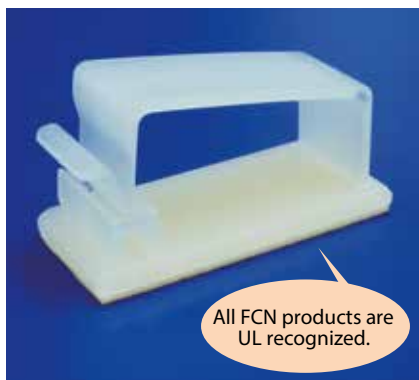


Part No.	Mounting hole size	Panel thickness	Std. Package
FCT-6010	Refer to Specification drawing	1 ± 0.2	100 pcs.

UL

UL ...UL1565 recognized product

(Unit : mm)



Adhesive-mount locking flat cable clamp

Features

- Easy cable fastening and releasing. Box-structured lock prevents side slippage at fastening.

Material

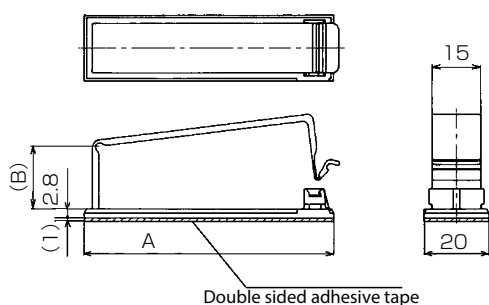
- Nylon 66 (Color : Natural)

UL94 V-2



Adhesive tape mounting

※With regard to adhered body which is covered by UL1565, please contact our sales department.



UL
UL
UL
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UL

Part No.	A	(B)	Max. width of cable	Max. thickness of cable	Std. Package
FCN-3010-R	45.5	7.0	31.0	6.5	100 pcs.
FCN-3015-R		13.4		13.0	
FCN-6010-R	77.0	7.0	63.0	6.5	
FCN-6015-R		13.4		13.0	
FCN-6020-R		19.1		19.0	

UL ...UL1565 recognized product

(Unit : mm)

FLAT CABLE CLAMP / FCN-P • FCC-M



Adhesive-mount clamp with pantograph strip to hold down multiple flat cables

Features

- Pantograph structured strip holds down one to multiple flat cables securely.

Material

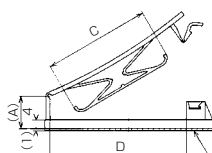
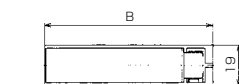
- Nylon 66 (Color : Natural)

UL94 V-2

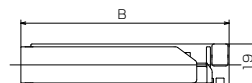
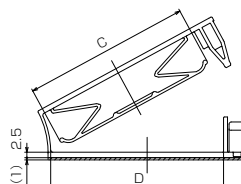


Adhesive tape mounting

FCN-P-R



Double sided adhesive tape



Part No.	(A)	B	C	D	Applicable cable		Std. Package
					Max. width	Max. thickness	
FCN-25P-R	12	47	23	32.0	32.0	2.6	100 pcs.
FCN-50P-R	15	79	50	64.0	63.5	7.0	
FCC-60M-R	—	90	76	78.5	77.0	16.0	


(Unit: mm)



Removal prevention clamp for USB connector (with up-and-down tab)

Features

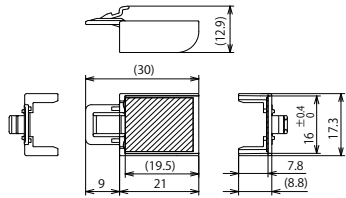
- Locking tab makes it easy to lock and release USB connector.
- Up-and-down tab enables transvers mounting .

 Snap Mounting

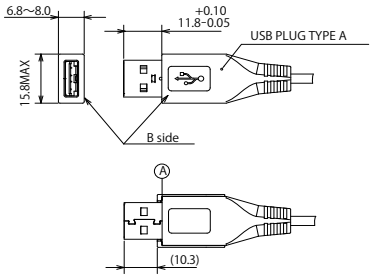
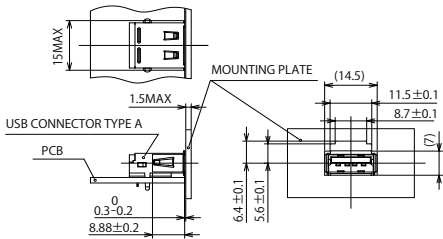
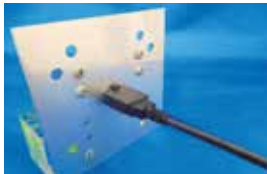
 Square hole

Material

- PBT (Color : Black)
- UL94 V-0



Application examples



Part No.	Compatible connector	USB plug size	Std. Package
USBCC-A-YR	Type-A USB connector	Refer to Specification drawing	100 pcs.

(Unit : mm)

※This product is assembled on a USB connector with double-sided adhesive.
Make sure to press the component firmly onto the connector. Assembled product cannot be reused.

USB CONNECTOR COVER / USBCC-B-YR



Removal prevention clamp for USB connector (Upper tab)

Features

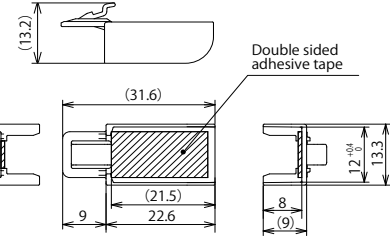
- Locking tab makes it easy to lock and release USB connector.
- The upper tab is suitable for USB connectors arranged side-by-side.

 Snap Mounting

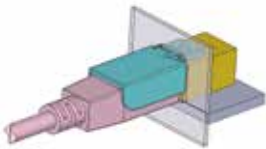
 Square hole

Material

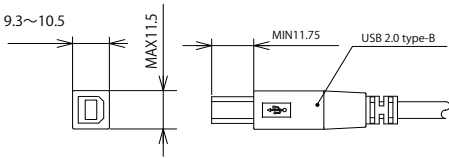
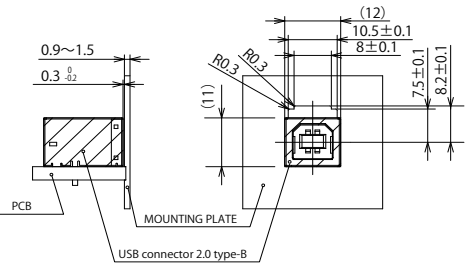
- PBT (Color : Black)
- UL94 V-0



Application examples



Specification drawing



Part No.	Compatible connector	USB plug size	Std. Package
USBCC-B-YR	Type-B USB connector	Refer to Specification drawing	100 pcs.

(Unit : mm)

※This product is assembled on a USB connector with double-sided adhesive.
Make sure to press the component firmly onto the connector. Assembled product cannot be reused.

Wiring Clamps

For Cables

For Flat cables

Removal prevention for connectors

For Optical fibres



Removal prevention clamp for USB connector (with side tab)

Features

- Locking mechanism prevents USB from unplugging from slot.
- Locking tab makes it easy to lock and release USB connector.

Material

- PBT (Color : Black)

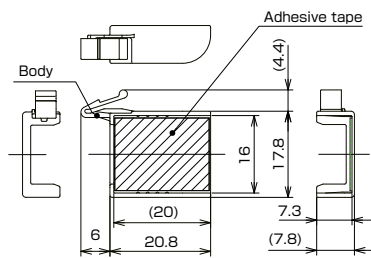
UL94 V-0



Snap Mounting



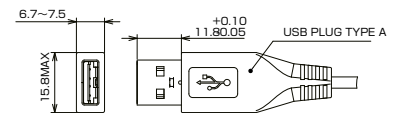
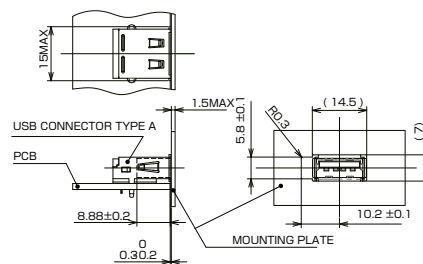
Square hole



Application examples



Specification drawing



Part No.	Compatible connector	USB plug size	Std. Package
USBCC-A	Type-A USB connector	Refer to Specification drawing	100 pcs.

(Unit : mm)

A.C. CORD CLAMP / ACCD



Adjustable, snap-mount clamp that prevents power cord from unplugging

Features

- Prevents power sockets from being removed from inlets.
- Socket holder is adjustable by using the lever.

Material

- Nylon 66 (Color : Black)

UL94 V-2 : ACCD86AS

UL94 V-0 : ACCD107AS

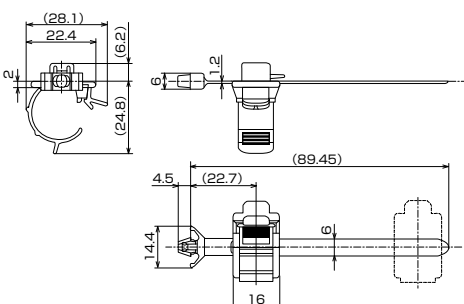


Snap Mounting

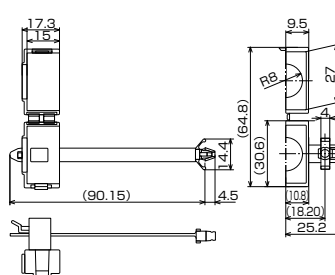


Round hole

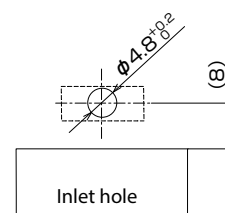
ACCD86AS



ACCD107AS



Specification drawing



Part No.	Bundle diameter	Panel thickness	Compatible plug	Compatible boot diameter	Std. Package
ACCD86AS	φ11~13.5	0.8~2.0	—	—	50 pcs.
ACCD107AS	—	0.5~2.3	26×18.5	φ16	100 pcs.

(Unit : mm)



Releasable, adjustable snap-mount clamp that prevents power cord from unplugging

Features

- Prevents power sockets from being removed from inlets.
- Easy detachable, reusable structure enables improved maintenance and disassembly with no tools.



Snap Mounting



Round hole

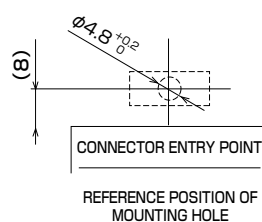
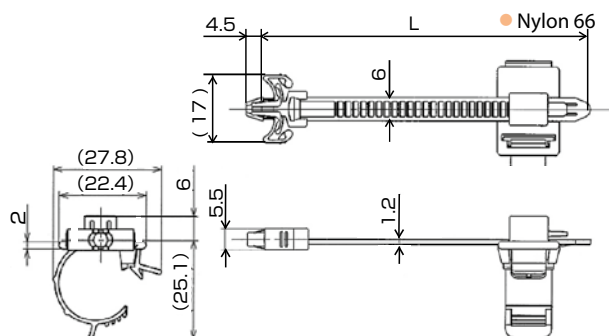
Material

● Nylon 66 (Color : Black)

UL94 V-2 : RACCD86-276AS

UL94 V-0 : RACCD86-236AS

Specification drawing



Part No.	Length	Bundle diameter	Panel thickness	Std. Package
RACCD86-236AS	84.5	$\phi 11 \sim 13.5$	0.5~2.0	100 pcs.
RACCD86-276AS	118.5			

(Unit : mm)

CONNECTOR CLAMP / HDCD-**-80-V0 BK



Adjustable, snap-mount clamp that prevents USB cord from unplugging

Features

- Prevents power sockets from being removed from inlets.
- Socket holder is adjustable by using the lever.



Snap Mounting



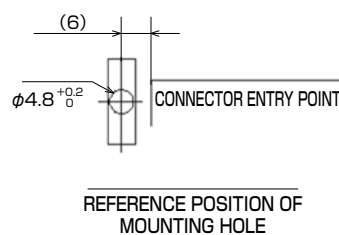
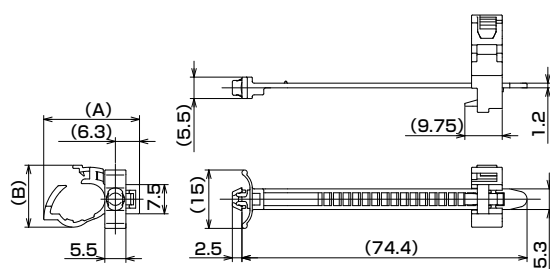
Round hole

Material

● Nylon 66 (Color : Black)

UL94 V-0

Specification drawing



Part No.	(A)	(B)	Bundle diameter	Panel thickness	Std. Package
HDCD-08-80-V0 BK	25	15.9	$\phi 6.5 \sim 8$	0.8~1.6	500 pcs.
HDCD-10-80-V0 BK	26.5	18.8	$\phi 8 \sim 10$		100 pcs.

(Unit : mm)

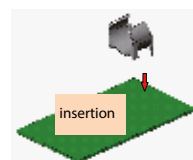


Flow soldering holder that allows for easy mount of capacitors

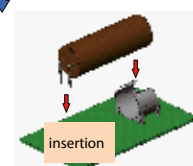
Features

- Because capacitors can be mounted without adhesive, It contributes for reduction of adhesive cost and improvement of workability in the conventional process.
- Capacitor can be mounted from the top of this product.
- Relief loads of vibration and shock applied to leads of capacitors.
- The product can be applied to various length of capacitors by flow soldering.

Assembling method



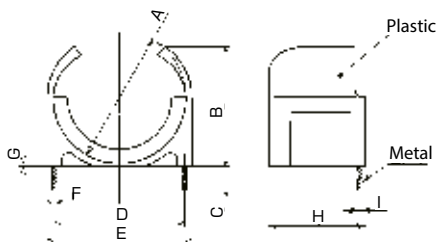
STEP.1 assemble the products to PC board



STEP.2 inserting them onto PC board



STEP.3 mounting (flow soldering)



Material

- Plastic part : Nylon66
- Metal part : Low carbon steel wire (□0.6mm)
Surface treatment : Sn plating on the underplating by Cu

UL94 V-0

Metal portion	Plastic portion	Diameter accommodation		Method of mounting
CP wire □0.6mm	PA66	RDHL-12.5E-V0 : φ12.5mm	RDHL-18E-V0 : φ18mm	For flow soldering

Part No.	A	B	C	D	E	F	G	H	I	Std.Package
RDHL-12.5E-V0	φ13	12	3.3	12.2	14.2	0.6	0.4	13.5	0.6	1000 pcs.
RDHL-16E-V0	φ16.5	15.4	3.3	15.6	17.9	0.6	0.4	13.5	0.6	500 pcs.
RDHL-18E-V0	φ18.5	16.7	3.3	18.1	20.1	0.6	0.4	13.5	0.6	500 pcs.

(Unit : mm)

CAPACITOR HOLDER / RDHL



Flow soldering holder for vibration damping of capacitors

Features

- Excellent resistance in vibration and impact of the product brings relief loads applied to leads of capacitors.
- Because capacitors can be mounted without adhesive, It contributes for reduction of adhesive cost and improvement of workability in the conventional process.
- The product can be applied to various length of capacitors by flow soldering.

Material

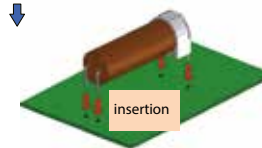
- Plastic part : Nylon66
- Metal part : Low carbon steel wire (□0.6mm)
Surface treatment : Sn plating on the underplating by Cu

UL94 V-0

Assembling method



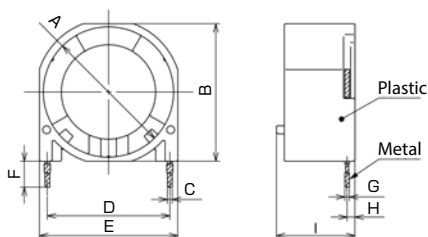
STEP.1 assemble the capacitor



STEP.2 inserting onto PC board



STEP.3 mounting (flow soldering)



Metal portion	Plastic portion	Diameter accommodation		Method of mounting
CP wire □0.6mm	PA66	RDHL-16-V0 : φ16mm		For flow soldering

Part No.	A	B	C	D	E	F	G	H	I	Std.Package
RDHL-16-V0	φ16.6	17.5	0.6	15.6	17.6	3.3	0.6	1.0	10.0	500 pcs.

(Unit : mm)



It maintains safe radius for fibers extending from connector boot.

Features

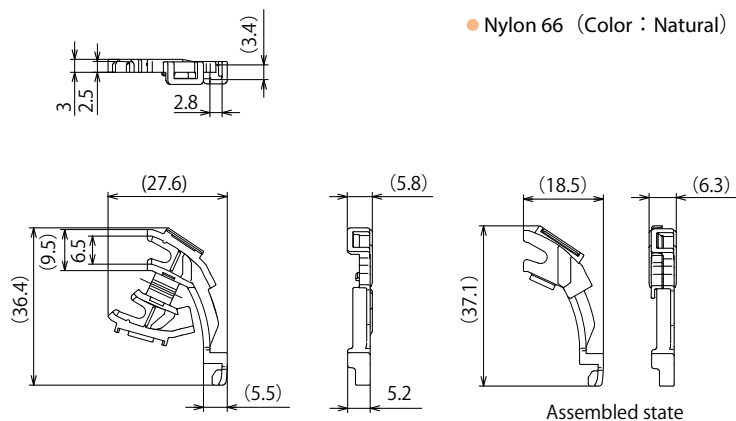
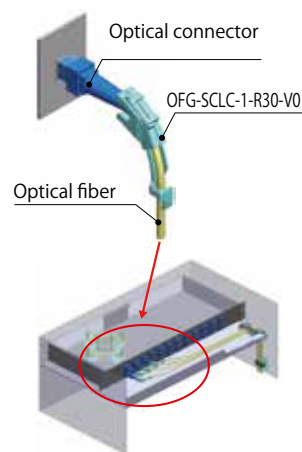
- The GUIDE maintains bend radius of 30° or more for optical fibers extending from connector boots.
- Applicable to both SC and LC connectors
- Downsized design is also applicable to LC duplex connectors.
- Lock structure prevents unfastening from the fibers.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

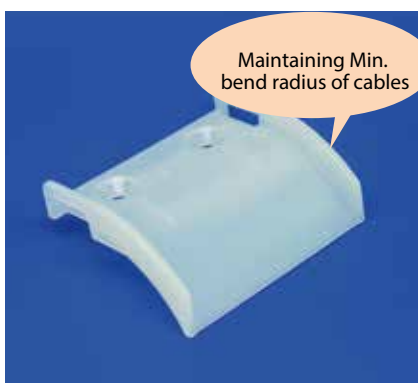
Application examples



Part No.	Applicable connector	Std. Package
OFG-SCLC-1-R30-V0	SC Connector, LC Connector	100 pcs.

(Unit : mm)

FIBER GUIDE / OFG-5042-R30



The guide retains the minimum bending radius for optical fibers

Features

- Optical fiber bending radius of 30 mm or higher can be retained.
- Hook and loop fastener applicable member is equipped for optical fiber bundle.
- The guide is fixable on a sheet metal with countersunk screws.

Material

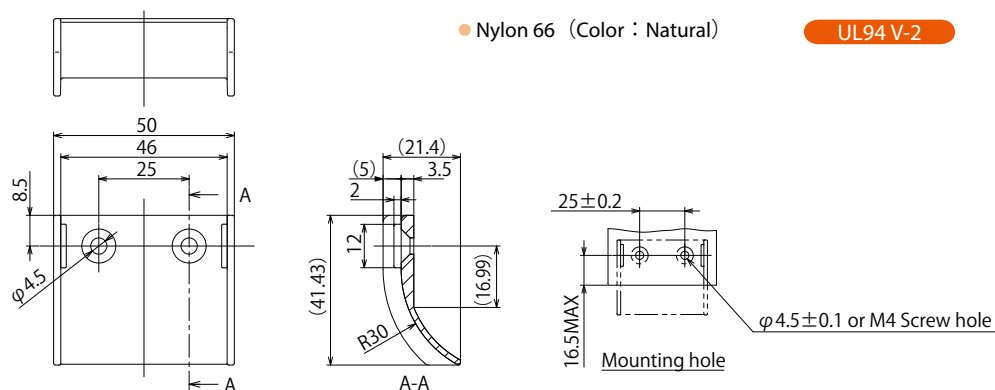
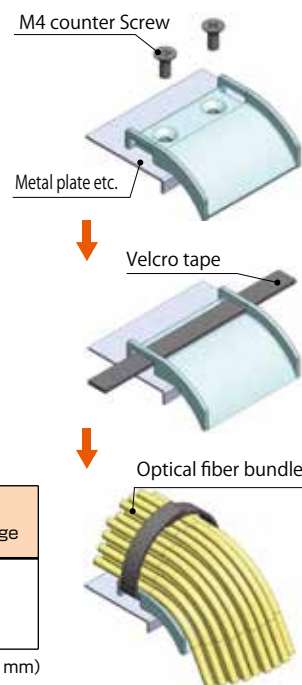
- Nylon 66 (Color : Natural)

UL94 V-2



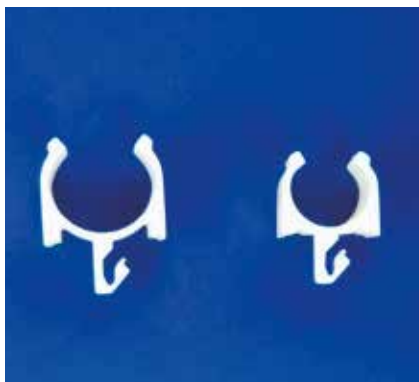
Screw mounting

Application examples



Part No.	Applicable velcro tape		Applicable screw	Mounting hole size	Std. Package
	Width	Thickness			
OFG-5042-R30	≤ 10	≤ 2	M4 counter screw	Refer to Specification drawing	50 pcs.

(Unit : mm)



Snap-mount capacitor holder

Features

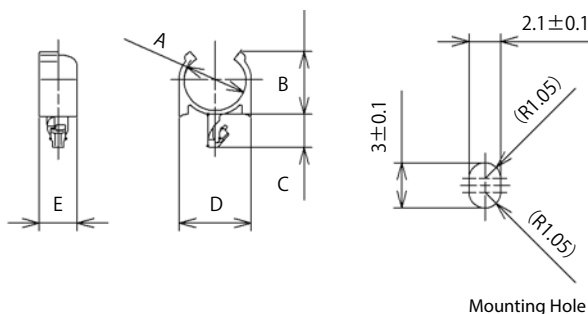
- Because capacitors can be mounted without adhesive, It contributes for reduction of adhesive cost and improvement of workability in the conventional process.
- Capacitor can be mounted from the top of this product.
- The product is mounted onto PC board by means of its plastic snap.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

※Because the product is not use for flow soldering process, it is required the masking of plastic snap on the reverse side of PC board.



Part No.	A	B	C	D	E	Diameter accommodation	Mounting Hole	Packaging specification	Panel thickness	Std. Package
CPHL-6.3S-V0	φ6.5	6.7	4.1	7.8	5.0	φ6.3	Refer to Specification drawing	Bulk	1.5~1.7	1000 pcs.
CPHL-8S-V0	φ8.2	8.3	4.3	9.5	5.0	φ8				

(Unit : mm)

SLEEVE HOLDER / OFSH-4004A

OPTICAL



Adhesive-mount clip for optical fiber sleeve to hold and support cables

Features

- Can hold 4 cables of $\Phi 3 \sim 4$ mm.
- As well as up to four CS sleeves of $\Phi 3 \sim 4$ mm.

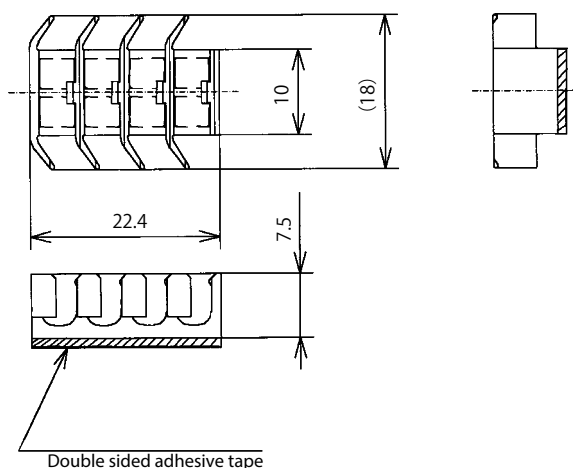


Adhesive tape mounting

Material

- Nylon 66 (Color : Natural)

UL94 V-2



Part No.	Std. Package
OFSH-4004A	100 pcs.

(Unit : mm)



Snap-mount clip for optical fiber cables

Features

- Holds cables in array.
- Up to 8 cables of $\Phi 2\text{mm}$ can be held.
- The structure minimizes the risk of damaging optical fibers when fastening and holding.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

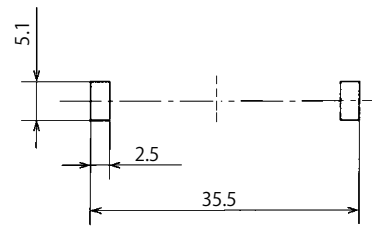
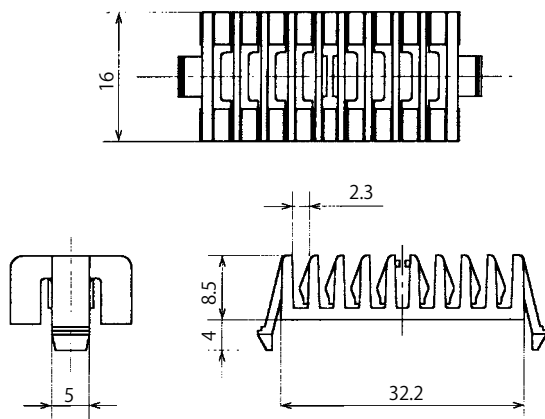


Snap Mounting



Odd-shaped hole

Specification drawing



Part No.	Mounting hole size	Panel thickness	Std. Package
OFHP-2008	Refer to Specification drawing	1~1.6	100 pcs.

(Unit : mm)

Wiring Clamps

FIBER CLAMP / OFC-2012

OPTICAL



Adhesive-mount, locking clamp for optical fiber cables

Features

- Foam pads hold cables (temporary fastening) and the arm part closes to lock the cables.
- Can hold 12 cables of $\Phi 2\text{mm}$ or 3.2×2 oval cables.
- Foam pads holds optical fiber cables softly and prevents slippage.

Material

- Body/Nylon 6 (Color : Black)
- Sponge/EPDM foam (Color : Black)

UL94 V-2

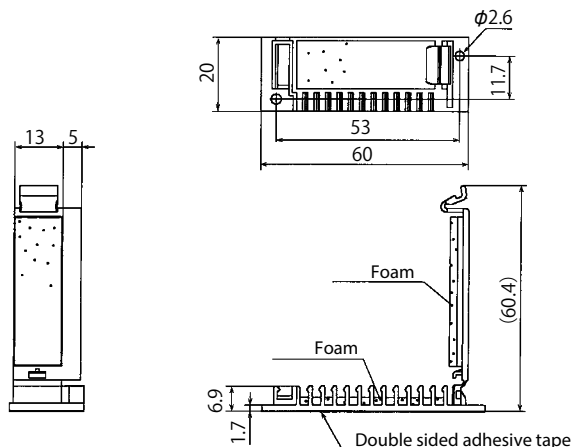


Adhesive tape mounting



Screw mounting type is also available

(Nominal diameter 2.5mm)



Part No.	Std. Package
OFC-2012	100 pcs.

(Unit : mm)

For Cables

For Flat cables

Removal prevention for connectors

For Optical fibres



Adhesive-mount optical fiber holder
capable of holding 2 cables at $\phi 7\text{mm}$ diam. each

Features

- Can hold up to 2 cables of $\phi 7\text{mm}$
- Accommodates optical branch modules in limited spaces. Holder prevents accidental release of modules.

Material

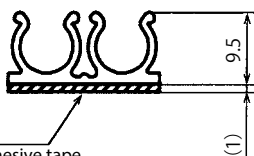
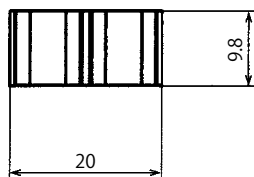
- Nylon 66 (Color : Natural)

UL94 V-2

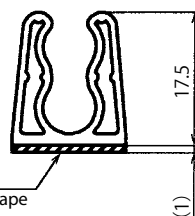
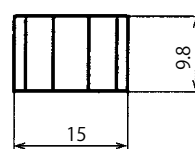


Adhesive tape mounting

OFDM-0702H-R



OFDM-0702V-R



Part No.	Std. Package
OFDM-0702H-R	100 pcs.
OFDM-0702V-R	

(Unit : mm)

FIBER HOLDER / OFHR-1716R,L

OPTICAL



Snap-mount optical fiber clip to minimize
bend radius cables

Features

- Holds cables in array with no load applied.
- 16 cables of $\phi 1.7 \sim 2\text{mm}$ can be held.
- Maintains minimum bend radius of optical fiber cables.

Material

- POM (Color : Natural)

UL94 HB

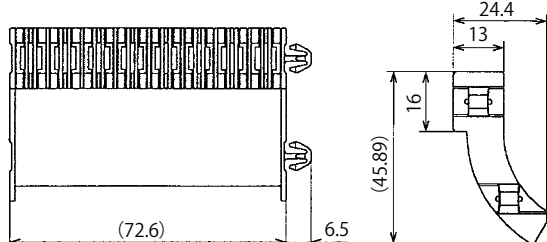


Snap Mounting

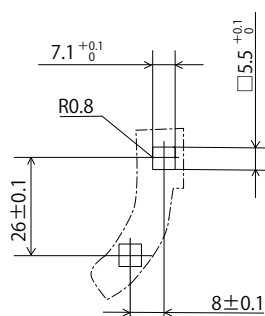


Odd-shaped hole

OFHR-1716R



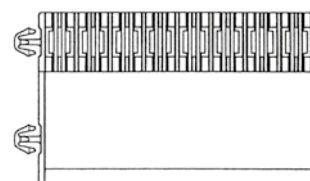
Specification drawing



Panel thickness : 1~1.8

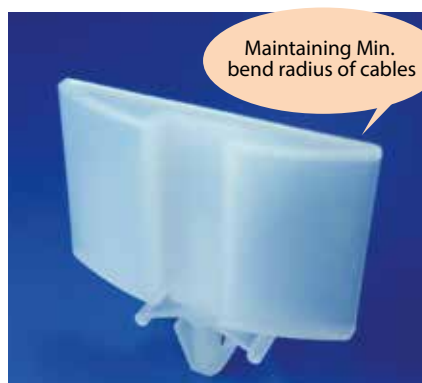
OFHR-1716L

Configuration of "L" type is symmetrical
to that of "R".



Part No.	Std. Package
OFHR-1716R	50 pcs.
OFHR-1716L	

(Unit : mm)



Maintaining Min.
bend radius of cables

Snap-mount winding guide for optical fiber cables

Features

- Long optical fiber cables are kept in place by bending with no damage applied.
- Can be used in combination with WS and/or LWS.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

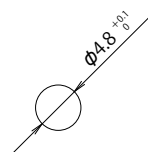
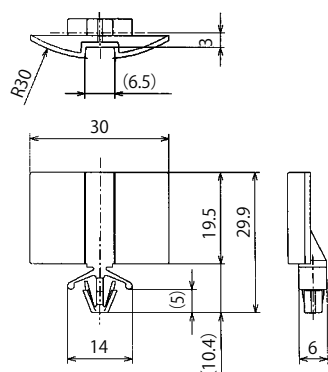


Snap Mounting



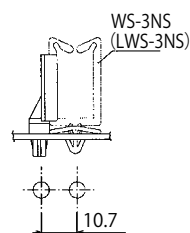
Round hole

Specification drawing



Panel thickness : 0.8~2.0

Reference specification



Part No.	Mounting hole size	Panel thickness	Std. Package
WSW-3	$\phi 4.8^{+0.1}_{-0}$	0.8~2.0	100 pcs.

(Unit : mm)

STORAGE BOBBIN / OFSB-8010



Slide tray

Optical fiber cable reel

Features

- Reels up fiber cables with the bend radius in R30.
- Bobbin cover can open and close.
- Easy maintenance by the bobbin tray.

Material

- ABS (Color : Black)

UL94 V-2



Snap Mounting (Storage tray)

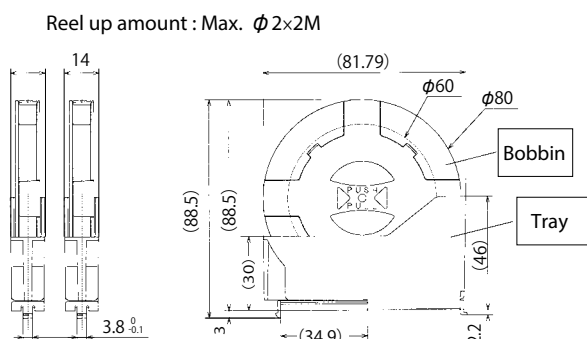
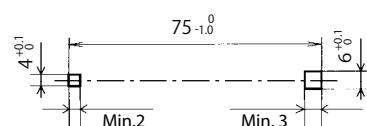
(Bobbin can be mounted with screw)



Odd-shaped hole

Specification drawing

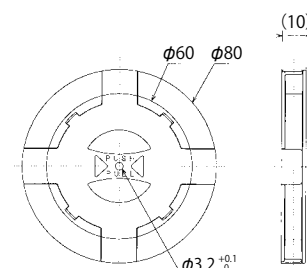
Panel thickness : 1

Reel up amount : Max. $\phi 2 \times 2M$

Bobbin



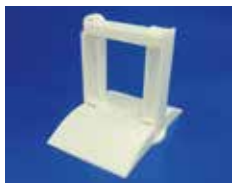
(OPEN)



(CLOSE)

Part No.	Configuration	Mounting hole size	Panel thickness	Std. Package
OFSB-8010S	Bobbin + tray	Refer to Specification drawing	1 ± 0.1	10 set.
OFSB-8010	Bobbin	—	—	10 pcs.

(Unit : mm)



Winding optical fiber cable guide that combines with FXC

Features

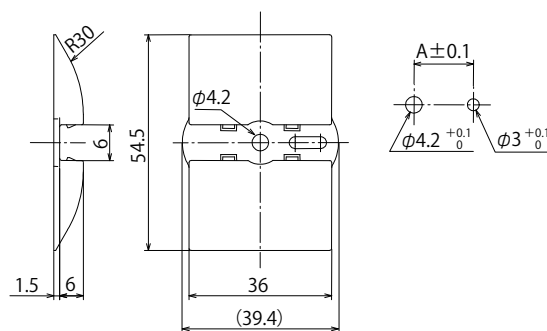
- In combination with FXC, maintains minimum bend radius of cables when wiring.

Material

- Nylon 66 (Color : Natural)

UL94 V-0

Specification drawing



FXC
Dedicated clamp for
FXCW-6040-V0

▶ 60

FXC Part No.	A
FXC-2030-V0	9
FXC-3240	15

(Unit : mm)

※ For details, please contact our sales department.

FLEXIBLE CLAMP / FXC

▶ P60

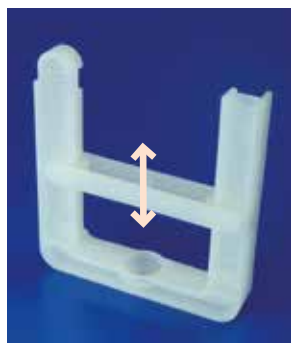
- Number of cables can be adjusted over a wide range.
- Quick operation with one hand.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

UL94 V-0



FK DUCT / FKD

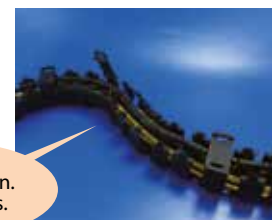
▶ P107

- Holds cables and allows them to bend in all 3D directions without causing damage.

Material

- FKD-10 / Nylon 6 (Color : Light gray)
- FKD-10K / Nylon 66 (Color : Black)

UL94 V-2

Maintains Min.
bend radius.

CABLE TIES

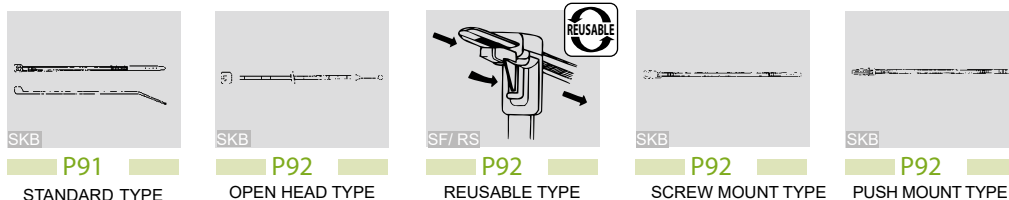
Plastic Type

Wide ranging lineup of cable ties

Bundling and securing wire/cable bundles



Bundling and securing wire/cable bundles (SK Binder)





Releasable snap-mount band that allows for easy access and maintenance of cables

Features

- Detachable snap and un-lockable band allow easy maintenance and disassembling.

Material

- Nylon66 (Color : Black / RSG-150E-BK, -190E-BK)
- Nylon66 (Color : Natural / RSG-100 V0, -130 V0)



Reusable Snap Mounting

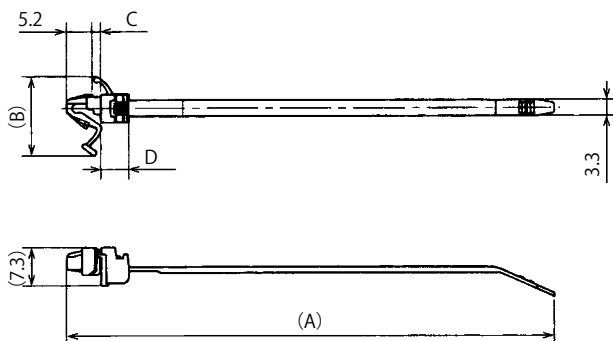


Round hole

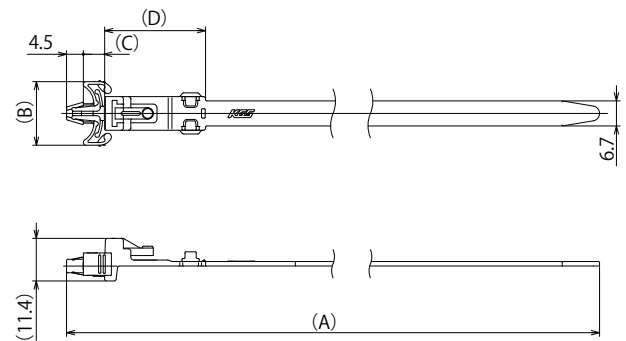
UL94 V-2

UL94 V-0

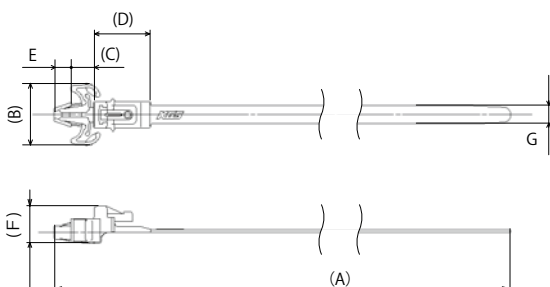
RSG-100V0,130V0



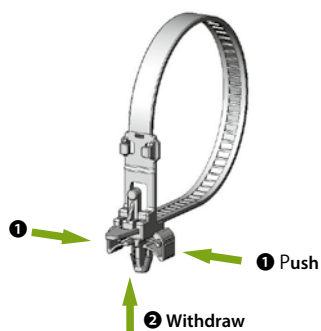
RSG-190E-BK



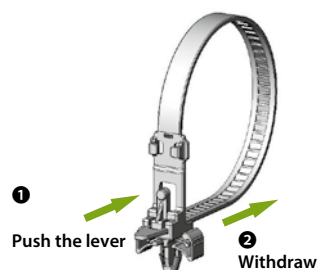
RSG-150E-BK



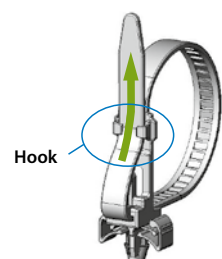
Snap removal



Bundle release



Holding remaining part



※RSG-190E-BK only

	Part No.	(A)	(B)	(C)	(D)	E	(F)	G	Mounting hole size	Panel thickness	Bundle diameter	Std. Package
UL	RSG-100 V0	100.0	16.2	1.8	5.9	5.2	7.3	3.3	$\phi 4.8^{+0.2}_0$	0.5~1.6	$\phi 1 \sim 20$	500 pcs.
	RSG-130-V0	133.5	17.9	2.7	6.2	5.2	7.3	3.3		0.6~2.4	$\phi 1 \sim 24$	
	RSG-150E-BK	149.3	16.0	5.9	15.0	4.4	9.5	4.7		0.5~2.3	$\phi 7 \sim 30$	100 pcs.
	RSG-190E-BK	195.2	17.0	5.7	27.0	4.5	11.4	6.7		0.5~2.3	$\phi 10 \sim 47$	

UL ...UL62275 recognized product

(Unit : mm)



Screw-mount band that allows for easy bundling of cables

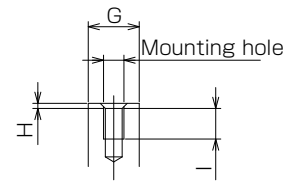
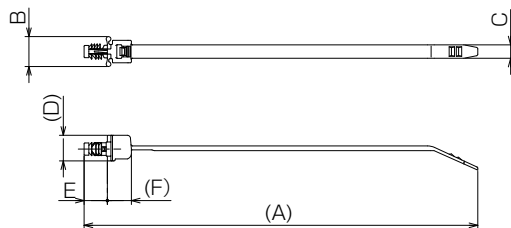
Features

- Plug-in mounting in screw hole is available without tool.
- Screw hole of M4 and M5 are available.
- Applying heat resistant aging material for the products that has AM-HT-BK at the end of the part number, both heat resistance and durability are performed.

Material

- Nylon 66 (Color : Black / VLSG-***-M*-AM-HT-BK) **UL94 V-2**
- Nylon 66 (Color : Natural / VLSG-130-M5) **UL94 V-2**

Installation specifications



Recommended mounting hole

Part No.	(A)	B	C	(D)	E	(F)	G	H	I	Mounting hole size	Bundle diameter	Std. Package
VLSG-100-M4-AM-HT-BK	99.9	7.6	3.4	6.5	5.9	6.1	$\geq \phi 10$	≤ 1	≥ 7	M4 screw hole (Thread pitch:0.7)	$\phi 1 \sim 20$	100 pcs.
VLSG-130-M5-AM-HT-BK	130.7	8.5	3.6	6.5	6.7	6.1	$\geq \phi 10$	≤ 1	≥ 8	M5 screw hole (Thread pitch:0.8)	$\phi 1 \sim 24$	100 pcs.
VLSG-130-M5	130.7	8.5	3.6	6.5	6.7	6.1	$\geq \phi 12$	≤ 1	≥ 8	M5 screw hole (Thread pitch:0.8)	$\phi 1 \sim 24$	500 pcs.

Operating temperature range: -40°C~125°C (VLSG-***-M*-AM-HT-BK)

(Unit : mm)

SNAP BAND / SG



Snap-mount band that allows for easy bundling of cables

Features

- Simultaneous securing and bundling of cables.

Material

- Nylon 66 (Color : Natural) **UL94 V-2 (V-0*)**



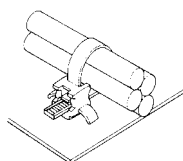
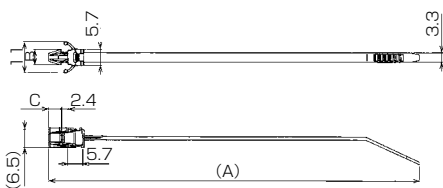
Snap Mounting



Round hole

※

For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Part No.	(A)	B	C	Mounting hole size	Panel thickness	Bundle diameter	Std. Package
SG-110	110	6.2	3.5	$\phi 4.8^{+0.2}_0$	0.5~2.0	$\phi 1 \sim 20$	500 pcs.
SG-130	132	5.4	4.5	$\phi 4.0^{+0.2}_0$		$\phi 1 \sim 24$	

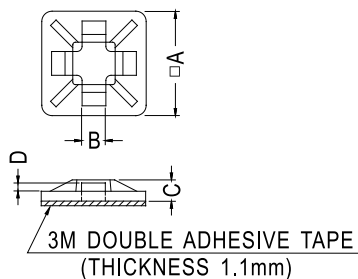


UL ...UL62275 recognized product

(Unit : mm)



DN



Cable tie mount with adhesive tape

Features

- Can be mounted with adhesive tape

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

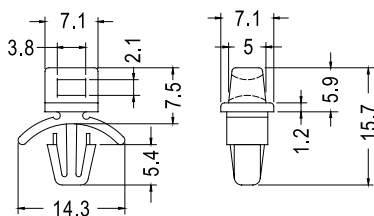
Std. Package: 1000 pcs.

Part No.	A	B	C	D
DN-13	13	3.2	3.2	1.3

(Unit: mm)



DDNF-1



CHASSIS Ø4.8
THICKNESS 0.8~2.0

(Unit: mm)

Snap-mount cable tie

Features

- Can be mounted with snap on PCB



Snap Mounting

Material

- Nylon 66 (Color: Natural)

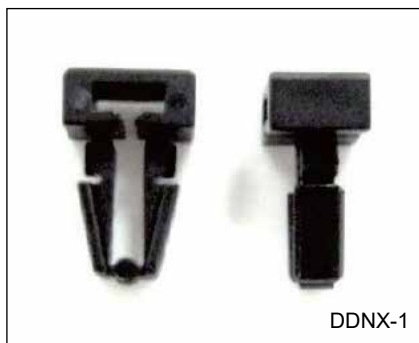
UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

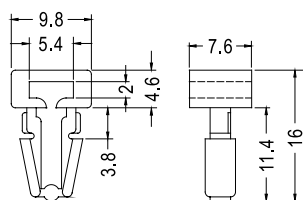


Round hole

Std. Package: 1000 pcs.



DDNX-1



PANEL HOLE DIA 6.4
PANEL THICKNESS 3.17 MAX

(Unit: mm)

Snap-mount cable tie

Features

- Can be mounted with snap on PCB

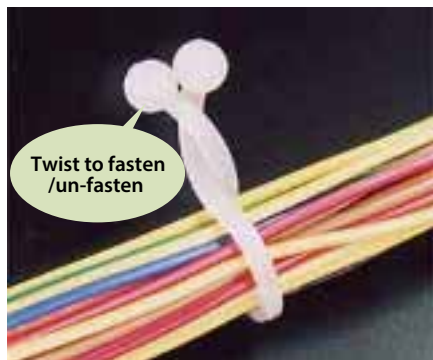
Material

- Nylon 66 (Color: Black)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

Std. Package: 1000 pcs.



Twist locking fastener

Features

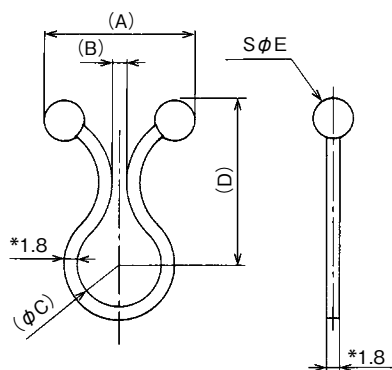
- Cost saving and easy locking /un-locking.

Material

- Nylon 66 (Color: Natural*)

UL94 V-2

* Color of OLS -150 BK is black.



* 1.9 mm for OLS-115 and OLS-150BK.

Part No.	(A)	(B)	(ϕ C)	(D)	S ϕ E	Std. Package
OLS-50	15.0	1.0	5.2	15.5	5.0	500 pcs.
OLS-80	20.2	1.1	8.2	20.1	5.7	
OLS-115	20.6	2.0	11.5	22.4	5.5	
OLS-150BK	21.0	2.0	15.0	23.75		

(Unit: mm)

WIRE LOCK / UM



Twist locking fastener

Features

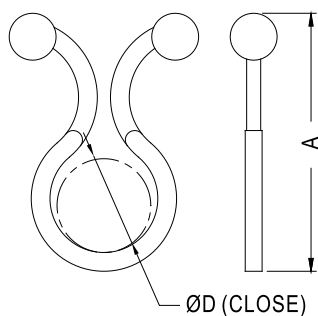
- Cost saving and easy locking/un-locking

Material

- Nylon 66 (Color: Natural)

UL94 V-2 (V-0*)

* For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Part No.	A	D	CLOSED (D)	Std. Package
UM-5	35.0	18.8	17.2	1000
UM-6	41.4	25.8	24.2	500
UM-7	42.0	22.0	19.5	
UM-8	16.5	5.6	5.0	
UM-9	30.0	11.0	9.7	
UM-13	32.5	13.2	11.5	
UM-28	55.5	29.0	26.8	

(Unit: mm)



Accessory that mounts onto aluminum frame for band, clamp, and fastener

Features

- It enables fixing by being inserted into aluminum frame and rotated.
- Fixing is performed by cable tie inserted into back and forth and around it.
- Installation of fastener such as clamp is possible onto the top face.

Material

- Polypropylen (Color : Natural)

How to mount onto Aluminium frame

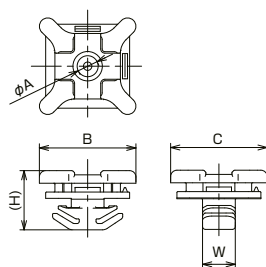
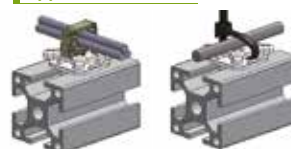


① Product is inserted into Aluminium frame groove.

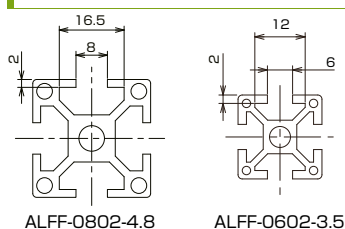
② Installation by a 90-degree rotation

※ Rotating installation around clockwise and counter clockwise are available.

Application



Installation Specifications (Applicable frame profile)



ALFF-0802-4.8

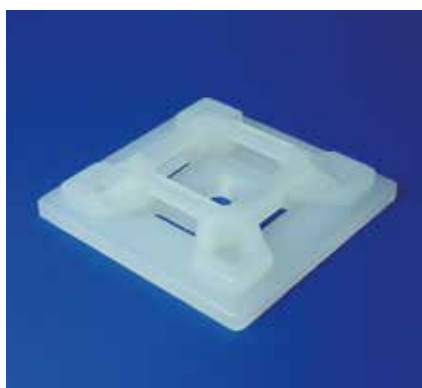
ALFF-0602-3.5

■ Aluminium frame length : 30mm and over Cable tie

Part No.	A	B	C	(H)	W	Applicable fastener specifications			
						Cable tie Width	Cable tie Thickness	Mounting hole diameter	Panel thickness
ALFF-0802-4.8	5	23	23	14.1	7.8	≤7.4mm	≤1.9mm	φ 4.8	2.0
ALFF-0602-3.5	3.5	16	16	11.1	5.8	≤5.2mm	≤1.6mm	φ 3.5	1.6

(Unit : mm)

CABLE TIE MOUNT / TMS



Cable tie mount with adhesive or screw-mount options

Features

- Can be mounted with either screw or adhesive tape.
- Cable tie can enter from any of four directions.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

(Resin portion of the body)

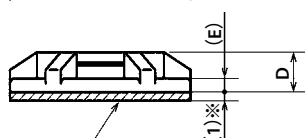
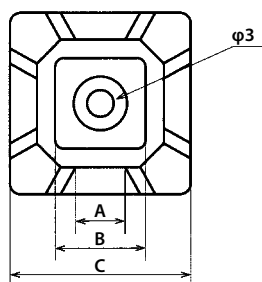


Adhesive tape mounting

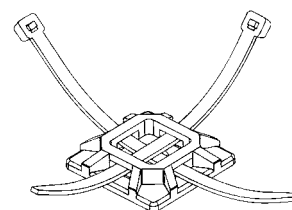


Screw mounting

(Screw type has "No adhesive backing" at the end of Part No.)



Double sided adhesive tape
(TMS-20-R • TMS-30-R) ※ 1.3mm for TMS-30-R.



Part No.	A	B	C	D	(E)	Screw (Small flat head screw)	Cable tie	Std. Package
TMS-20-R	5.2	10.0	20.0	4.5	1.5	---	Width Max 5.0	200 pcs.
TMS-20 No adhesive backing						M2.5	Thickness Max. 1.5	
A TMS-30-R	8.2	12.0	30.0	6.0	2.0	---	Width Max 8.0	
TMS-30 No adhesive backing						M2.5~M3	Thickness Max. 2.0	

(Unit : mm)



Plug-in cable tie mount that insets into screw holes

Features

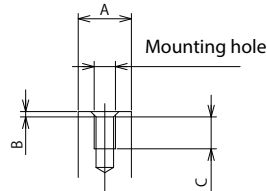
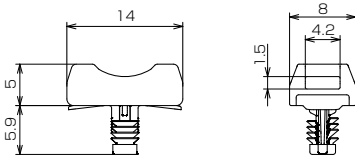
- Plug-in mounting in screw hole is available without tool.

Material

- Nylon 66 (Color : Natural)

UL94 V-2

Installation specifications



Recommended mounting hole

Part No.	A	B	C	Bundle diameter / Cable tie size	Mounting hole size	Std. Package
VLMS-1408-M4	$\geq \phi 15$	≤ 1	≥ 7	Max thickness 1.3×Width 4	M4 screw hole (Thread pitch:0.7)	100 pcs.

(Unit : mm)

BUNDLE BAND / KB



Adjustable band that can be cut to a desired length

Features

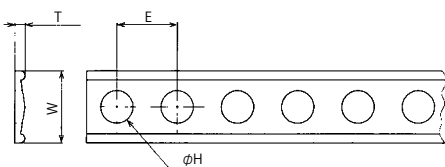
- Can be cut to required length out of a rolled band. Economical and minimizes waste.
- Available in four band widths, as well as four kinds of mounting accessories.

Material

- Nylon 6※ (Color : Black)

※ Mount B is made of PP (Color: Black).

KB-07 ~16

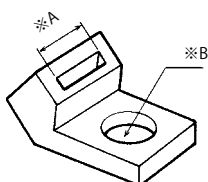


Part No.	W	T	E	ϕH	Stopper and Mount	Std. Package
KB-07 / Black	7.1	0.9	6.0	3.2	Snap button,Mount A	2m×50 pcs.
KB-13 / Black	13.0	1.6	10.0	5.5	Snap button,Mount A	5m×10 pcs.
KB-16 / Black	16.0	1.9	12.5	6.5	Buckle	

(Unit : mm)

Stopper and Mounts for KB

■ Mount A / For KB-07 · KB-13



Secures bundled wires/cables on a panel or wall.

※Dimension A

※Dimension B

KB-07 8.5 mm

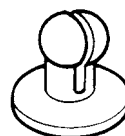
KB-07 ϕ4.2 mm

KB-13 16 mm

KB-13 ϕ5.2 mm

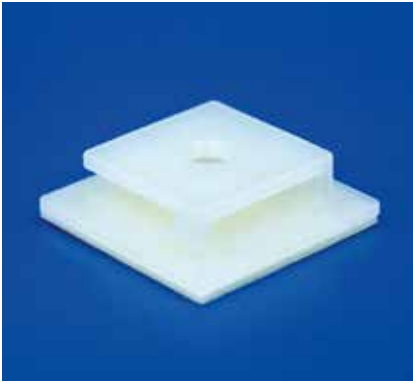
Std. Package :100pcs.

■ Snap button (Stopper) / For KB-07 · KB-13



Easy and fast mount/dismounting. One end of the band is fixed on the button, and a wire/cable bundle is secured by snapping the hole into the button.

Std. Package :100pcs.



Clamp base for fastening member without mounting hole

Features

- Our fastener products are applicable fixing with the product.
- Hook and loop fastener applicable in both directions equipped for optical fiber bundle.

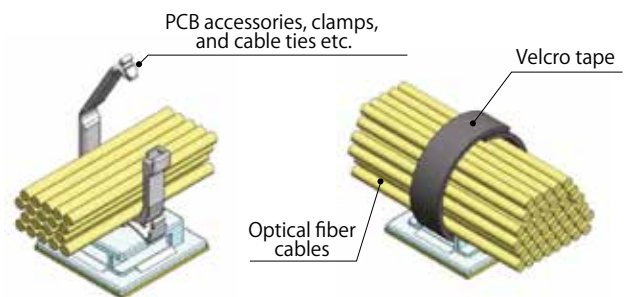
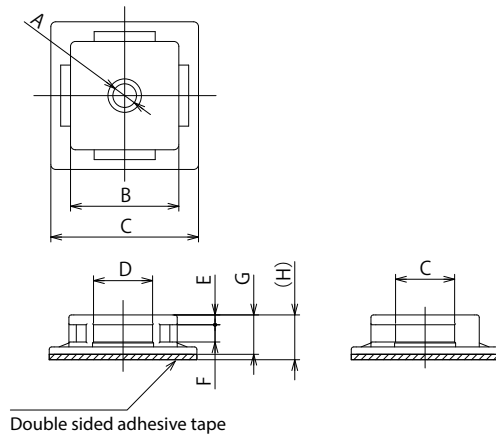
Material

- Nylon 66 (Color : Natural)

UL94 V-2

(Resin portion of the body)

Application examples



Part No.	A	B	C	D	E	F	G	(H)	Applicable fastener specifications			Std. Package
									Cable tie Thickness	Mounting hole diameter	Panel thickness	
OFTMS-30-R	4.8	22	30	12	2	3.5	8	9.1	≤2.0	φ4.8	2.0	100 pcs.

(Unit : mm)



Releasable beaded tie for easy bundling and removal of cables

Features

- Reusable beaded tie, easy fastening and releasing.

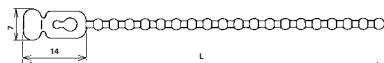
Material

- Refer to the table below since the material varies for each Part No.
Only nylon type is UL94 V-2 recognized.

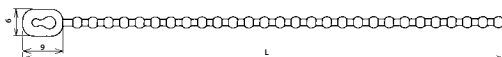
UL94 V-2

How to handle

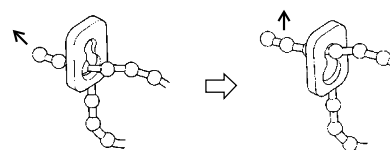
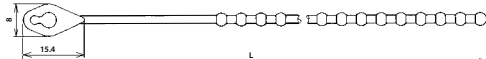
NS-80



N-108, P-108



N-255



Part No.	L	Material	Bundle diameter	Color	Std. Package
NS-80	81	Nylon 66	ϕ 2~26	Natural	1,000 pcs
N-108	108	Nylon 6	ϕ 12~73	Black	500 pcs
N-255	255			Natural	1,000 pcs
P-108	108	Polyethylene	ϕ 2~26	Natural	500 pcs

(Unit: mm)

Cables Ties

SOFT TIE / FX-200



Releasable beaded tie for easy bundling and removal of cables

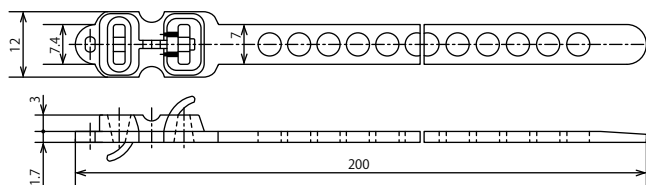
Features

- Elastic material secures bundle wires/cables softly.
- Easy bundling and releasing. Double loop fastening is possible.
- Applicable to bundle diameters 3-45mm.

Material

- Polyester elastomer (Color : Dark blue,Black)

UL94 HB



(Unit : mm)

Std. Package: Dark blue : 100
: Black : 5,000

Application example



Can secure in double loops

Securing optical fiber cables

- Elastomer fastens optical fiber cables safely and securely.
- Supports a wide range of bundle diameters and accommodates adjustment of the number of cables.

Plastic type



Features

- Various application use for bundling wires, cables and hoses (tubes) etc.
- A range of variations are available to meet requirements.

Plenty of the variations are available in addition to the products in this catalog, as well as in other materials and colors.

● Please contact our sales department for details.

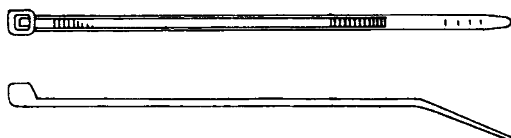
Standard type

Material

- Nylon 66 (Color: Natural)

UL94 V-2

A type



B type



	Part No.	Configuration type	Max bundle diameter	Length	Width	Loop tensile strength (kgf)	Std. Package
UL	SKB-85mm	A	ϕ 18	85	2.2	10	1,000 pcs.
UL	SKB-80M			80	1.9		
UL	SKB-1M		ϕ 21	100	2.5	9	
UL	SKB-1.5M			ϕ 35			
UL	SKB-2M		ϕ 37	145	3.4	12	
UL	SKB-2.2M			ϕ 58			
UL	SKB-2.5M		ϕ 70	200	2.6	12	
UL	SKB-2.8M			275			
UL	SKB-3M	B	ϕ 75	282	4.5	30	1,000 pcs.
UL	SKB-3M		ϕ 50	185	4.8	42	
UL	SKB-3.5M		ϕ 70	250	5.0	32	100 pcs.
UL	SKB-4M		ϕ 100	365	7.8	55	
UL	SKB-5M						

UL ---UL1565 recognized product

(Unit: mm)

Open head type

Material

- Nylon 66 (Color: Natural)

UL94 V-2



Easy operation!

Insert the end of the strip into the open head to bundle.



	Part No.	Max bundle diameter	Length	Width	Loop tensile strength (kgf)	Std. Package
UL	SKB-2	φ 32	154	3.4	14	1,000 pcs.
UL	SKB-3	φ 44	186	4.0	20	

UL ---UL1565 recognized product

(Unit: mm)

Reusable type



Material

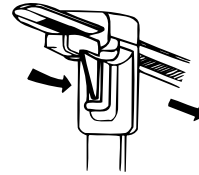
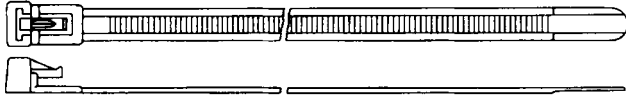
● Nylon 66 (Color: Natural)

UL94 V-2

SF-150R



RS



	Part No.	Max bundle diameter	Length	Width	Loop tensile strength (kgf)	Std. Package
UL	SF-150R	φ 40	150	6.9	30	3,000 pcs.
	RS-145	φ 38	145	7.3	35	1,000 pcs.
	RS-250	φ 70	250			

UL ...UL1565 recognized product

(Unit: mm)

Screw mount type

Material

● Nylon 66 (Color: Natural)

UL94 V-2



	Part No.	Max bundle diameter	Length	Width	Loop tensile strength (kgf)	Mounting hole size	Std. Package
UL	SKB-145F	φ 32	145	3.5	16	φ 4.5	1,000 pcs.

UL ...UL1565 recognized product

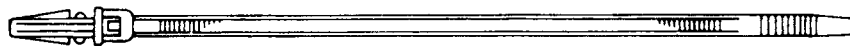
(Unit: mm)

Push mount type

Material

● Nylon 66 (Color: Natural)

UL94 V-2



	Part No.	Max bundle diameter	Length	Width	Loop tensile strength (kgf)	Mounting hole size	Std. Package
UL	SKB-145P	φ 32	157	3.5	16	φ 4.8	1,000 pcs.

UL ...UL1565 recognized product

(Unit: mm)

Cables Ties

Plastic type

GROMMETS & BUSHINGS

Edge protection

Protects cables against sharp edges of chassis



P95
FLEXIBLE INSULATING
BUSHING



P95
GROMMET



P96
FLEXIBLE INSULATING
BUSHING WITH
ADHESIVE



P96
EDGING



P97-100
LOCK EDGING
SADDLE



P103
HOLE PLUGS



P103
ONE-TOUCH
BUSHING

Securing with protection against dust, water, damage

Cables passing through panels are protected against dust, water, damage and held firmly

Protection and securing



P101
YK BUSHING

Securing with protection against dust, water, damage



P102
DUST PROOF
BUSHING



P102
DUST PROOF
BUSHING

Securing with protection against dust, water, damage (For cables, passing through panels)



P104
WATER PROOF
COVER



Flexible bushing to protect cables from edges of panel

Features

- Protects cables against sharp edges of panels and chassis.
- Flexibility allows installation on a variety of shaped holes.



Insertion Mounting

Cutting available

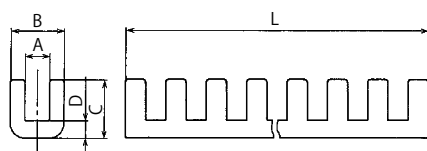
Please contact our sales department for details.

Material

- Nylon 6 (Color : Natural)

UL94 V-2 : KG-008 ~032

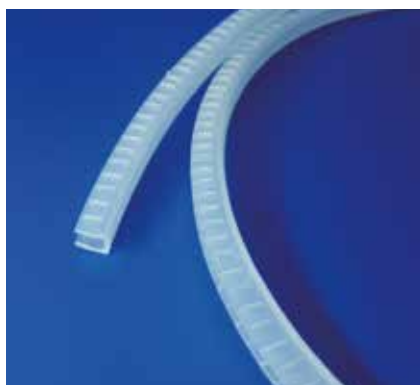
UL94 HB : KG-045 ~ ~132



Part No.	Panel thickness	A	B	C	D	L	Std. Package
KG-008	0.8±0.1	0.9	2.9	4.0	1.2	250.6	100 pcs.
KG-010	1.0±0.1	1.1	3.1				
KG-012-2	1.2±0.1	1.3	3.3				
KG-016	1.6±0.1	1.7	3.7				
KG-024	2.4±0.1	2.4	4.4				
KG-032	3.2±0.1	3.4	5.5	6.0	2.0	320.0	
KG-045	4.9±0.1	5.0	8.2				
KG-062	6.4±0.1	6.5	9.7	6.5			
KG-082	8.1±0.1	8.2	11.4				
KG-107	10.6±0.1	10.7	13.9				
KG-132	13.1±0.1	13.2	16.4				

(Unit : mm)

GROMMET / CSG



100-m grommet strip that protects cables from edges of panel

Features

- Protects cables from chafing against sharp edges of panels and chassis.
- Economical long type.
- Fits well even to corners.



Insertion Mounting

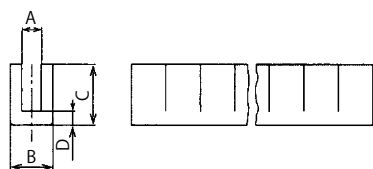
Cutting available

Please contact our sales department for details.

Material

- Nylon 6 (Color : Natural)

UL94 HB



Part No.	Panel thickness	A	B	C	D	Std. Package
CSG-012	1.2	1.3	3.3	5.0	1.0	100m pcs.
CSG-016	1.6	1.7	3.7			
CSG-024	2.3	2.4	4.4	5.2	1.2	
CSG-032	3.2	3.3	5.3			

(Unit : mm)



Grommet and edging strip with adhesive

Features

- Easy and fast installation with adhesive, previously attached in the groove.
- Firm and easy securing.



Insertion Mounting

Cutting available

Please contact our sales department for details.

※ Please refer to the specifications below.

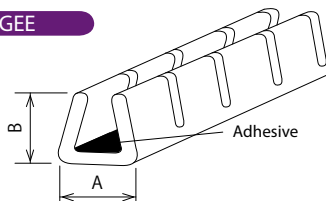
Material

- Polyethylene (Color : Natural)
- Weather-resistant Polyethylene (Color : Black)

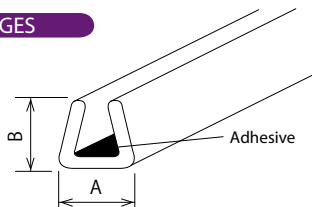
UL94 HB

UL94 HB

GEE



GES



Part No.	Panel thickness	A	B	Material	Std. Package
GEE62F-A-C	0.9~1.6	3.3	4.1	Polyethylene	30.48m
GEE99F-A-C	1.57~2.5	4.3	4.7		
GEE144F-A-C	2.5~3.7	5.4	5.7		
GEE62F-A-CO	0.9~1.6	3.3	4.1	Weather-resistant Polyethylene	30.48m
GEE99F-A-CO	1.6~2.5	4.3	4.7		
GEE144F-A-CO	2.5~3.7	5.4	5.7		
GES62F-A-C	0.9~1.6	3.3	4.1	Polyethylene	30.48m
GES99F-A-C	1.6~2.5	4.3	4.7		
GES144F-A-C	2.5~3.7	5.4	5.7		
GES62F-A-CO	0.9~1.6	3.3	4.1	Weather-resistant Polyethylene	30.48m
GES99F-A-CO	1.6~2.5	4.3	4.7		
GES144F-A-CO	2.5~3.7	5.4	5.7		

(Unit : mm)

EDGING / CE



Edge protection for cable at panel edges

Features

- Protects cables against sharp edges of panels and chassis.
- Economical long type.
- For straight edges and square holes.



Insertion Mounting

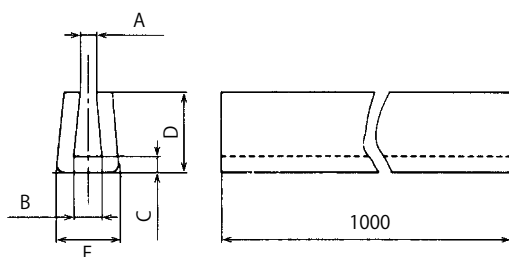
Cutting available

Please contact our sales department for details.

Material

- Nylon 6 (Color : Natural)

UL94 HB



Part No.	Panel thickness	A	B	C	D	E	Std. Package
CE-010L	0.6~0.8	0.3	1.0	1	5	3.0	100 pcs.
CE-012SN		0.5	1.3			3.3	
CE-012N	1.0~1.2	0.6				3.7	
CE-016N	1.2~1.5	0.9	1.7			4.4	
CE-024N	1.6~2.3	1.2	2.4			5.3	
CE-032N	2.3~3.2	1.5	3.3				

(Unit : mm)

※ For products designated with "N" at the end of the part No, the "N" will be eliminated when they are custom-cut. For non-standard products, please contact our sales department



Edge protection cable clamp

Features

- Easy insertion of cables through openings and protection of cables from sharp edges of chassis etc.



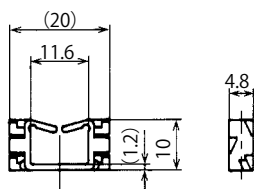
Insertion Mounting

Material

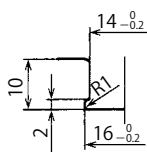
- Nylon 66 (Color : Natural)
 - UL94 V-2 : EDS-1~3
 - UL94 V-0 : EDS-4, -0607M

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

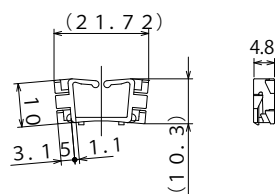
EDS-1 ~3



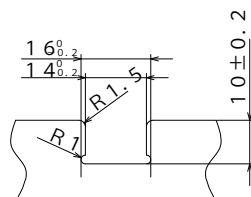
Specification drawing



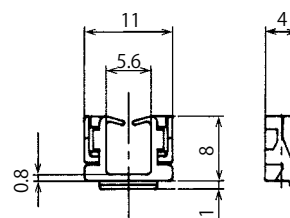
EDS-4



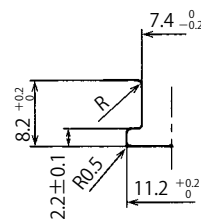
Specification drawing



EDS-0607M



Specification drawing



Part No.	Panel thickness	Color	Std. Package
EDS-1	0.8~1.2	Black	100 pcs.
EDS-2	1.2~1.6	Natural	
EDS-3	1.6~2.0	Gray	
EDS-4	0.8~2.0	Natural	1,000 pcs.
EDS-0607M	0.8~1.2	Black	

UL ...UL1565 recognized product

(Unit : mm)



Edge protection cable clamp

Features

- Easy insertion of cables through openings and protection of cables from sharp edges of chassis etc.



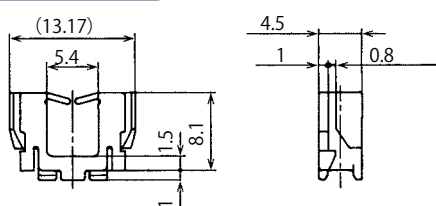
Insertion Mounting

Material

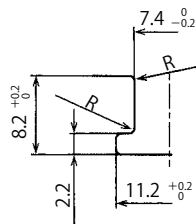
- Nylon 66 (Color : Natural) **UL94 V-2 (V-0※)**

※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)

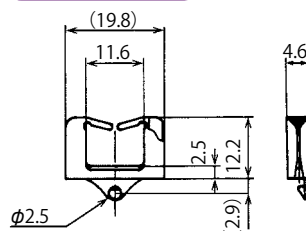
EDS-0607U



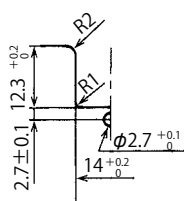
Specification drawing



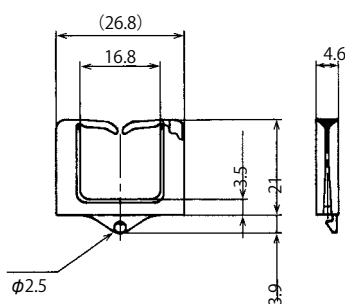
EDS-1208U



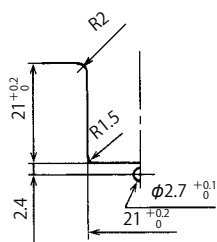
Specification drawing



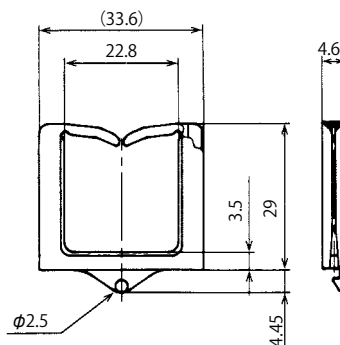
EDS-1717U



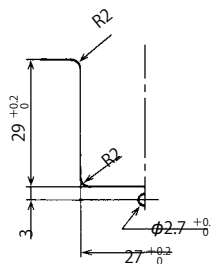
Specification drawing



EDS-2323U



Specification drawing



Part No.	Panel thickness	Color	Std. Package
EDS-0607U	0.8~2.0	Natural	100 pcs.
EDS-1208U	0.8~1.6		
EDS-1717U			
EDS-2323U			500 pcs.



UL ...UL1565 recognized product

(Unit : mm)



Edge protection locking cable clamp

Features

- Lock prevents cable bundles from release.
- Original structure of EDS~L-V0 protect cables from damage.



Insertion Mounting

Material

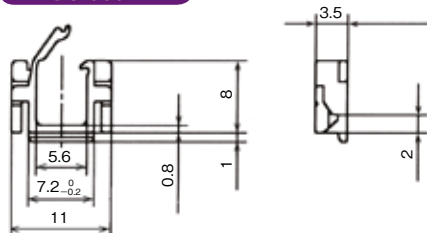
- Nylon 66 (Color : Natural)
(Color : Black)

UL94 V-0

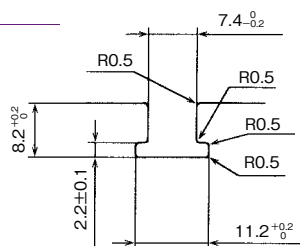
UL94 V-0

: EDS-17L, -25L

EDS-0607L



Specification drawing

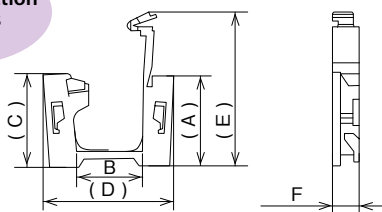


Part No.	Mounting hole size	Panel thickness	Std. Package
EDS-0607L	Refer to Specification drawing	0.8~1.6	1,000 pcs.

UL ... UL1565 recognized product

(Unit : mm)

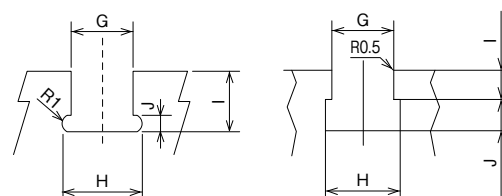
EDS~L-V0

Bite-in protection
for cablesInner round corners protect
cables against damage

Specification drawing

•EDS-1L-V0

•EDS~L-V0



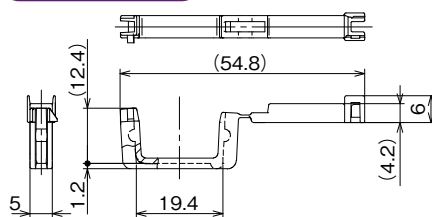
※ EDS-1L-V0 has a slightly different configuration from the others

	Part No.	(A)	B	(C)	(D)	(E)	F	Panel thickness	G	H	I	J	Std. Package
	EDS-1L-V0	10.0	11.6	10.0	20.0	18.6	4.8	0.6~1.2	14 ⁰ _{-0.2}	16 ⁰ _{-0.2}	10	2	500 pcs.
UL	EDS-0704L-V0	7.1	7.0	7.8	17.9	16.9	3.8	0.6~2.0	12.8±0.1	13.8±0.1	2.7±0.1	3.4 ^{+0.2} ₀	
UL	EDS-1010L-V0	15.2	10.5	15.9	21.2	25.7	4.2		14±0.1	17±0.1	6.5±0.1	7.5 ^{+0.2} ₀	
UL	EDS-1710L-V0	15.1	17.8	15.9	29.1	32.9			22±0.1	25±0.1	6.0±0.1	8.0 ^{+0.2} ₀	
UL	EDS-1720L-V0	24.6	17.8	26.3	31.5	42.6			22±0.1	25±0.1	16±0.1	8.0 ^{+0.2} ₀	

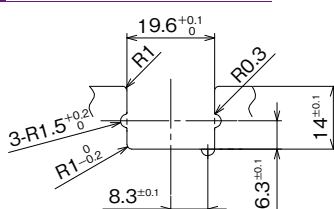
UL ... UL1565 recognized product

(Unit : mm)

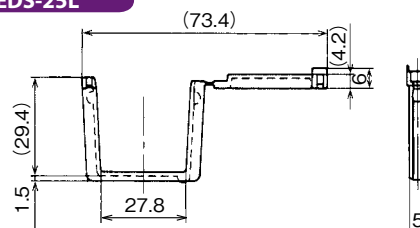
EDS-17L



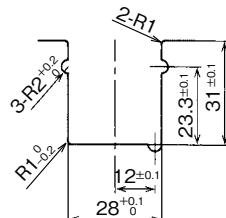
Specification drawing



EDS-25L



Specification drawing



Part No.	Panel thickness	Std. Package
EDS-17L	0.8~2.2	500 pcs.
EDS-25L		

UL ... UL1565 recognized product

(Unit : mm)



Edge and slot protection locking cable clamp

Features

- Available for protection of through hole edge.
- Making easier to fix (Refer to how to install).
- Simplified fixing hole (Refer to Assembly drawing).
- Space-saving design so that protruded part is small when fixing.
- UL94 V-0 recognized materials are used.
- Prevent product removal from fitted panel caused by cable load.



Insertion Mounting

Material

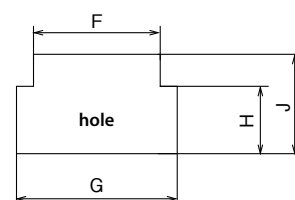
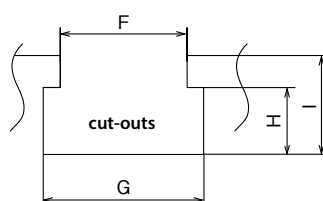
- Nylon 66 (Color : Natural)

UL94 V-0

Specification drawing

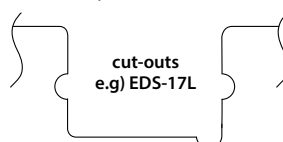


new products



(t0.6~2.0mm)
(panel thickness : t0.6~2.0mm)

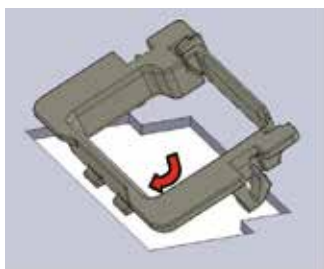
conventional products



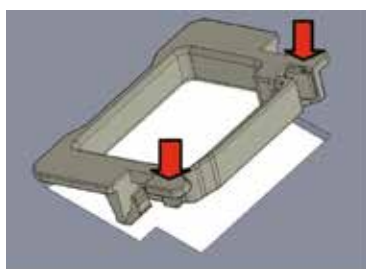
Part No.	(A)	B	(C)	D	E	Fixing hole size				
						F	G	H	I	J
EDS-0305LS-V0	3.7	15.8	5.8	8.8	4.2	10	16.5	3.5	8.5	9.0
EDS-1005LS-V0	10.2	22.3	5.8			16.5	23	3.5		
EDS-2005LS-V0	20.2	32.3	5.8			26.5	33	4.2		
EDS-3005LS-V0	30.2	42.8	5.8			36.5	43.5	4.2		
EDS-4505LS-V0	45.2	57.8	5.7		3.4	51.5	58.5	4.2		
EDS-1015LS-V0	10.2	21.8	15.1	18.3	4.2	14.5	20.5	12.6	18.5	19.0
EDS-2015LS-V0	20.2	31.8	15.1			24.5	30.5	12.7		

(Unit : mm)

How to install



STEP.1 Hooked claw on the back of fixing panel



STEP.2 Press the arrow points

Bushing for power cord that provides a secure grip

Features

- Flexible YK can hold cables in a Min. bend radius to protect wires/cables from damaging by sharp bend.



Insertion Mounting



Odd-shaped hole

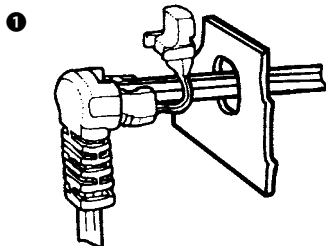
Material

- Nylon 6 (Color : Black, White ※)

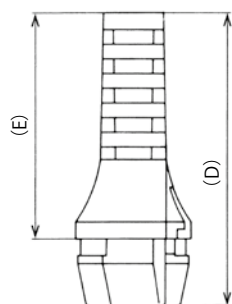
UL94 V-2

※ With regard to lot size and lead time for the white type, please contact us.

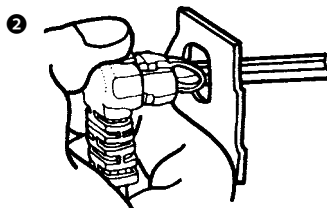
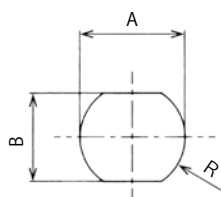
How to install



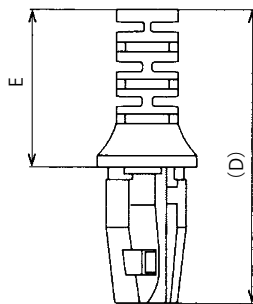
YK-



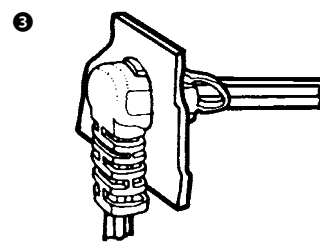
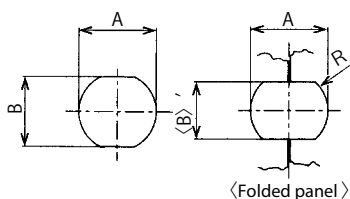
Specification drawing



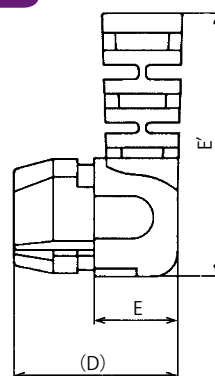
YKA-1



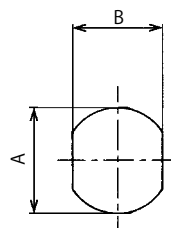
Specification drawing



YKL-1



Specification drawing



Part No.	Applicable wire (dimensions)	Mounting hole specifications				(D)	(E)	Std. Package
		A	B (B')	R	Panel thickness			
YK-1	NNFF0.75mm ² (3.3×6.6)	14.4 ^{+0.1} ₀	12.0 ^{+0.2} ₀	7.2 ^{+0.1} ₀	2.0	40.0	30.8	500 pcs.
	NNFF1.25mm ² (3.6×7.2)	14.8 ^{+0.1} ₀						
YK-2	Vinyl wire 0.75mm ² (2.8×5.6)	φ 10.9±0.1	9.5	—	2.4	23.0	14.0	100 pcs.
YKA-1	VCTFK0.75mm ² (4.5×6.2)	14.0	13.4 (10.9)	7.2	2.3 (1.2)	56.0	30.0	
	VCTFK1.25mm ² (5.4×8)	14.5	13.3 (10.9)	7.25				
YKL-1	NNFF0.75mm ² (3.3×6.6)	12.7	11.1	6.6 ^{+0.1} ₀	2.0 ^{+0.05} _{-0.1}	20.4	10.4(E'=32.8)	500 pcs.
	NNFF1.25mm ² (3.6×7.2)	13.2						

※ Dimensions in < > are for folded panel.

※ Since outside diameter and hardness varies in wire manufacture, please confirm the mounting fitness before the purchase.

(Unit : mm)



Dust resistant plug that can be pierced with round cables

Features

- Consists of soft and hard components for tight hold and secure fixation.
- Can be used as a blind bushing.



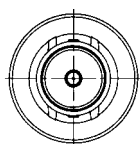
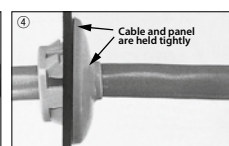
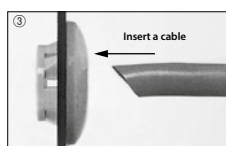
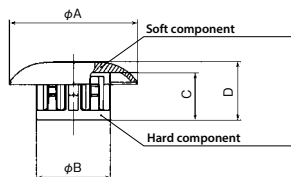
Insertion Mounting



Round hole

Material

- Soft component : Polyurethane Elastomer (Color : Gray)
- Hard component : Polyurethane Resin (Color : Gray)



Part No.	φ A	φ B	C	D	Mounting hole size	Panel thickness	Applicable wire	Std. Package
DDB-1216	26.5	15	9.2	11.6	$\phi 16^{+0.2}_0$	1.0~3.2	φ 3~6	100 pcs.
DDB-1520	30.0	19	9.0	12.4	$\phi 20^{+0.2}_0$		φ 3~9	
DDB-2428	38.0	27	9.2	11.8	$\phi 28^{+0.2}_0$		φ 3~16	

(Unit : mm)

WATER PROOF BUSHING / WPB



Water resistant bushing for snap-mount clamp and spacer

Features

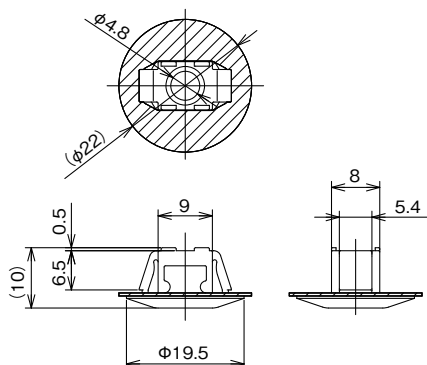
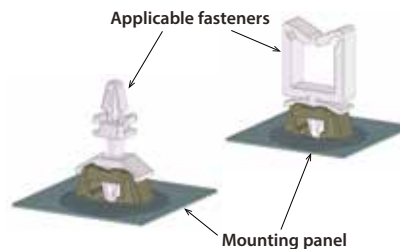
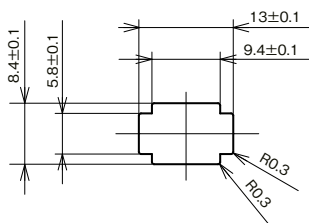
- Combination of resin and elastomer is resized water proof performance of IP X5 equivalent.
- Outdoor application is available with weather resistant material.
- Installation of fastener such as clamp, spacer, etc. are available.

Material

- Resin part : Nylon 66 (Color : Black)
- Sealing gasket : EPDM (Color : Black)

UL94 V-2

Installation specifications



Part No.	Panel thickness	Clamp, spacer, etc.		Std. Package
		Mounting hole size	Panel thickness	
WPB-20-BK	0.8~1.0	φ 4.8	2.0	100 pcs.

(Unit : mm)



Edge protection bushing for round slots

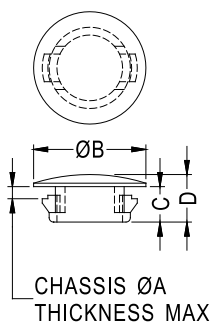
Features

- Snapped on PCB

Material

- Nylon 66 (Color: Black)

UL94 V-2



Part No.	A	B	C	D	Thickness	Std. Package
N04	4.8	6.35	4.5	5.5	1.6	2000
N06	6.4	7.6	4.5	5.6	1.6	2000
N09S	9.5	13.0	4.1	5.5	1.4	1000
N13,5	13.5	15.2	5.0	6.2	2.2	500
N16S	15.9	20.0	6.5	7.7	2.0	500

(Unit: mm)

ONE-TOUCH BUSHING / TB



Edge protection bushing for round slots

Features

- Firm cable protection with quick installation by snapping in a hole from one side.
- Four locks hold a wide range of panel thickness.



Insertion Mounting

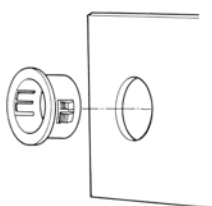
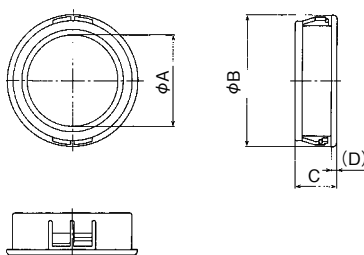


Round hole

Material

- Nylon 6 (Color : Black)

UL94 V-2



Part No.	φ A (Inner diameter)	φ B (Head diameter)	C	(D)	Mounting hole size	Panel thickness	Std. Package
TB-0813	8.0	15.0	10.4	1.4	$\phi 13.0^{+0.2}_{-0}$	0.8~3.2	100 pcs.
TB-9513	9.5	14.5	5.3	1		$1.6^{+0.15}_{-0}$	1,000 pcs.
TB-1116	11.0	19.0	11.0	1.4	$\phi 16.0^{+0.2}_{-0}$	0.8~3.2	100 pcs.
TB-1216	12.0	19.0	6.4	1.5	$\phi 16.0^{+0.1}_{-0}$	0.8~1.2	1,000 pcs.
TB-1520	15.0	23.0	11.0		$\phi 20.0^{+0.2}_{-0}$	0.8~3.2	100 pcs.
TB-1926	19.0	29.0	12.0		$\phi 26.0^{+0.2}_{-0}$		
TB-2533	25.0	36.0	11.5		$\phi 33.0^{+0.2}_{-0}$		
TB-2938	29.0	41.4	12.0		$\phi 38.0^{+0.2}_{-0}$		
TB-3140	31.0	44.0	12.5		$\phi 40.0 \pm 0.1$	2.3~4.5	
TB-3545	35.0	48.0	12.0		$\phi 44.5^{+0.2}_{-0}$	0.8~3.2	
TB-4049	40.0	49.0	10.0	2	$\phi 45.0 \pm 0.1$	$2.6^{+0}_{-0.1}$	

(Unit : mm)



Water and dust resistant cover for USB connectors

Features

- Water sealing cover of a socket.
- Cover with clamp portion prevents cables from releasing.

Material

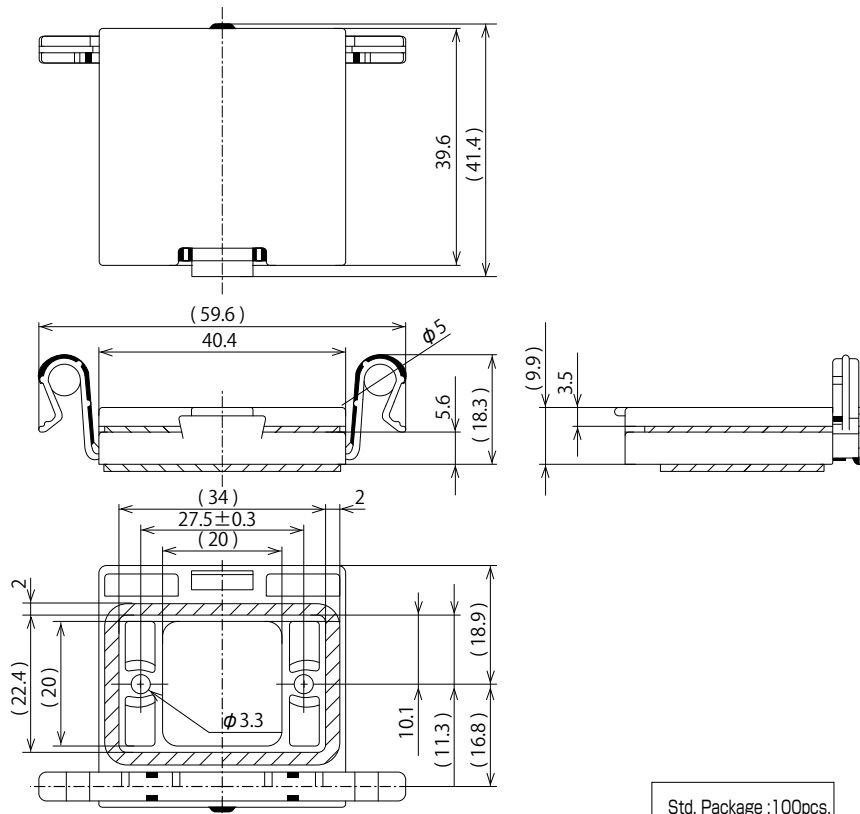
- Body / Polyacetal (Color : Black)
- Gasket / EPDM (Color : Black)



Screw mounting

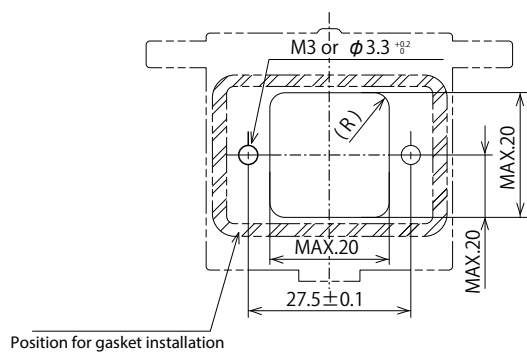
(Applicable screw : M3 Pan head screw)

UL94 HB



Std. Package : 100pcs.

Specification drawing



(Unit : mm)

WIRING TUBES & DUCTS

Tube

Covering cables to bundle and protect



SPP/ SPN/ SPF

P106

SPIRAL TUBE

Ducts

A line of connected ducts holds cables and allows them to move in 3-dimensions



FKD

P107

FK DUCT



Spiral tube to bundle and protect cables

Features

- Bundles and protects cables simultaneously.
- Easy cable bundling by twisting TUBE. Can be used to join or divide cable bundles.

Material

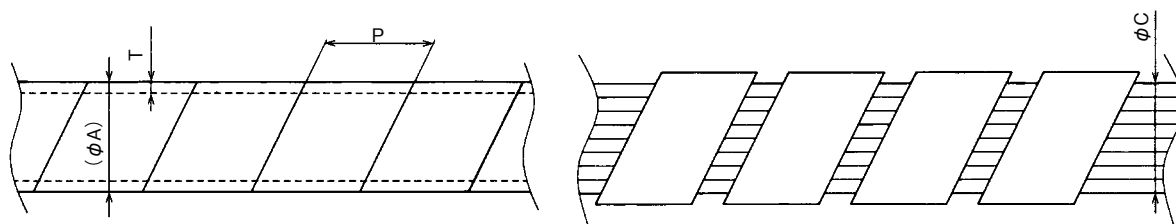
- Polyethylene (Color : Natural)
- Nylon 6 (Color : Natural)
- Fluorocarbon resin (Color : Natural)

Cutting available

Please contact our sales department for details.

: SPP	UL94 HB
: SPN	UL94 HB(V-0)*
: SPF	UL94 V-0

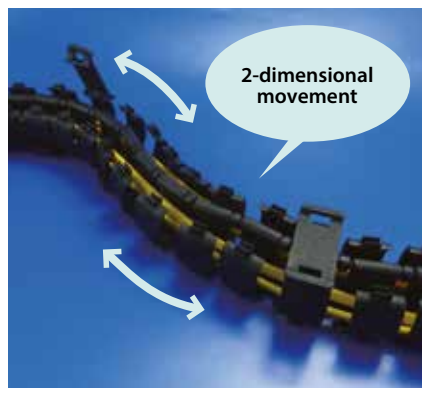
※ For V0 type, "V0" is added to the end of the part No.
(With regard to lot size and lead time, please contact us.)



Material	Part No.	Outer diameter φA	Thickness T	Pitch P	Bundle diameter φC	Std. Package
Polyethylene	SPP-04L	4.2	0.8	6.0	φ 3~ 7	100m
	SPP-06L	6.0	1.0	8.0	φ 4~12	
	SPP-08L	8.0	1.0	10.0	φ 6~18	
	SPP-11L	11.0	1.5	12.0	φ 8~25	50m
	SPP-12L	12.0	1.5	12.0	φ 9~28	
	SPP-13L	13.0	1.5	12.0	φ10~30	
	SPP-15L	15.0	1.5	15.0	φ12~35	25m
	SPP-18L	18.0	1.5	20.0	φ15~45	
	SPP-24L	24.0	2.0	22.0	φ20~60	
Nylon	SPN-04L	3.6	0.5	6.0	φ 3~ 7	100m
	SPN-06L	5.5	0.75	8.0	φ 4~12	
	SPN-08L	7.6	0.8	10.0	φ 6~18	
	SPN-11L	10.6	0.8	12.0	φ 9~28	50m
	SPN-15L	13.6	0.8	15.0	φ12~35	
	SPN-18L	16.6	0.8	20.0	φ15~45	
	SPN-24L	21.6	0.8	22.0	φ20~60	25m
	SPN-29L	27.0	1.0	28.0	φ25~75	
Fluorocarbon resin	SPF-04	4.2	0.8	6.0	φ 3~ 7	100m
	SPF-06	6.0	1.0	10.0	φ 4~10	
	SPF-12	12.0	1.5	12.0	φ 9~20	50m

※ Fluorocarbon resin SPIRAL TUBE is only made to order.

(Unit : mm)



Flexible cable duct

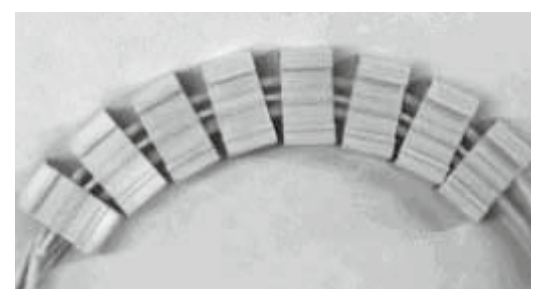
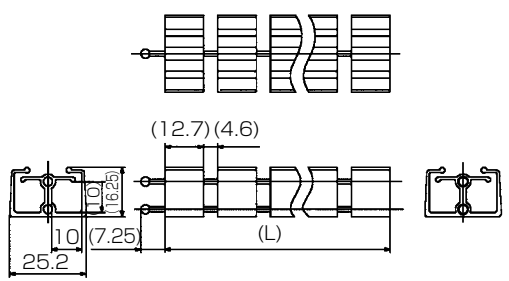
Features

- Allows cables to bend in all 3D directions.
- Maintains Min. bend radius for optical fiber cables.
- Can be connected in unit of one piece.

Material

- Nylon 6 (Color : Light grey) **UL94 V-2** : FKD-10
- Nylon 66 (Color : Black) **UL94 V-2** : FKD-10K

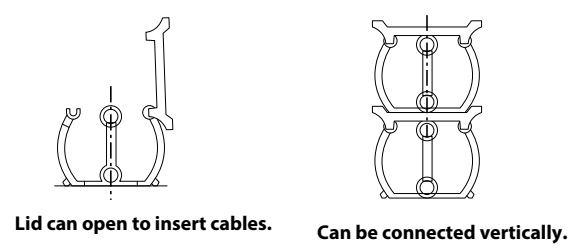
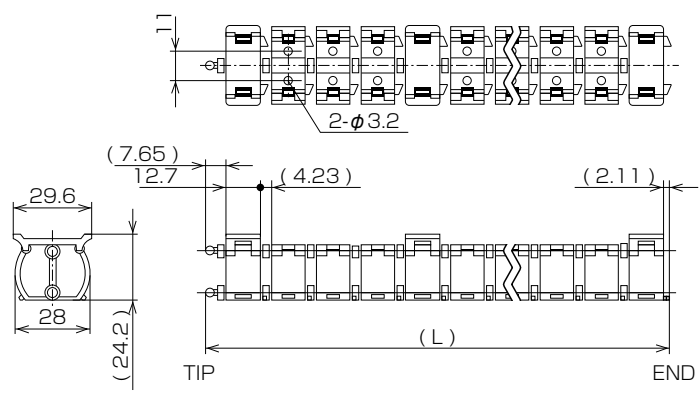
FKD-10



Part No.	Connection number n	Total length : L	Std. Package
FKD-10	58	(998.8)	10 pcs.
FKD-10-n*	n	$(12.7+4.6) \times n - 4.6$	※

※ Required connection numbers available, please contact our sales department for details. (Unit : mm)

FKD-10K



Lid can open to insert cables. Can be connected vertically.

Part No.	Connection number n	Total length : L	Std. Package
FKD-10K	59	(1004.4)	50 pcs.
FKD-10K-n	n	$(L)=16.93n-5.53$	※

※ Required connection numbers available, please contact our sales department for details. (Unit : mm)

Functional Materials

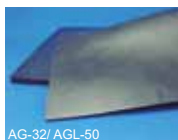
Silicone free material, excellent in impact buffering, vibration control and isolation



YMG

P109

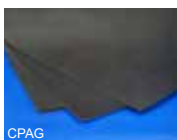
Super-low hardness
elastomer



AG-32/AGL-50

P111

High-Vibration damping
elastomer
(Heat resistant type)



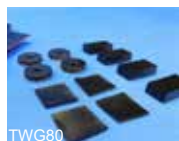
CPAG

P112

High-vibration damping, thermally
conductive rubber

Sheets / KG-GEL

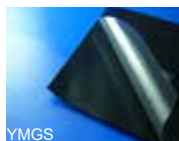
High-performance products for impact buffering, vibration and noise control using KGS' original sheets



TWG80

P113

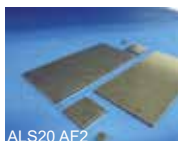
KG-GEL 80TW SHEET



YMGS

P113

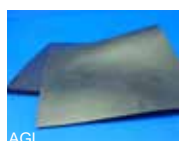
KG-GEL 95T SHEET



ALS20 AF2

P113

LOSTOMER TPS SHEET



AGL

P114

LOSTOMER AG SHEET



CPAG

P114

THERMAL DAMPER



TSEA

P115

LOSTOMER TSEA SHEET



SS2

P116

SOUND DAMPER

Standard products

Bushings



ALS

P117

HIGH VIBRATION DAMPING



SYD/HED

P118-119

SY DAMPER
+ HIGH-END DAMPER + VB



OTVD-1209-95T

P122

ONE TOUCH
VIBRATION DAMPER

Acoustic noise control for fans



FF

P120

FAN FIXER

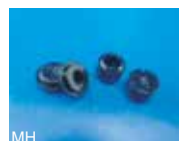


FH

P121

FAN HOLDER

MIC HOLDER



MH

P121

MIC HOLDER

Solution material for vibration, impact and noise.

- **Vibration energy damping**
Attenuated vibration energy by conversion into thermal energy.
- **Vibration transmitting control**
Isolated and attenuated vibration transmitted from vibratory source to equipment.
- **Impact damping**
Suppressed impact strength at any given stroke.

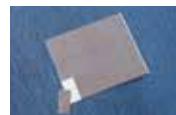
A variety of molding

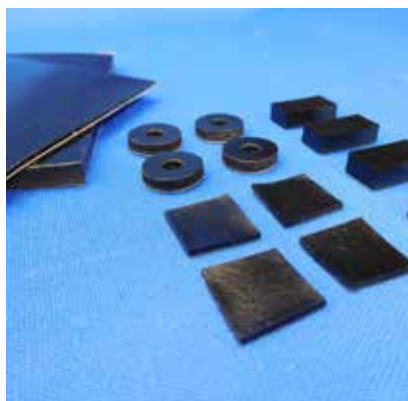


We provide suitable profile of products for specified place and measure based on our production facilities and technology.

Sheet, secondary processing

Custom cutting, punching, adhesive backed type and film attached type are available. Please contact our sales department for details.



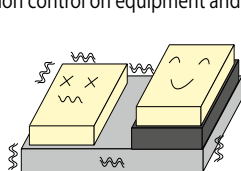


Excellent impact buffering and vibration control

Super low hardness

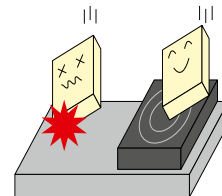
Effective from low-frequency

A special Styrene GEL performs with super low hardness excellent impact and vibration control on equipment and components etc.



Vibration control

Vibration control from low frequency below 100Hz.



Impact buffering

Effective for lightly loaded equipment and components.

Non-Silicone material

Solution for electric-contact failures caused by siloxane.

Silicone free KG-GEL is a solution for electric-contact failures caused by siloxane.

UL94-HB recognized

Flame retardant type is also available.

Properties

■ Hardness index

Type A durometer
(JIS K 6253, ISO 7619, ASTM D 2240)

10 20 30 40 50 60 70 80 90

ASKER Durometer Type FP

80 95 100

● Actual hardness shall be changed by specimen conditions such as profile, etc. The above index is not conversion purpose but only guide for hardness.

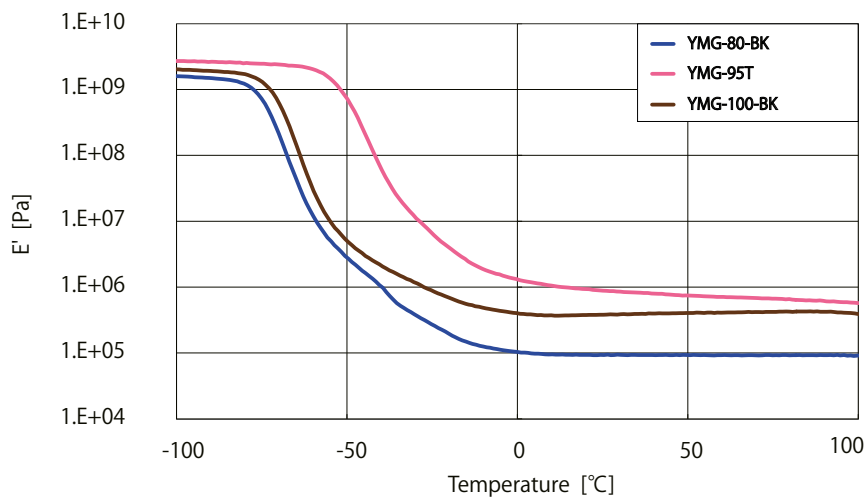
■ Typical Properties

Item	Unit	Multi-purpose type		Heat resistant type	Flame-retardant ^{※1} and heat resistant type
		YMG-80-BK	YMG-100-BK	TWG-80	YMG-95T
Hardness	ASKER FP	80	100	83	95
Tensile strength	MPa	0.81	5.10	1.0	1.61
Elongation	%	1350	970	728	492
Compression set ^{※2}	%	17.0	12.7	—	35
Color		Black			

※1) UL94HB recognized for thickness 1.5mm or more.

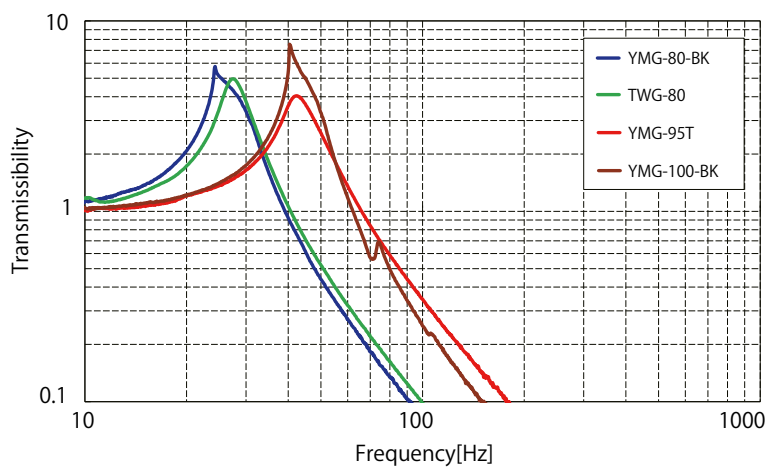
Dynamic Viscoelastic Property

E' : Storage elastic modulus -- It is shown hardness of specimen and the larger number is meant the larger hardness.



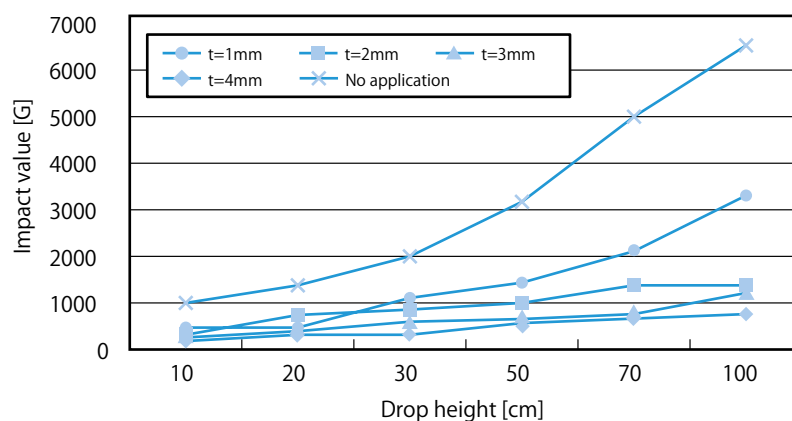
Vibration Properties

<Testing condition>
 Sample : □5mm, t=3mm
 Load : 400g
 Support point number : Four point mounting
 Acceleration : 0.4G



Impact Property

2.5mm HDD with YMG-80-BK(□20mm) applied at 4 corners was dropped.





Wide range of applications with high-vibration damping and heat resistance.

High-vibration damping

Attenuated vibration energy by conversion into thermal energy.

"LOSTOMER AG" has excellent damping properties

Improved heat resistance

Up to 100°C heat resistance by special acrylic rubber

"LOSTOMER AG" performs wider range of applications in combination with improved heat resistance.

UL94HB recognized

"LOSTOMER AG" (AGL-32) is UL94HB recognized for thickness 1.5mm or more (Black) (AGL-50 is equivalent of UL94HB)

Specifications

Molded components

Required shaped components can be produced by transfer molding. KGS offers total support system from design to prototype and mass production to meet your requirement.



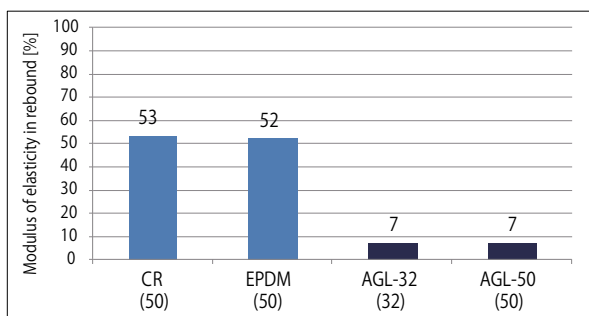
Properties

Typical Properties

Item	Unit	AGL-32	AGL-50
Hardness	Durometer Type A *	A 32	A 53
Tensile strength	MPa	4.33	6.25
Elongation	%	580	420
Compression set	%	31.8	67.9

※In conformity to JIS K 6253

Elastic property in rebound



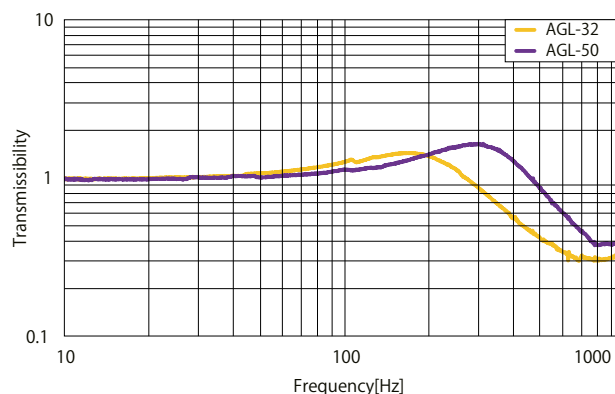
LUPKE TYPE REBOUND RESILIENCE TEST / According to JIS K 6255:1966

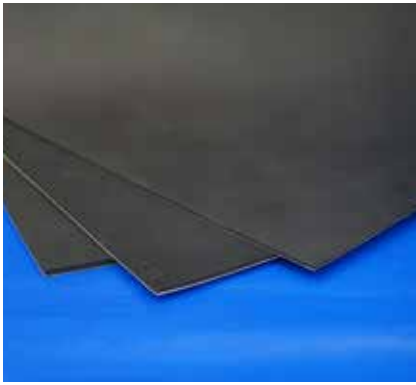
Please contact our sales department for installation instructions (precautions) before use. Also please confirm precautions described on the back page of the brochure.

Vibration Properties

Item	AGL-32	AGL-50
Vibration transmissibility	1.4	1.6
(Hz)		
Resonance frequency	158.9	311.3
Loss factor	1.44	0.95

Testing condition
Sample: $\phi 5\text{mm}$, $t=3\text{mm}$
Load : 400 g
Support point number :
Four point mounting
Acceleration : 0.4G





High-vibration damping together with improved thermal conductivity allows wider range of applications

High-vibration damping

Attenuated vibration energy by conversion into thermal energy.

The product provides high vibration damping, as well as impact buffering using its softness.

Improved heat resistance

Up to 100°C heat resistance by special acrylic rubber

The product performs wider range of applications in combination with improved heat resistance.

Thermal conductivity properties

Vibration damping solution together with useful for thermal management with its excellent thermal conductivity.

Specifications

Molded components

Required shaped components can be produced by compression molding. KGS offers total support system from design to prototype and mass production to meet your requirement.

Properties

Typical Properties

Item	Unit	CPAG
Hardness	Durometer Type A ^{※2}	64
Tensile strength	MPa	23.7
Elongation	%	417
Compression set ^{※1}	%	24.4
Thermal conductivity	W/m · K	0.8
Flame Retardancy	—	V-1 equivalent(t2.0mm) V-0 equivalent(t3.0-5.0mm)

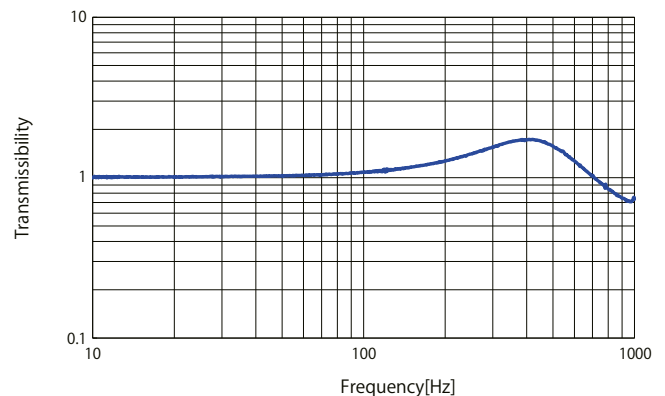
※1) JIS K 6262 (Room temperature × 168hrs)

※2) JIS K 6253 / In conformity to JIS K 6253

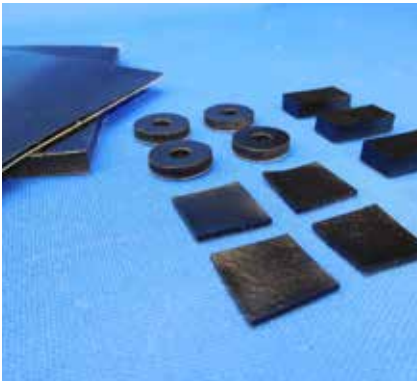
Vibration Properties

Item	CPAG
Vibration transmissibility	1.8
(Hz) Resonance frequency	420.2
Loss factor	1.03

<Testing condition>
Sample : □5mm, t=3mm
Load : 400g
Support point number : Four point mounting
Acceleration : 0.4G



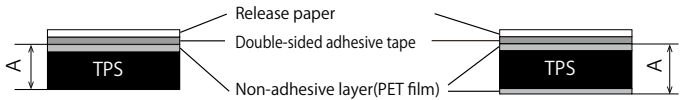
KG-GEL 80TW SHEET / TWG80



Low hardness gel sheet(Heat resisitant type)

<TWG80F1>
With adhesive tape

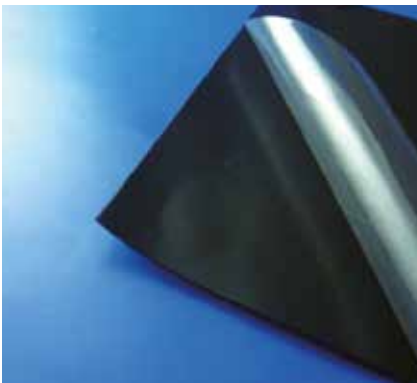
<TWG80F2>
With adhesive tape(surface non-adhesive type)



Part No.	Material	A (mm)	Available max. dimension (mm) ^{※1}	Color	Material hardness
TWG80F1(2)-1.0TC1	TPS (TWG-80)	1	430×310	Black	ASKER FP 83
TWG80F1(2)-2.0TC1		2			
TWG80F1(2)-3.0TC1		3			
TWG80F1(2)-4.0TC1		4			
TWG80F1(2)-5.0TC1		5			

※1) Please contact us for available pcs/sheet.

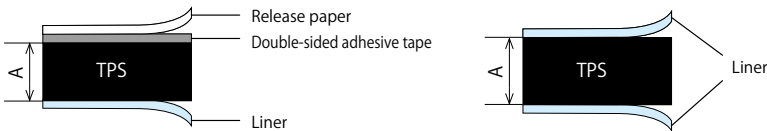
KG-GEL 95T SHEET / YMGS



Low hardness gel sheet(Heat resisitant type)

<YMGS-95T-0.5T>
With adhesive tape

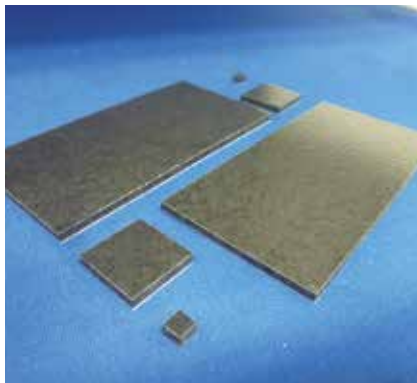
<YMGS-95T-1.0>
With no adhesive tape



Part No.	Material	A (mm)	Available max. dimension (mm) ^{※1}	Color	Material hardness
YMGS-95T-0.5T	TPS (YMGS-95T)	0.5	400×140	ブラック Black	ASKER FP 95
YMGS-95T-1.0		1			

※1) Please contact us for available pcs/sheet.

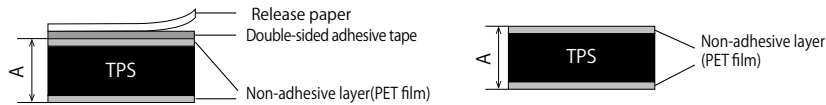
LOSTOMER TPS SHEET / ALS20AF2



High-Vibration damping elastomer sheet

<ALS20AF2-TC>
With adhesive tape(surface non-adhesive type)

<ALS20AF2>
With no adhesive tape(both sides non-adhesive type)



Part No.	Material	A (mm)	Available max. dimension (mm) ^{※1}	Color	Material hardness
ALS20AF2-1.0(TC)	TPS (ALS-20A-BK)	1.0	297×205	Black	Durometer Type A 20 ^{※2}
ALS20AF2-2.0(TC)		2.0			
ALS20AF2-3.0(TC)		3.0			
ALS20AF2-4.0(TC)		4.0			
ALS20AF2-5.0(TC)		5.0			

※1) Please contact us for available pcs/sheet.

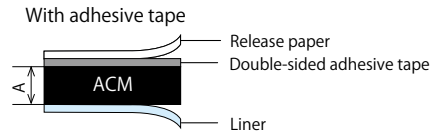
※2) In conformity to JIS K 6253

LOSTOMER AG SHEET / AGL

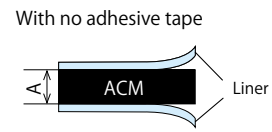


High-Vibration damping rubber sheet

<AGL-T>



<AGL>



Part No.	Material	A (mm)	Available max. dimension.(mm) ^{※1}	Color	Material hardness
AGL-32-0.5T	ACM (AGL-32)	0.5	200×200	Black	Durometer Type A 32 ^{※2}
AGL-32-1.0(T)		1	350×350		
AGL-32-2.0(T)		2			
AGL-32-3.0(T)		3			
AGL-50-1.0T	ACM (AGL-50)	1			Durometer Type A 53 ^{※2}
AGL-50-2.0T		2			
AGL-50-3.0T		3			

※1) Please contact us for available pcs/sheet.

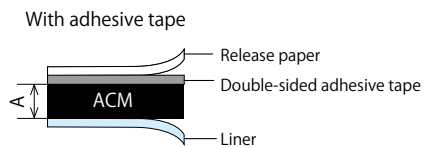
※2) In conformity to JIS K 6253

THERMAL DAMPER / CPAG

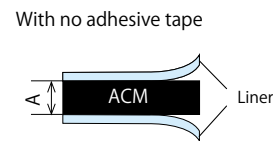


High-Vibration damping rubber sheet(Thermally conductive type)

<CPAG-T>



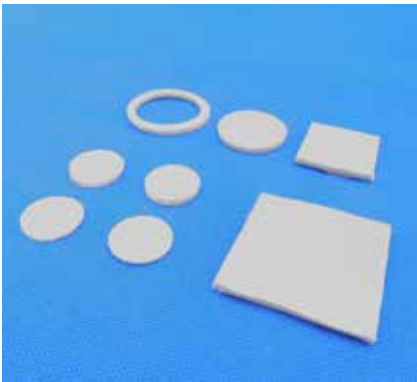
<CPAG>



Part No.	Material	A (mm)	Available max. dimension.(mm) ^{※1}	Color	Material hardness
CPAG-0.5(T)	ACM	0.5	350×350	Black	Durometer Type A 64 ^{※2}
CPAG-1.0(T)		1.0			
CPAG-2.0(T)		2.0			
CPAG-3.0(T)		3.0			
CPAG-4.0(T)		4.0			
CPAG-5.0(T)		5.0			

※1) Please contact us for available pcs/sheet.

※2) In conformity to JIS K 6253



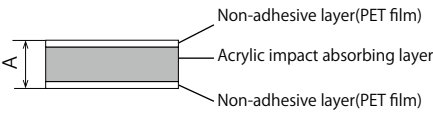
This thin film sheet has both impact absorbing and vibration damping capabilities.

- Converts kinetic energy to thermal energy for excellent shock attenuation.
- Thin profile is useful in limited spaces.
- Single sided non-adhesive film provides easy assembly.
- Silicone-free, no siloxane outgassing.

Specifications

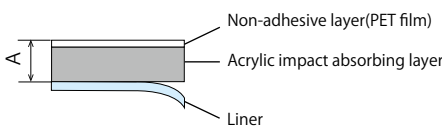
<TSEA-F2>

Non-tacky type



<TSEA-F>

One-side tacky type



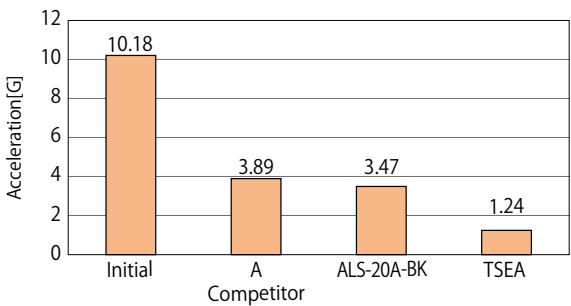
Part No.	A(mm) Thickness
TSEA-0.3F2	0.3
TSEA-0.5F2	0.5
TSEA-1.0F	1.0
TSEA-2.0F	2.0

● Products with double-sided adhesive tape are also available for sheet fixation.

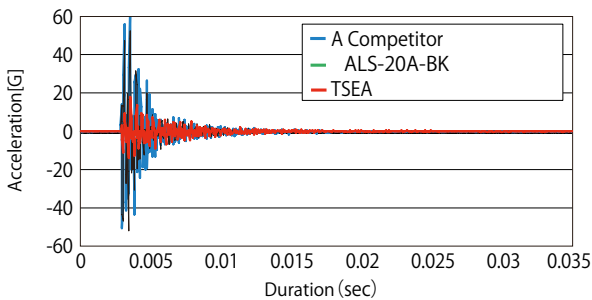
	Standard	Condition	Unit	TSEA
Specific gravity	—	Room Temperature	—	1.54
Hardness	JIS K6253	Room Temperature	ASKER C	9
Loss factor	JIS K6251	Room Temperature	—	1.00
Compression set	JIS K6262	100℃×22hr	%	31.3
Recommended operation temperature	—	—	℃	-20 ~ 110

Properties

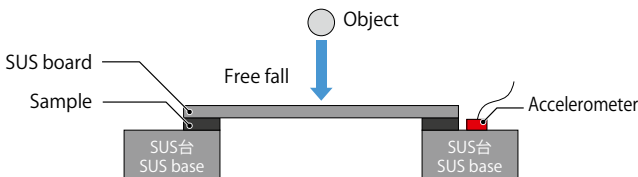
Impact drop test



Time vs waveform (Attenuation property)



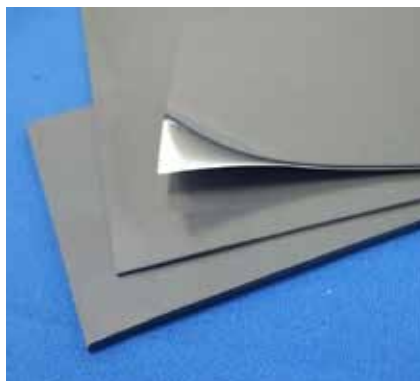
<Test method>



<Testing condition>

Specimen size : t=2mm×10mm×60mm
Object weight : 5g
Drop height : 300mm

● Custom cutting, punching and other processing are available.



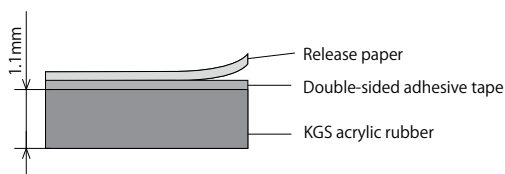
Sound damper suppresses airborne and vibration sound simultaneously

- Simply by applying damper sheet to surface it reduces sound emission from vibration.
- KGS acrylic rubber gives high sound insulation effect.
- Custom die cut upon request.

Specifications

Application

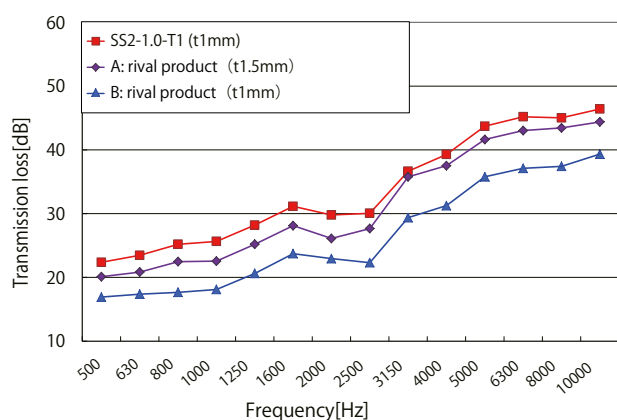
Noise control of motors, fans, relays, inverters, etc



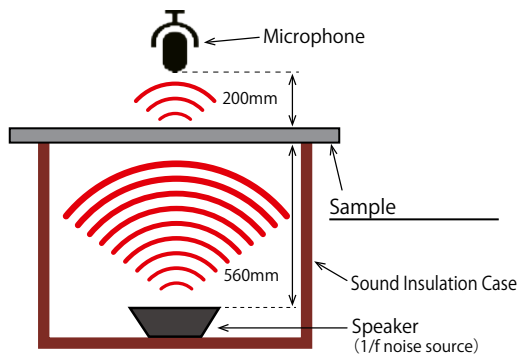
Item		Unit	SS2-1.0-T1
Gravity		—	3.5
Tensile Strength		MPa	4.4
Elongation		%	34
Sound Insulation Rate	500Hz	dB	22
	2,000Hz		29
	10,000Hz		46
(tan δ) Loss factor	-40℃	—	0.009
	20℃	—	0.053
	150℃	—	0.007
Volume Resistivity		Ω・cm	1×10 ¹¹
Thermal Conductivity		W/m・K	1.1
90° Peel Adhesion		N/10mm	6.9
High Temperature Test 150℃×1000h	Gravity	—	3.5
	Tensile Strength	MPa	4.1
	Elongation	%	14
Recommended operation temperature		℃	-40~150
Flame Retardancy		UL94	HB equivalent

Properties

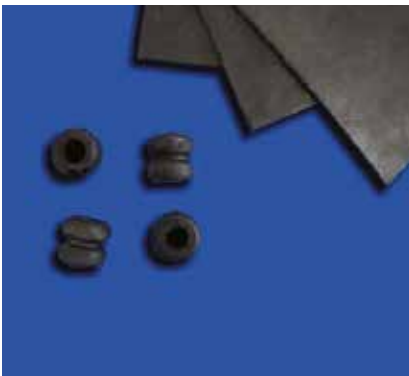
Sound Insulation Rate



<Test method^{※1}>



※1) KGS test method



Damps vibration energy effectively

High-vibration damping

By converting vibration energy into thermal energy.

The product provides high vibration damping, as well as impact buffering using its softness.

Eco-friendly Halogen-free material

Generates No chlorine gas when burned.

The product employs reusable Halogen-free thermoplastic elastomer. Available in two types of TPS(Styrene elastomer), hardness JIS A 20,32 and 37.

Specifications

Molded components

Required shaped components can be produced by injection molding. KGS offers total support system from design to prototype and mass production to meet your requirement.



Properties

Typical Properties

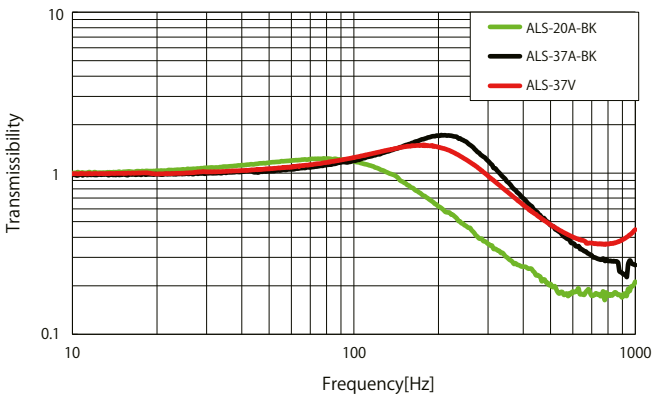
Item	Unit	Multi-purpose type		Flame-retardant type ^{※3}
		ALS-20A-BK	ALS-37A-BK	ALS-37V
Hardness	Durometer Type A ^{※2}	20	37	32
Tensile strength	MPa	6.63	5.54	4.0
Elongation	%	1119	870	667
Compression set ^{※1}	%	1.3	33.2	10.8

※1) JIS K 6262 (Room temperature×168hrs)
※2) JIS K 6253 /In conformity to JIS K 6253
※3) Equivalent to UL 94 V-0 when thickness is 1.5 mm or more.

Vibration Properties

Item	ALS-20A-BK	ALS-37A-BK	ALS-37V
Resonance frequency (Hz)	78.3	204.2	176.3
Maximum vibration transmissibility	1.2	1.7	1.5
Loss factor	2.05	0.96	1.31

<Testing condition>
Sample : □5mm, t=3mm
Load : 400g
Support point number : Four point mounting
Acceleration : 0.4G



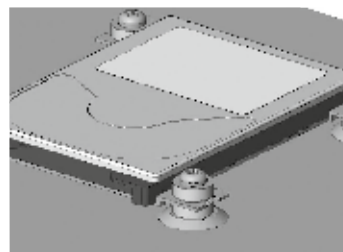
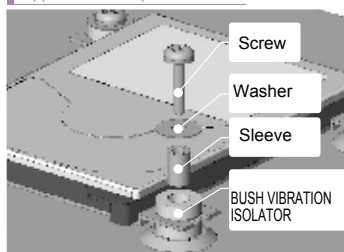
BUSH VIBRATION ISOLATOR / VB



High-performance damper using extremely low-hardness material with high damping performance.

- Extremely low-hardness version and high damping performance version are available.
- Using silicone free material.
- UL 94 certified material version is also available.

Application example



SY DAMPER · HIGH-END DAMPER / SYD · HED



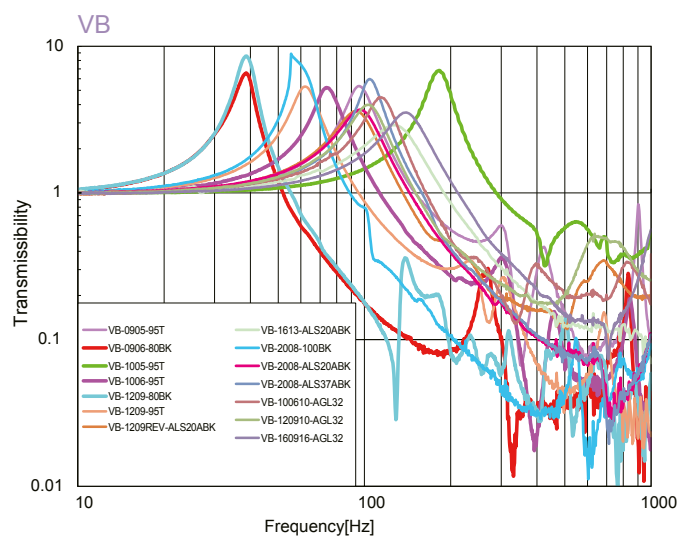
Low resonance damper using high damping material.

- Low resonance is achieved by high damping material.
- Higher damping performance lead to instant damping of vibration and impact.
- Using silicone free material.

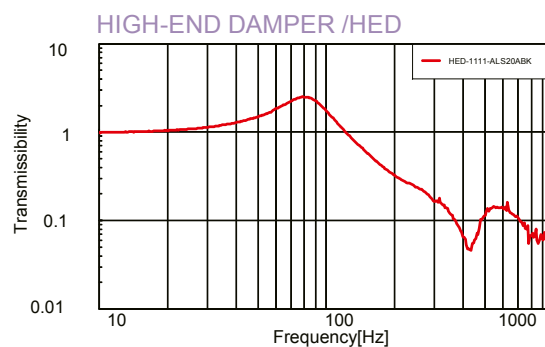
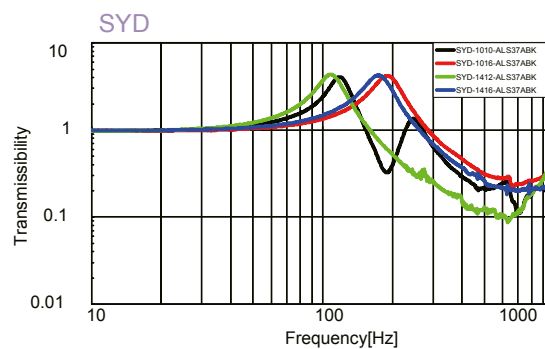
Properties

■ Vibration transmission

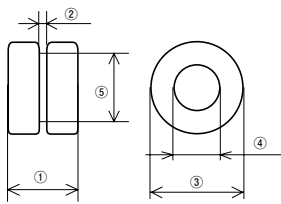
Testing condition
Load : 400 g
Support point number :
Four point mounting
Acceleration : 0.4G



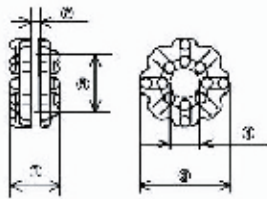
Please contact our sales department for installation instructions (precautions) before use.
Also please confirm precautions described on the beginning page of the brochure.



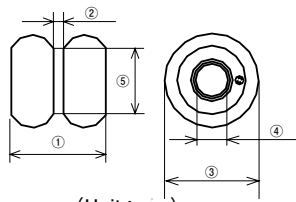
Product drawing
VB



SYD



HIGH-END DAMPER/HED



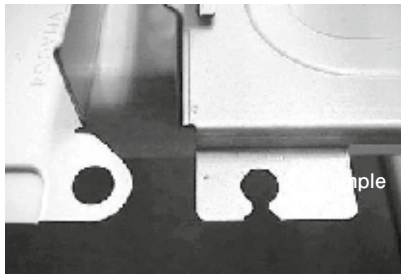
(Unit : mm)

Part No.	Material	Hardness	Color	①	②	③	④	⑤
VB-0905-95T ^{※1}	TPS (KG-GEL/YMG-95T)	ASKER FP 95	Black	5.2	1.2	φ9.6	φ4.0	φ7.0
VB-0905-90VBK	TPS (KG-GEL/YMG-90V-BK)	ASKER FP 91	Black	5.2	1.2	φ9.6	φ4.0	φ7.0
VB-0906-80 BK	TPS (KG-GEL/YMG-80-BK)	ASKER FP 80	Black	6.4	1.2	φ9.6	φ4.0	φ7.0
VB-1005-95T	TPS (KG-GEL/YMG-95T)	ASKER FP 95	Black	4.8	1.6	φ10.0	φ4.0	φ6.2
VB-1006-95T	TPS (KG-GEL/YMG-95T)	ASKER FP 95	Black	6	1	φ10.0	φ5.3	φ8.3
VB-1006-90VBK	TPS (KG-GEL/YMG-90V-BK)	ASKER FP 91	Black	6	1	φ10.0	φ5.3	φ8.3
VB-1209-80 BK	TPS (KG-GEL/YMG-80-BK)	ASKER FP 80	Black	9	1	φ12.0	φ6.0	φ9.0
VB-1209-95T	TPS (KG-GEL/YMG-95T)	ASKER FP 95	Black	9	1	φ12.0	φ6.0	φ9.0
VB-1209-90VBK	TPS (KG-GEL/YMG-90V-BK)	ASKER FP 91	Black	9	1	φ12.0	φ6.0	φ9.0
VB-1209REV-ALS20ABK	TPS (LOSTOMER TPS/ALS-20A-BK)	Durometer A 20	Black	9	1	φ12.0	φ6.0	φ9.0
VB-1613-ALS20ABK	TPS (LOSTOMER TPS/ALS-20A-BK)	Durometer A 20	Black	13.6	1.6	φ16.0	φ8.0	φ12.0
VB-2008-100 BK ^{※1}	TPS (KG-GEL/YMG-100-BK)	ASKER FP 100	Black	8	3	φ20.0	φ5.3	φ15.0
VB-2008-ALS20ABK ^{※1}	TPS (LOSTOMER TPS/ALS-20A-BK)	Durometer A 20	Black	8	3	φ20.0	φ5.3	φ15.0
VB-2008-ALS37ABK ^{※1}	TPS (LOSTOMER TPS/ALS-37A-BK)	Durometer A 37	Black	8	3	φ20.0	φ5.3	φ15.0
VB-100610-AGL32	ACM (LOSTOMER AG/AGL-32)	Durometer A 32	Black	6	1	φ10	φ5.3	φ8.3
VB-120910-AGL32	ACM (LOSTOMER AG/AGL-32)	Durometer A 32	Black	9	1	φ12	φ6	φ9
VB-160916-AGL32	ACM (LOSTOMER AG/AGL-32)	Durometer A 32	Black	9	1.6	φ16	φ8	φ12
SYD-1010-ALS37ABK	TPS (LOSTOMER TPS/ALS-37A-BK)	Durometer A 37	Black	5.8	1	φ10.0	φ4.3	φ6.4
SYD-1016-ALS37ABK	TPS (LOSTOMER TPS/ALS-37A-BK)	Durometer A 37	Black	5.8	1.6	φ10.0	φ4.3	φ6.4
SYD-1412-ALS37ABK	TPS (LOSTOMER TPS/ALS-37A-BK)	Durometer A 37	Black	8	1.2	φ14.5	φ5.3	φ9.9
SYD-1416-ALS37ABK	TPS (LOSTOMER TPS/ALS-37A-BK)	Durometer A 37	Black	8	1.6	φ14.5	φ5.3	φ9.9
HED-1111-ALS20ABK	TPS (LOSTOMER TPS/ALS-20A-BK)	Durometer A 20	Black	10.8	1	φ11.1	φ3.8	φ7.7

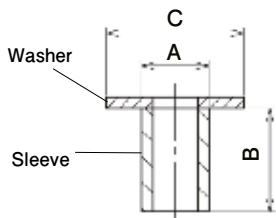
※1) VB-0905 and VB-2008 have slightly different configurations from the others.
Please confirm the specifications with formal drawings before use.

Installation Specifications

Mounting hole



Recommended Sleeve



Sleeves are not our products.

Recommended Installation Specifications

(Unit : mm)

Part No.	Installation Specifications		Recommended Sleeve (Reference)		
	Mounting hole size	Panel thickness	A	B	C
VB-0905-***	φ7.0	1.2±0.1	φ3.9	5.2	≧φ9.6
VB-0906-***	φ7.1	1.2±0.1	φ3.9	6.4	≧φ9.6
VB-1005-***	φ6.2	1.6±0.1	φ3.9	4.8	≧φ10.0
VB-1006-***	φ8.3	1.0±0.1	φ5.2	6.0	≧φ10.0
VB-1209-***	φ9.0	1.0±0.2	φ5.9	9.0	≧φ12.0
VB-1209REV-***	φ9.0	1.0±0.2	φ5.9	9.0	≧φ12.0
VB-1305-***	φ10.4	0.8±0.1	φ5.9	5.0	≧φ13.6
VB-1613-***	φ12.0	1.6±0.1	φ7.9	13.6	≧φ16.0
VB-2008-***	φ15.1	3.0±0.1	φ5.2	8.0	≧φ20.0
VB-100610-***	φ8.3	1.0±0.1	φ5.2	6.0	≧φ10.0
VB-120910-***	φ9.0	1.0±0.1	φ5.9	9.0	≧φ12.0
VB-160916-***	φ12.0	1.6±0.2	φ7.9	9.0	≧φ16.0
SYD-1010-***	φ6.5	1.0±0.2	φ4.2	5.8	≧φ10.0
SYD-1016-***	φ6.5	1.6±0.1	φ4.2	5.8	≧φ10.0
SYD-1412-***	φ10	1.2±0.1	φ5.2	8.0	≧φ14.5
SYD-1416-***	φ10	1.6±0.1	φ5.2	8.0	≧φ14.5
HED-1111-***	φ7.7	1.0±0.2	φ3.8	10.8	≧φ11.1

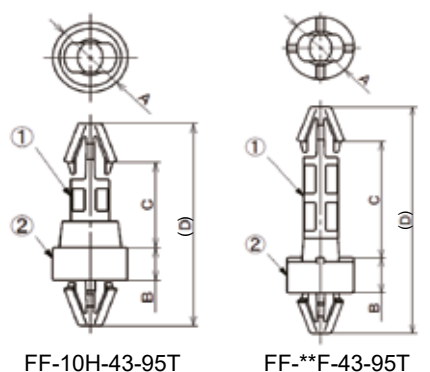
Please contact our sales department for installation instructions (precautions) before use.
Also please confirm precautions described on the beginning page of the brochure.



The Fan Fixer is a fixture which reduces the vibrations and noise of cooling fan. It enables to install the fan without screws.

- Resonance and fluttering noise are reduced by damping the vibrations transmitted from the cooling fan.
- A snap structure enables simple one-touch installation. Screws and tools are not necessary.

Specifications



Part No.	A	B	C	(D)	Panel thickness	Mounting hole size	Color
FF-10H-43-95T	φ8	3.8	9.8	23.4	t0.8~1.0	φ4.3±0.1	Black
FF-15F-43-95T		4.5	15.0	29.3	t1.0~1.2		
FF-25F-43-95T		4.5	25.0	39.1	t0.8~1.0		

Material : ①PP (Snap portion and support portion) ②TPS (flexible portion)

Recommended fan specifications

Part No.	(mm) Thickness	(mm) Screw hole diameter	Weight(g)
FF-10H-43-95T	t10 ^{+0.2} _{-0.6}	φ4.3	~40
FF-15F-43-95T	t15 ^{+0.3} _{-0.5}		
FF-25F-43-95T	t25 ^{+0.3} _{-0.5}		

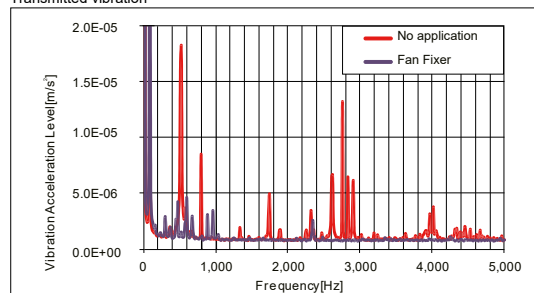
FF-10H-43-95T is dedicated for use with the D05X series made by Nidec Corporation.

Properties

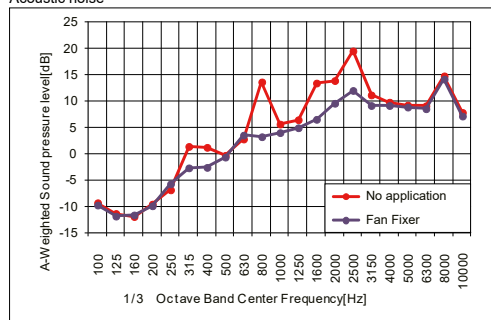
Example for vibration suppression of vibration and acoustic noise

Testing condition : Measuring vibration and noise with bladeless fan on chassis.

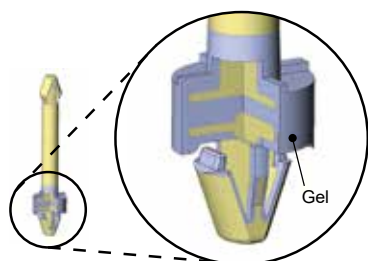
Transmitted vibration



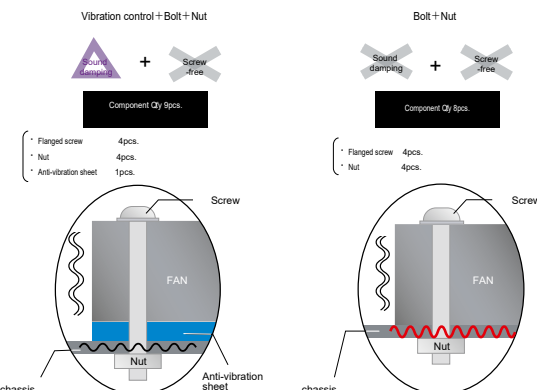
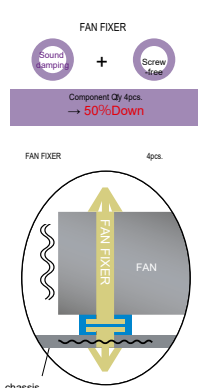
Acoustic noise



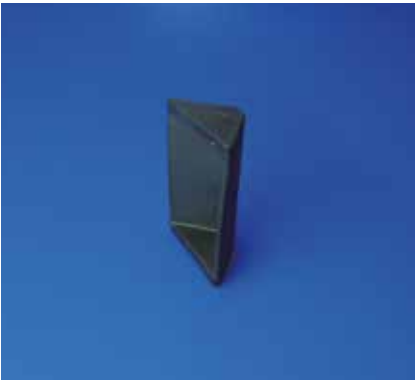
Structure



KG GEL Sandwich configuration



Please contact our sales department for installation instructions (precautions) before use.
Also please confirm precautions described on the beginning page of the brochure.



Suppresses noise for cooling fans

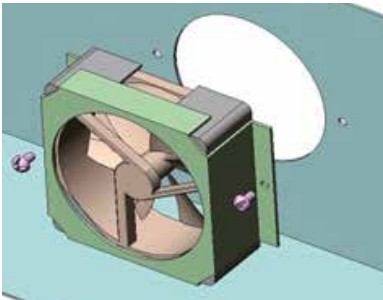
Especially for controlling fan noise

- Excellent noise suppression is provided with selection of appropriate material according to vibration frequency which causes fan noise.

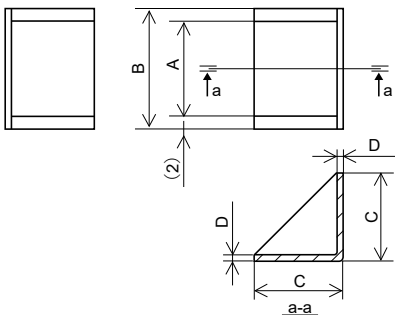
Fit to fans

- 3 designs are available to fit fans.

■ Application image



Specifications



Part No.	A	B	C	D	Color
FH-10M-95T	10.0	12.4	9.0	1.2	Black
FH-15M-95T	14.6	18.6	13.0	1.0	
FH-25M-95T	24.0	28.0	13.0	1.0	

Part No.	Material	Applicable fan / Thickness mm
FH-10M-95T	TPS (KG-GEL/YMG-95T)	10
FH-15M-95T		15
FH-25M-95T		25

This product may not be installed on some manufacturers fans. Please contact us for details such as required size, material and property etc.

MIC HOLDER / MH

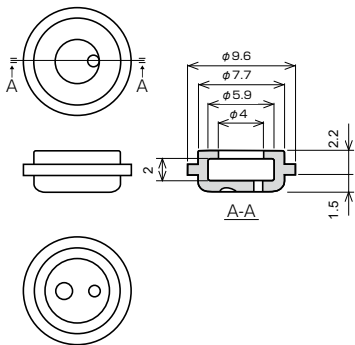


Improved sound quality for microphone

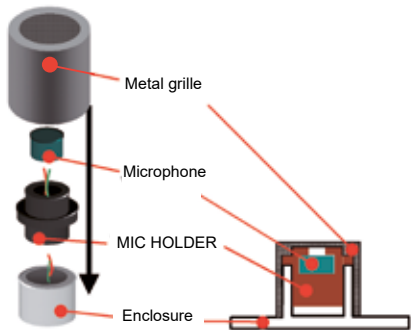
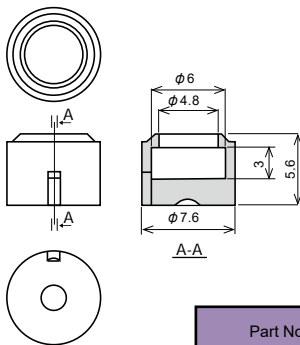
- Propagated external vibration of mechanical noise from motors, enclosures and so on is suppressed.
- Easy to assemble for microphone with connector because of material characteristic of high elongation rate.
- Silicon-free and sulfur-free material, solves electrical contact failures.

Specifications

MH-62-100BK



MH-6022-100BK



Please contact our sales department for installation instructions (precautions) before use.
Also please confirm precautions described on the beginning page of the brochure.

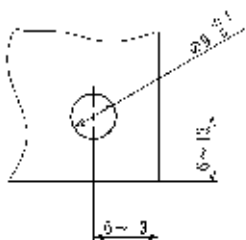
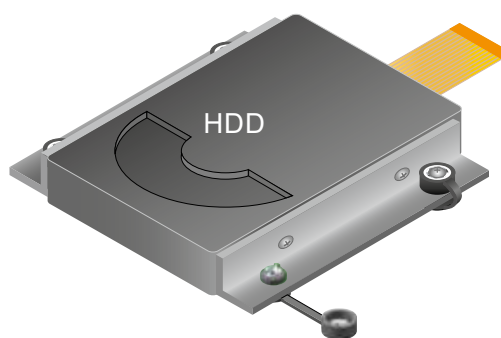
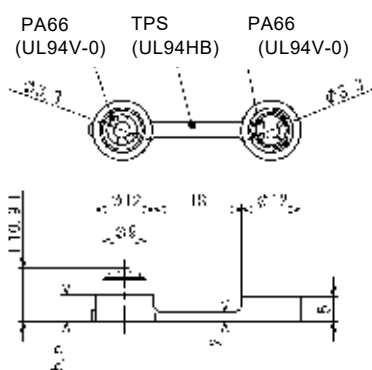
Part No.	Material	Applicable microphone size
MH-62-100BK	TPS (KG-GEL/YMG-100-BK)	φ6mm / Thickness 1.5~1.9mm
MH-6022-100BK		φ6mm / Thickness 2.2~2.9mm



One touch Vibration Damper effective for Low-frequency

- It is effective for Low-frequency compared with an ordinary rubber damper.
- No sleeves and washers are needed. It enables to reduce the number of components.
(Only used M3-sized screw to mount. / Shoulder screw isn't needed.)

Specifications

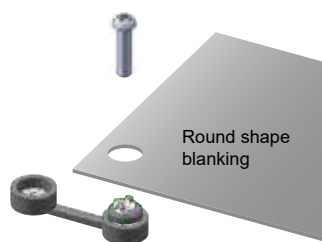


Panel thickness $t=1\pm0.1\text{mm}$

Solution

Component Qty 2pcs.
→ **50%Down**

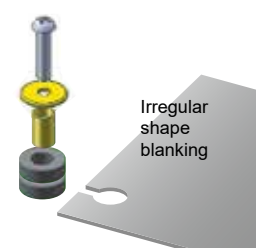
- Screw 1pcs.
- OTVD 1pcs.



Past assembly

Component Qty 4pcs.

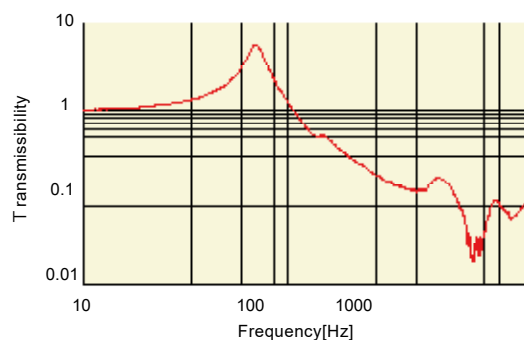
- Screw 1pcs.
- Washer 1pcs.
- Sleeve 1pcs.
- Bush 1pcs.



Properties

■ Vibration transmission

Testing condition
Sample: $t=3\text{mm}$
Load : 400 g
Support point number :
Four point mounting
Acceleration : 0.4G

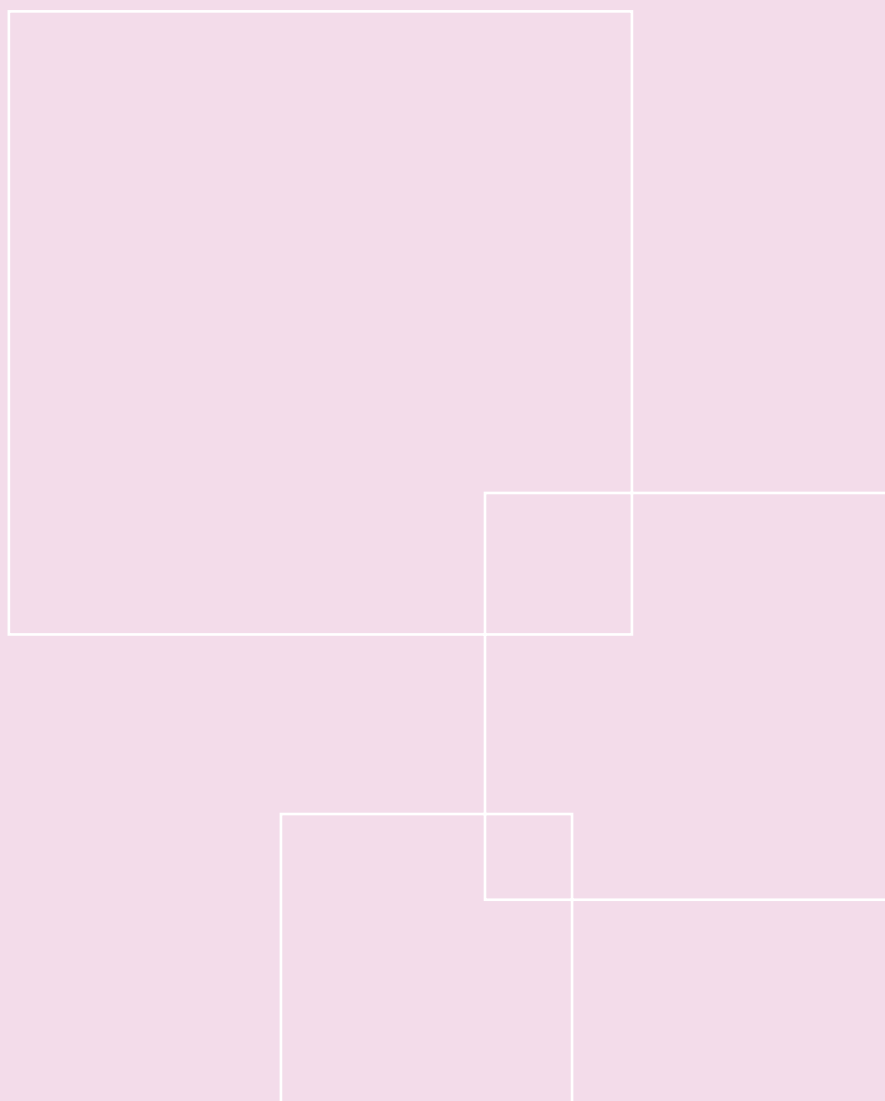


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Also please confirm precautions described on the beginning page of the brochure.



PART NAME / PART NO. INDEX

GENERAL TERMS OF DELIVERY AND PAYMENT



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1. Scope

1.1 The following General Terms of Delivery and Payment shall be applicable – provided nothing to the contrary is stipulated in writing – to all of the deliveries and other performance effected by us.

1.2 Deviating General Terms of Business of the Purchaser shall not bind us.

1.3 Amendments and/or supplements to the following terms and to the additionally stipulated agreements upon the conclusion of the contract must be made in writing.

2. Conclusion of the Contract

2.1 The offers of Kitagawa GmbH are made without obligation.

2.2 A contract between Kitagawa GmbH and the Purchaser shall only come into effect in accordance with the contents of the written confirmation of order on the part of Kitagawa GmbH or through the delivery of the goods or the rendering of the agreed performance by Kitagawa GmbH.

2.3 The Purchaser shall be bound to its order for three weeks. Kitagawa GmbH reserves the right to deviate from the order specifications in the acceptance of the order if this is necessary for the fulfillment of the order and is acceptable for the Purchaser.

2.4. Kitagawa GmbH shall be entitled to effect an alteration to the goods at any time without prior notification insofar as this does not result in any shortfall of the contractually stipulated characteristics of the goods and the alteration is reasonable for the Purchaser. The alteration of already delivered contract cannot be subsequently demanded.

3. Delivery Terms

3.1 The delivery period of the goods shall be determined in accordance with the written confirmation of order of Kitagawa GmbH.

3.2 Indicated delivery periods shall run from the dispatch of the written confirmation or order. If the Purchaser is obliged to effect advance performance, then the delivery period shall commence with the receipt of the contractual advance performance of the Purchaser at Kitagawa GmbH.

3.3 If the Purchaser demands alterations to the contractually stipulated performance after a written confirmation of order has been effected, then Kitagawa GmbH shall be entitled to effect a reasonable extension to the delivery period if necessary.

3.4 In cases of force majeure, interventions by sovereign powers, natural disasters, war, revolts, strikes at its own company, at supply companies or at carriers, Kitagawa GmbH shall be entitled to make up the delivery after the cessation of the

cause of the impediment and the delivery period shall be extended accordingly. The same applies if Kitagawa GmbH does not receive its own supplies in due time or in due form. There shall be no claims due to non-delivery or late delivery. This shall also be applicable if above indicated circumstances arise once the stipulated delivery period was already exceeded.

3.5 If a promised delivery date is not met by Kitagawa GmbH for reasons attributable to Kitagawa GmbH's fault, then the Purchaser shall be entitled to set Kitagawa GmbH a two-week subsequent period after the expiry of the stipulated delivery period by means of registered letter. The Purchaser shall be entitled to withdraw from the agreement after the fruitless expiry of the period. Claims for damages, insofar as is legally permissible, as well as more extensive rights shall be excluded, provided the delay in delivery is neither due to intent nor gross negligence on the part of Kitagawa GmbH. This limitation of claims shall not apply in cases due to loss of life, bodily injury or damage of health. The burden of proof that intent or gross negligence is not applicable shall be borne by Kitagawa GmbH.

3.6 Kitagawa GmbH shall be entitled to effect part deliveries unless they should be unreasonable to be accepted by the Purchaser.

4. Shipment and passing of risk

4.1 Kitagawa GmbH shall undertake the shipments of the goods at the Purchaser's expense. Kitagawa GmbH shall select the forwarder/carrier to the best of its knowledge, without, however, assuming corresponding liability. Kitagawa GmbH shall award the shipping order on the customary terms in the sector in each case. Transport insurance shall only be taken out at the Purchaser's request and expense.

4.2 Risk shall pass when the goods leave the warehouse or upon the surrender of the goods to the forwarder/carrier.

The risk shall also pass to the Purchaser, if the goods are ready for shipment and delivery is delayed or fails for other reasons attributable to the Purchaser.

4.3 Any transport damage which occurs must be asserted by the Purchaser in due time to the forwarder/carrier or its insurance company.

5. Prices

The prices are indicated in the respective confirmation of order of Kitagawa GmbH and are expressed net in EURO plus the statutory rate of V.A.T. exclusive of packing, freight, postage, delivery charges etc.

6. Payment Terms

6.1 Insofar as no other payment terms are indicated in the confirmation of order of Kitagawa GmbH, the invoices are payable after the invoice date within 30 days net without any discount. Decisive for effecting payment on time is the receipt of the payment at Kitagawa GmbH.

Cheques shall only be accepted on account of performance.

6.2 If the Purchaser is a businessman, then it shall be in default upon the exceeding of the due date without a separate warning. Kitagawa GmbH shall be entitled to assert default interest to the amount of 8 percentage points above the basic rate of interest. The assertion of a more extensive loss caused by default remains reserved.

6.3 In the event that the Purchaser should be in default with payment, Kitagawa GmbH may upon its discretion request advance payment before

delivery of the goods. The same shall apply if the Purchaser's economic conditions give reason to concern regarding the due fulfillment of payment obligations.

6.4 The Purchaser shall only be entitled to set off the claims of Kitagawa GmbH against those claims which are undisputed or legally binding.

7. Warranty

7.1 Kitagawa warrants for the duration of 12 months that the goods contained not material or fabrication defects at the time the risks passes. This warranty ("Gewährleistung") commences upon delivery of the goods.

7.2 Warranty shall not be effected in the case of improper utilization, faulty installation, incorrect operation etc. No warranty shall similarly be effected for losses which arise through the operation of the goods together with such appliances whose compatibility has not been expressly confirmed in writing by Kitagawa GmbH.

7.3 The Purchaser shall notify Kitagawa GmbH of any defects of the delivery in writing as soon as such defects are detected under conditions of normal business operations. Section 377 German Trade Code applies.

7.4 In the case of defects the warranty shall be effected at the option of Kitagawa GmbH by subsequent rectification or substitute delivery free of charge. If the subsequent rectification also fails on the second attempt or in if the second substitute delivery also contains defects or if Kitagawa GmbH does not meet its subsequent delivery or substitute delivery obligation within a reasonable period, then the Purchaser shall be entitled to a reduction of the purchase price or rescission of the contract.

7.5 Claims for damages caused by defects shall be excluded. This exclusion shall not apply in case a defect has been fraudulently concealed, in the event that life, body or health is injured and acts of Kitagawa GmbH with intention or gross negligence. In the case a guaranteed characteristic of the goods should be lacking, liability shall be restricted to the loss which is to be expected in accordance with the customary course of events. More extensive claims on account of the faulty nature of the goods shall be excluded. This shall also be applicable to the reparation of consequential losses and to the violation of ancillary contractual obligations.

7.6 The afore mentioned exclusion of liability shall also be applicable to claims in tort and in connection with the initiation, conclusion and processing of a contract, not, however, in the case of claims in accordance with the Product Liability Act.

8. Retention of Title

8.1 Kitagawa GmbH shall retain title to all goods until the payment in full of all receivables resulting from the business relations with Kitagawa GmbH. If the value of the collateral which is in existence in favour of Kitagawa GmbH should exceed the claims against the contract partner by more than 10 per cent in total, then Kitagawa GmbH shall be obliged to release collateral at the request of the Purchaser

8.2 The Purchaser shall be entitled to resell the goods subject to retention of title in customary business transactions. For this case, the Purchaser hereby assigns all claims arising out of such resale, whether the goods have been processed or not, to Kitagawa. Herewith, Kitagawa accepts this assignment. Notwithstanding Kitagawa's right to claim direct payment, the Purchaser shall be entitled to receive the payment on the assigned claims. To this end, Kitagawa agrees to not demand payment on the assigned claims to the extent the Purchaser complies with all its obligations for payment and does not become subject to an application for insolvency or similar proceedings or to any delay of payments. Moreover, the Purchaser shall not be entitled to pledge the goods subject to retention of title or to assign all claims to which it is entitled from a future sale of the goods subject to retention of title against its purchasers to Kitagawa GmbH by way of security.

8.3 In the case of the processing or reconstruction of the goods subject to retention of title by the Purchaser, this shall always be effected for Kitagawa GmbH. If the goods subject to retention of title are processed with other articles which do not belong to Kitagawa GmbH, then Kitagawa shall acquire co-ownership to the new article in proportion to the value of the goods subject to retention of title to the other processed articles at the time of processing. If the Purchaser sells the goods subject to retention of title together with other goods which do not belong to Kitagawa GmbH, or after joining or processing, then the assignment shall only be effected to the amount of the outstanding invoices sum of the respective goods subject to retention of title.

8.4 The Purchaser shall be entitled to collect the assigned receivable in its own name. Kitagawa GmbH shall, however, be entitled to revoke this collection authority at any time, especially in the case of default in payment by the Purchaser. In the case of revocation the Purchaser shall be obliged to provide Kitagawa GmbH with or to surrender to it all necessary information and documentation for the assertion of the assigned receivables and to disclose the assignments to its purchasers. In the case of default in payment by the Purchaser Kitagawa GmbH shall be entitled to

notify its purchasers of the assignment.

8.5 The Purchaser shall be obliged to provide Kitagawa GmbH with information at any time on the whereabouts of the goods subject to retention of title and on the receivables arising from their resale. The Purchaser shall be obliged to inform Kitagawa GmbH in writing of a seizure by a third party of the goods subject to retention of title or of the receivables assigned to Kitagawa GmbH and it shall be obliged to draw the third party's attention to the rights of Kitagawa GmbH. The Purchaser shall furthermore be obliged to support Kitagawa GmbH upon the assertion and enforcement of its rights against this third party, especially at its expense to lodge the necessary immediate remedies/appeals in order to safeguard the rights of Kitagawa GmbH.

8.6 In case of default in payment on the part of the Purchaser Kitagawa GmbH shall be entitled to take back the goods subject to retention of title. The Purchaser shall accordingly be obliged to surrender these goods. The taking back of the goods subject to retention of title does not constitute a withdrawal from the contract, unless Kitagawa GmbH expressly states such a withdrawal in writing.

8.7 The Purchaser shall be obliged to treat the delivered goods subject to retention of title with care. It shall especially be obliged to take out adequate insurance cover for the goods subject to retention of title at its own expense against loss or damage through fire, water, burglary or theft. The Purchaser hereby assigns its corresponding insurance claim to Kitagawa GmbH. Kitagawa GmbH hereby accepts this assignment and states the reassignment to the Purchaser with the proviso that this shall become effective if and as soon as the retention of title has expired.

9. Final Provisions

9.1 The Purchaser shall not be entitled to assign rights and obligations to third parties arising from the contract concluded with Kitagawa GmbH without the prior approval of Kitagawa GmbH.

9.2 The contractual relations between the contracting parties shall be subject to the Law of the Federal Republic of Germany. The provisions of the Convention on Contracts of the International Sale of Goods (CISG, Vienna Convention) shall not apply to the contract concluded with the Purchaser.

9.3 Venue for all disputes and types of proceedings arising from or in connection with the contractual relations between the parties shall be Darmstadt, Federal Republic of Germany, provided the Purchaser is a businessman.

9.4 Kitagawa GmbH shall be entitled to store and to use the personal data to which it has obtained access from the business relations with the Purchaser under the terms of the German Data Protection Act for its own business purposes.

9.5 If a provision of these General Terms of Business or of the contract concluded with the Purchaser should be or become ineffective, then this shall not affect the effectiveness of the remaining provisions of these General Terms of Business or of the concluded contract.

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Notice:

The specifications provided in this catalogue are believed to be accurate and reliable. Kitagawa GmbH reserves the right to make changes to specifications to improve manufacturing process performance and reliability.

This catalogue is intended for representation only and is not to form any part of any order. Engineering specifications are available upon request.

Any information/specification supplied by Kitagawa GmbH is based upon Kitagawa Industries laboratory test data and is believed to be reliable. It is recommended that our products are tested by the customer to ensure suitability for the intended application.

If any Kitagawa product is to be used in a life threatening application (such areas as Medical Automotive and Aerospace etc) the application must be discussed with Kitagawa GmbH and its written approval must be obtained.

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