



# SHINAGAWA SHOKO

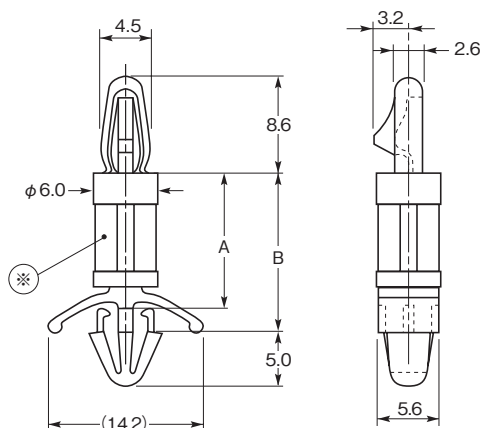
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# Circuit board spacer

## SPLSN series



※ SPLSN-3 has a different shape at mid-section.

### Feature

- Maintain an uniform distance between chassis and P.C.B.
- Easy handling and installation of P.C.B.
- Easy to remove P.C.B.

### Material

Nylon 66

### Standard color

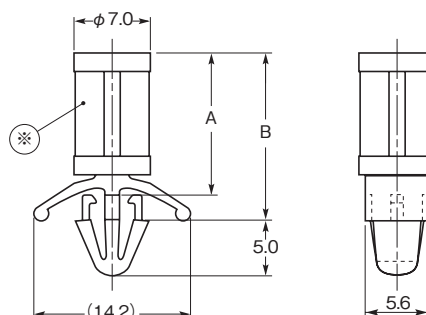
UL94V-2: Natural

UL94V-0: White

Part No.		Dimensions (mm)		Mounting hole		Applicable board thickness		Packing unit (pieces)
UL94V-2	UL94V-0	A	B	P.C.B.	Chassis	P.C.B.	Chassis	
SPLSN- 3	SPLSN- 3U	4.9	7.1	φ 4.0	φ 4.8	0.8 ~ 1.6	0.5 ~ 2.0	500
SPLSN- 4	SPLSN- 4U	6.2	8.4					
SPLSN- 6	SPLSN- 6U	9.4	11.6					
SPLSN- 7	SPLSN- 7U	11.0	13.2					
SPLSN- 8	SPLSN- 8U	12.5	14.7					
SPLSN-10	SPLSN-10U	15.7	17.9					
SPLSN-12	SPLSN-12U	18.9	21.1					
SPLSN-14	SPLSN-14U	22.0	24.2					
SPLSN-16	SPLSN-16U	25.1	27.3					
SPLSN-18	SPLSN-18U	28.3	30.5					
SPLSN-20	SPLSN-20U	31.5	33.7					
SPLSN-22	SPLSN-22U	34.6	36.8					

# Circuit board spacer

## SPSN series



※ SPSN-3 has a different shape at mid-section.

### Feature

- Prevent P.C.B. from the deflection caMounted by the weight of the mounted parts.

### Material

Nylon 66

### Standard color

UL94V-2: Natural

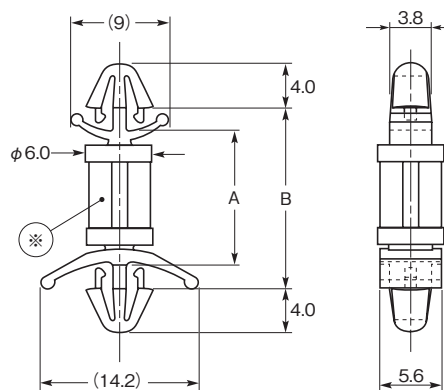
UL94V-0: White

Part No.		Dimensions (mm)		Mounting hole		Applicable board thickness		Packing unit (pieces)
UL94V-2	UL94V-0	A	B	Chassis	Chassis			
SPSN- 3	SPSN- 3U	4.9	7.1	φ 4.8	0.5 ~ 2.0	500		
SPSN- 4	SPSN- 4U	6.2	8.4					
SPSN- 6	SPSN- 6U	9.4	11.6					
SPSN- 7	SPSN- 7U	11.0	13.2					
SPSN- 8	SPSN- 8U	12.5	14.7					
SPSN-10	SPSN-10U	15.7	17.9					
SPSN-12	SPSN-12U	18.9	21.1					
SPSN-14	SPSN-14U	22.0	24.2					
SPSN-16	SPSN-16U	25.1	27.3					
SPSN-18	SPSN-18U	28.3	30.5					
SPSN-20	SPSN-20U	31.5	33.7					
SPSN-22	SPSN-22U	34.6	36.8					



# Circuit board spacer

## SPD series



※ SPD-3, and SPD-4 have a different shape at mid-section.

### Feature

- For  $\phi 4.0$  mounting hole.

### Material

Nylon 66

### Standard color

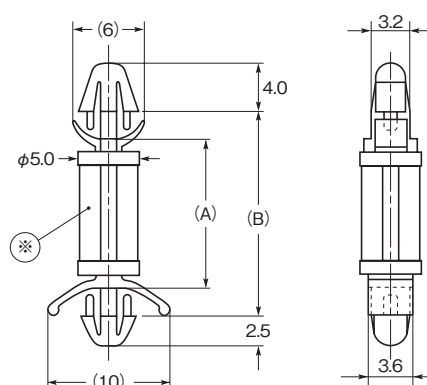
UL94V-2: Natural

UL94V-0: White

Part No.		Dimensions (mm)						Packing unit (pieces)
		A	B	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0			P.C.B.	Chassis	P.C.B.	Chassis	
SPD- 3	SPD- 3U	4.6	8.9	φ 4.0	φ 4.0	0.8 ~ 1.6	0.5 ~ 2.0	500
SPD- 4	SPD- 4U	5.9	10.2					
SPD- 6	SPD- 6U	9.1	13.4					
SPD- 7	SPD- 7U	10.7	15.0					
SPD- 8	SPD- 8U	12.2	16.5					
SPD-10	SPD-10U	15.4	19.7					
SPD-12	SPD-12U	18.6	22.9					
SPD-14	SPD-14U	21.7	26.0					

# Circuit board spacer

## SPM series



※ SPM-3 has a different shape at mid-section.

### Feature

- For  $\phi 3.5$  mounting hole.
- Stick out 2.5mm on the other side of chassis.

### Material

Nylon 66

### Standard color

UL94V-2: Natural

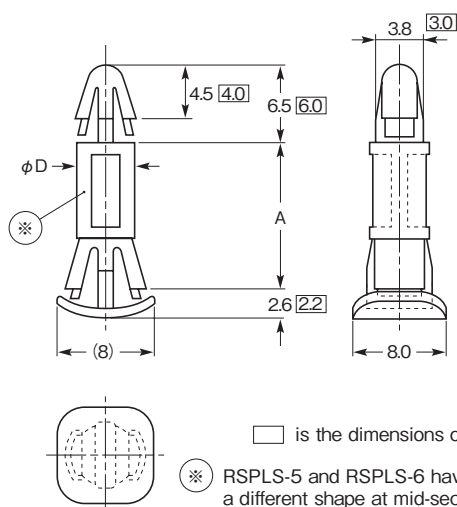
UL94V-0: White

Part No.		Dimensions (mm)						Packing unit (pieces)
		A	B	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0					P.C.B.	Chassis	P.C.B.
SPM- 3	SPM- 3U	4.4	8.9	φ 3.5	φ 3.5	0.8 ~ 1.6	0.8 ~ 1.6	500
SPM- 4	SPM- 4U	6.0	10.5					
SPM- 5	SPM- 5U	7.6	12.1					
SPM- 6	SPM- 6U	9.2	13.7					
SPM- 7	SPM- 7U	10.8	15.3					
SPM- 8	SPM- 8U	12.3	16.8					
SPM- 9	SPM- 9U	14.0	18.5					
SPM-10	SPM-10U	15.5	20.0					
SPM-16	SPM-16U	25.5	30.0					



# Circuit board spacer

## RSPLS series



### Feature

- Can be easily snapped on from the other side of chassis.
- Stick out 2.1mm or less on the other side of chassis.

### Material

Nylon 66

### Standard color

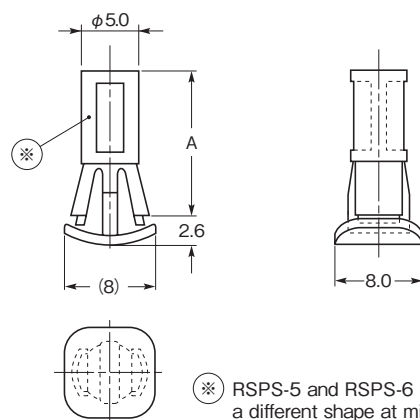
UL94V-2: Natural

UL94V-0: White

Part No.		Dimensions (mm)						Packing unit (pieces)
		A	φ D	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0					P.C.B.	Chassis	P.C.B.
RSPLS- 5	RSPLS- 5U	5.0	5.0	φ 4.0	φ 5.5	1.6	0.5 ~ 1.0	500
RSPLS- 6	RSPLS- 6U	6.0						
RSPLS- 8	RSPLS- 8U	8.0						
RSPLS- 10	RSPLS- 10U	10.0						
RSPLS- 12	RSPLS- 12U	12.0						
RSPLS- 14	RSPLS- 14U	14.0						
RSPLS- 16	RSPLS- 16U	16.0						
RSPLS- 18	RSPLS- 18U	18.0						
RSPLS-4M	RSPLS-4MU	6.2	4.6	φ 3.2	φ 4.8			
RSPLS-8M	RSPLS-8MU	12.8						

# Circuit board spacer

## RSPS series



### Feature

- Prevent P.C.B. from the deflection caused by the weight of the mounted parts.
- Can be easily snapped on from the other side of chassis.
- Stick out 2.1mm or less on the other side of chassis.

### Material

Nylon 66

### Standard color

UL94V-2: Natural

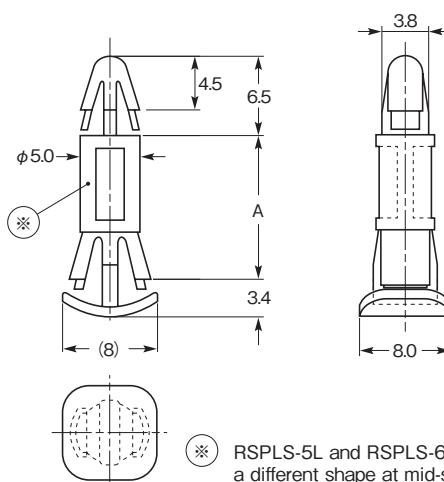
UL94V-0: White

Part No.		Dimensions (mm)			Packing unit (pieces)
		A	Mounting hole	Applicable board thickness	
UL94V-2	UL94V-0				
RSPS- 5	RSPS- 5U	5.0	$\phi 5.5$	0.5 ~ 1.0	500
RSPS- 6	RSPS- 6U	6.0			
RSPS- 8	RSPS- 8U	8.0			
RSPS-10	RSPS-10U	10.0			
RSPS-12	RSPS-12U	12.0			
RSPS-14	RSPS-14U	14.0			
RSPS-16	RSPS-16U	16.0			
RSPS-18	RSPS-18U	18.0			



# Circuit board spacer

## RSPLS-L series



### Feature

- These are the modification of RSPLS to be compatible with 1.2t ~ 2.0t thickness of chassis.

### Material

Nylon 66

### Standard color

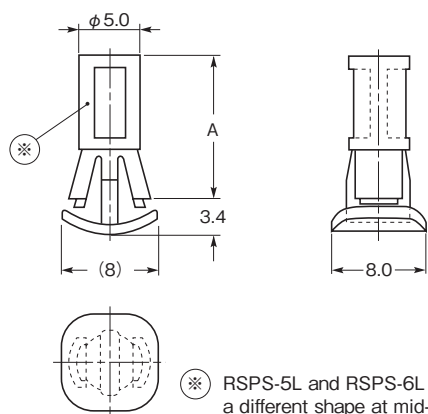
UL94V-2: Black

UL94V-0: Black

Part No.		Dimensions (mm)					Packing unit (pieces)
		A	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0			P.C.B.	Chassis	P.C.B.	Chassis
RSPLS- 5L	RSPLS- 5LU	5.0	φ 4.0	φ 5.5	1.6	1.2 ~ 2.0	500
RSPLS- 6L	RSPLS- 6LU	6.0					
RSPLS- 8L	RSPLS- 8LU	8.0					
RSPLS-10L	RSPLS-10LU	10.0					
RSPLS-12L	RSPLS-12LU	12.0					
RSPLS-14L	RSPLS-14LU	14.0					
RSPLS-16L	RSPLS-16LU	16.0					
RSPLS-17L	RSPLS-17LU	17.0					
RSPLS-18L	RSPLS-18LU	18.0					

# Circuit board spacer

## RSPS-L series



### Feature

- These are the modification of RSPS to be compatible with 1.2t ~ 2.0t thickness of chassis.

### Material

Nylon 66

### Standard color

UL94V-2: Black

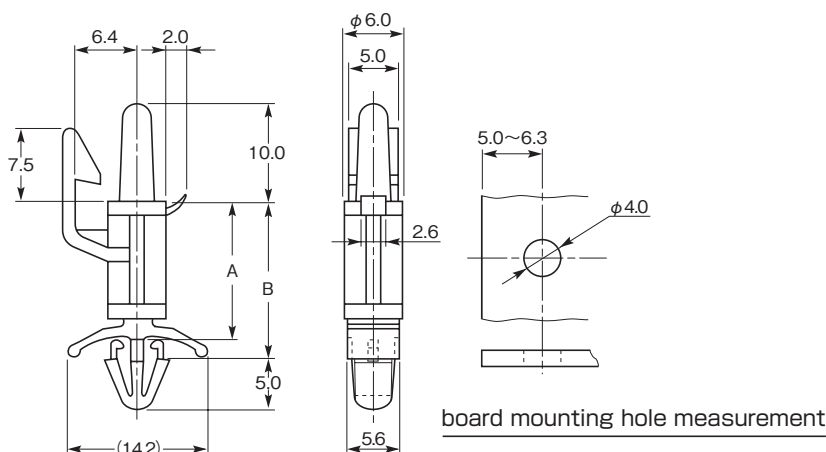
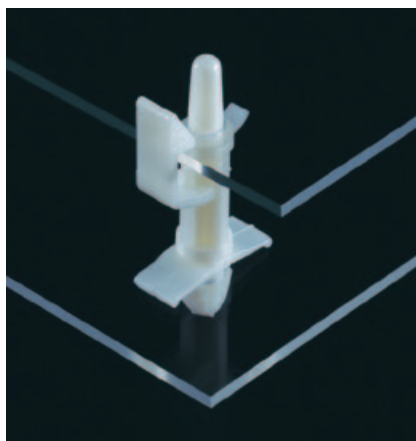
UL94V-0: Black

Part No.		Dimensions (mm)			Packing unit (pieces)
UL94V-2	UL94V-0	A	Mounting hole	Applicable board thickness	
RSPS- 5L	RSPS- 5LU	5.0	φ 5.5	1.2 ~ 2.0	500
RSPS- 6L	RSPS- 6LU	6.0			
RSPS- 8L	RSPS- 8LU	8.0			
RSPS-10L	RSPS-10LU	10.0			
RSPS-12L	RSPS-12LU	12.0			
RSPS-14L	RSPS-14LU	14.0			
RSPS-16L	RSPS-16LU	16.0			
RSPS-17L	RSPS-17LU	17.0			
RSPS-18L	RSPS-18LU	18.0			



# Circuit board spacer

## SHCBS series



### Feature

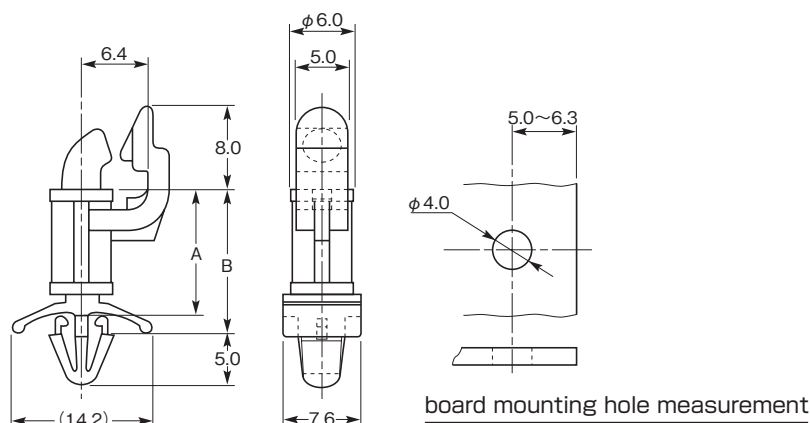
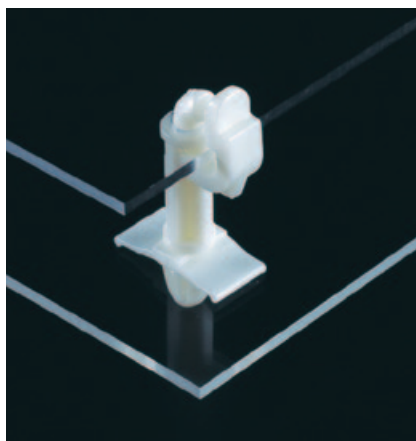
- Easy to unlock the P.C.B. and convenient at a time of inspection and maintenance.
- With the combined use with SRF series, it will be very convenient.

**Material** Nylon 66  
**Standard color** UL94V-2: Natural  
 UL94V-0: White

Part No.		Dimensions (mm)						Packing unit (pieces)
		A	B	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0			P.C.B.	Chassis	P.C.B.	Chassis	
SHCBS- 5	SHCBS- 5U	7.9	10.3	φ 4.0	φ 4.8	1.6	0.5 ~ 2.0	500
SHCBS- 6	SHCBS- 6U	9.5	11.9					
SHCBS- 8	SHCBS- 8U	12.6	15.0					
SHCBS-10	SHCBS-10U	15.8	18.2					
SHCBS-12	SHCBS-12U	19.0	21.4					
SHCBS-14	SHCBS-14U	22.2	24.6					
SHCBS-16	SHCBS-16U	25.3	27.7					

# "R"-free spacer

## SRF series



### Feature

- Enable to open/close and hold the P.C.B. vertically, which makes inspection and maintenance easy.
- With the combined use with SHCBS series, it will be very convenient.

**Material** Nylon 66  
**Standard color** UL94V-2: Natural  
 UL94V-0: White

Part No.		Dimensions (mm)						Packing unit (pieces)
		A	B	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0			P.C.B.	Chassis	P.C.B.	Chassis	
SRF- 5	SRF- 5U	7.9	10.3	φ 4.0	φ 4.8	1.6	0.5 ~ 2.0	500
SRF- 6	SRF- 6U	9.5	11.9					
SRF- 8	SRF- 8U	12.6	15.0					
SRF-10	SRF-10U	15.8	18.2					
SRF-12	SRF-12U	19.0	21.4					
SRF-14	SRF-14U	22.2	24.6					
SRF-16	SRF-16U	25.3	27.7					



# Circuit board spacer

## SPRH-10/SPRF-10

INSULATION SLEEVE  
FOR TERMINAL

CIRCUIT BOARD ACCESSORY

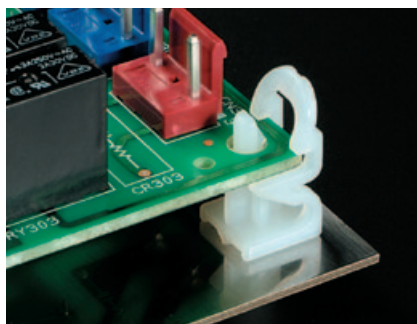
WIRING CLAMP

WIRING PROTECTOR

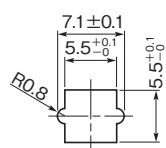
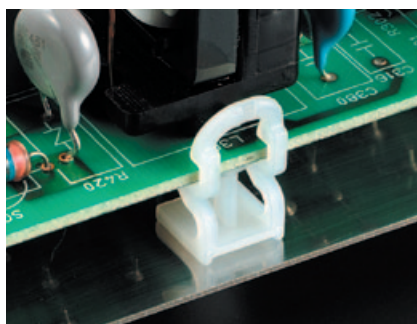
FASTENER

DIP-MOLDED PRODUCT

SPRH-10



SPRF-10

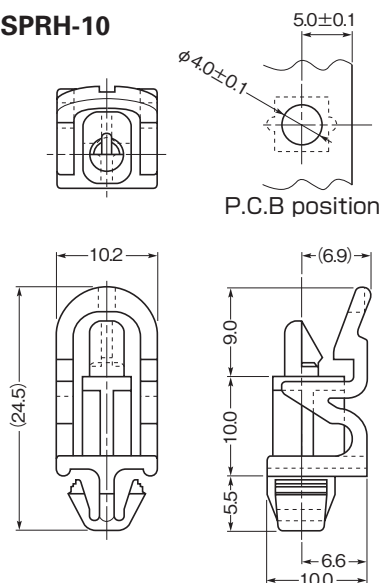
Mounting hole  
measurement

### Feature

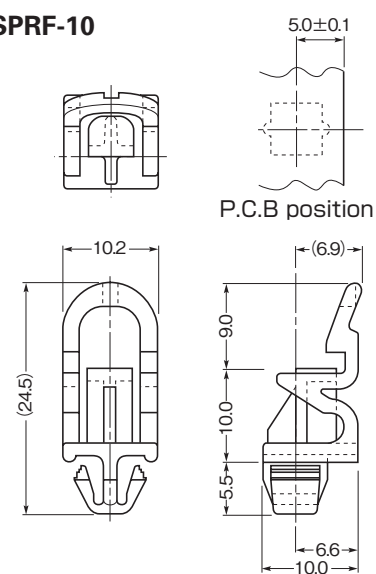
- Easy to unlock the fixation of P.C.B. at a time of maintenance.
- SPRF type is to hold the mid-section, not requiring mounting hole of P.C.board.

**Material** Nylon 66**Standard color** UL94V-2: Natural

SPRH-10



SPRF-10



Part No.	Dimensions (mm)			Packing unit (pieces)
	Mounting hole	Applicable board thickness		
	P.C.B.	P.C.B.	Chassis	
SPRH-10	φ 4.0	1.6	0.5 ~ 1.2	500
SPRF-10	—			

# Circuit board spacer

## STBS series



### Feature

- Fixed with the self tapping screws.
- Only its head part will stick out on the other side of the P.C.B.

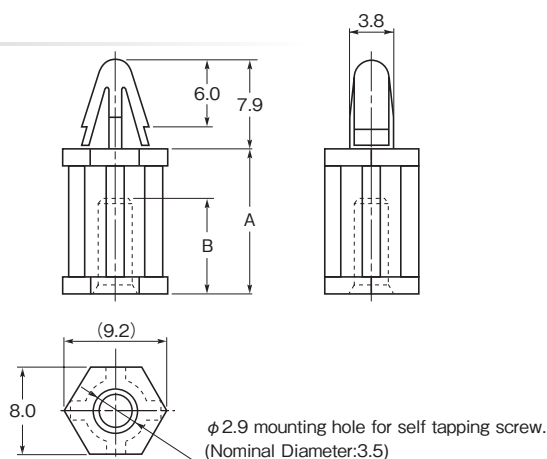
**Material**

Nylon 66

**Standard color**

UL94V-2: Natural

UL94V-0: White



Part No.		Dimensions (mm)			Packing unit (pieces)	
		A	B	P.C.B.		
UL94V-2	UL94V-0			Mounting hole	Applicable board thickness	
STBS- 4	STBS- 4U	6.4	5.0	φ 4.0	1.6	500
STBS- 6	STBS- 6U	9.6	7.0			
STBS- 8	STBS- 8U	12.7	8.4			
STBS-10	STBS-10U	15.9	8.4			
STBS-12	STBS-12U	19.1	8.4			
STBS-14	STBS-14U	22.3	8.4			
STBS-16	STBS-16U	25.4	8.4			
STBS-18	STBS-18U	28.6	8.4			
STBS-22.5	STBS-22.5U	35.7	8.4			



# Non-hole spacer

## NH series



### Feature

- Best Suited for the P.C.B. having no space to allocate the mounting hole such as hi-density or small P.C.B.
- Can be easily snapped-on.
- Easy to unlock the P.C.B. fixation and convenient at a time of maintenance and inspection.

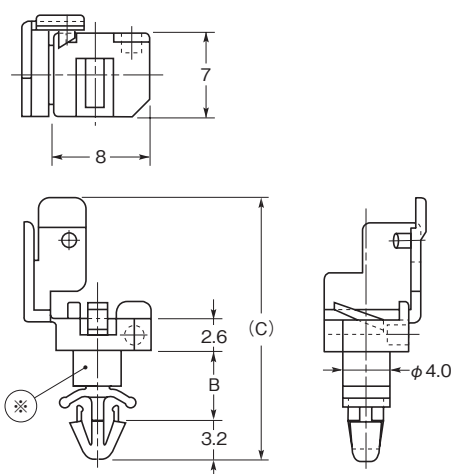
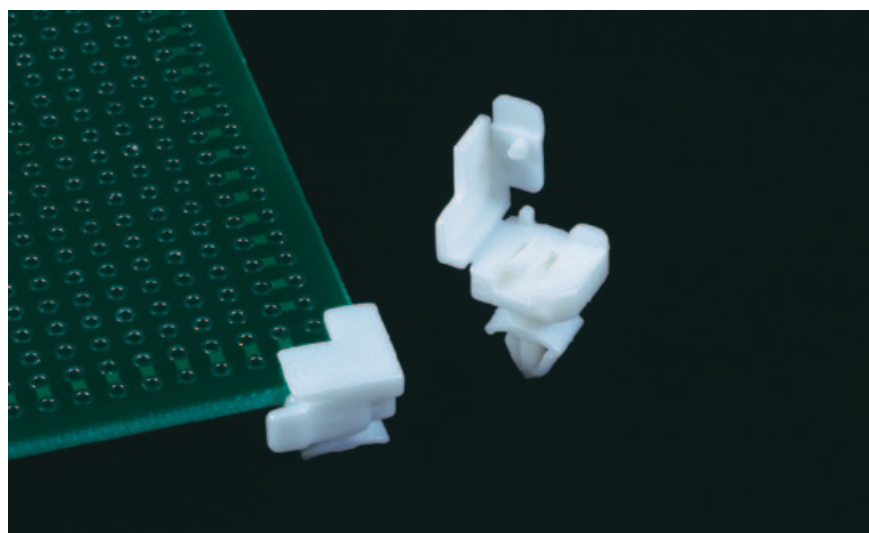
### Material

Nylon 66

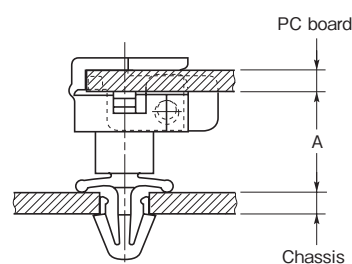
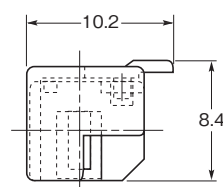
### Standard color

UL94V-2: Natural

UL94V-0: White



※ Each product has a different shape at mid-section in this series.



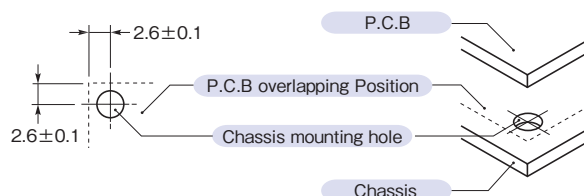
Fixed

### Vibration test

- Frequency : 4 cycles/sec.
- Amplitude : 2mm
- Duration : 4 hours
- Force : 9.8N (1kgf)
- Installed P.C.B. 57mm x 57mm t=1.6mm

Under above-mentioned vibration test, P.C.B did not come off the spacer. This data is only for the reference, but not for any warranty of the product.

Between the spacer mounting hole and the PC board position



Part No.		Dimensions (mm)			Chassis		Packing unit (pieces)
		A	B	(C)	P.C. board Applicable board thickness	Mounting hole Applicable board thickness	
UL94V-2	UL94V-0						
NH- 4	NH- 4U	4.0	2.9	18.7	1.2 ~ 1.6	φ 3.2	500
NH- 7	NH- 7U	7.0	5.8	21.6			
NH-12	NH-12U	12.0	10.8	26.6			



# Edge lock spacer

## ELS series

INSULATION SLEEVE  
FOR TERMINAL

CIRCUIT BOARD ACCESSORY

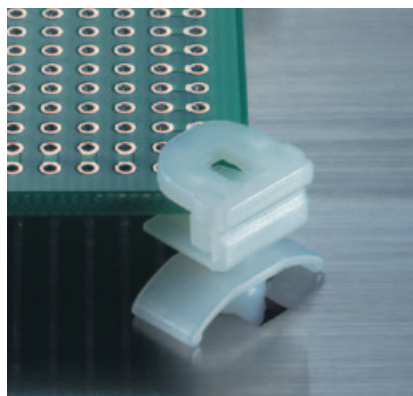
WIRING CLAMP

WIRING PROTECTOR

FASTENER

DIP-MOLDED PRODUCT

### Re-usable type



### Feature

- Best suited for fixing the sub-P.C.B.
- Can be used for both straight and corner section without mounting hole on P.C.B.
- Easy to unlock, and to attach and remove the circuit boards.
- Easy to remove from the chassis and re-usable.

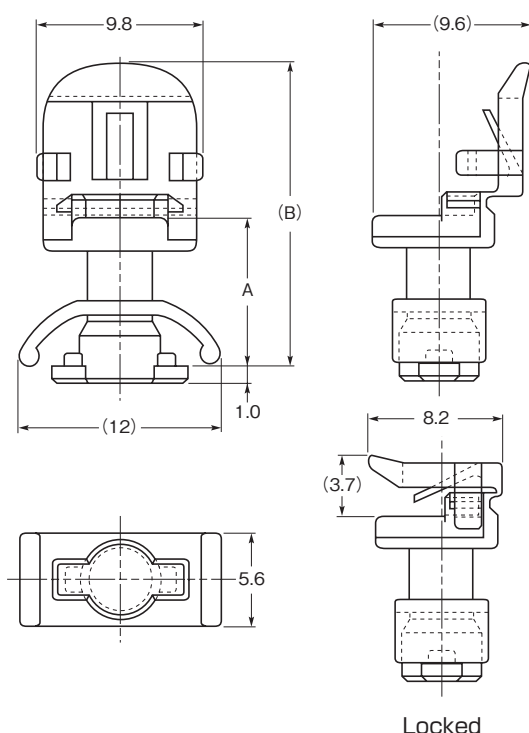
### Material

Nylon 66

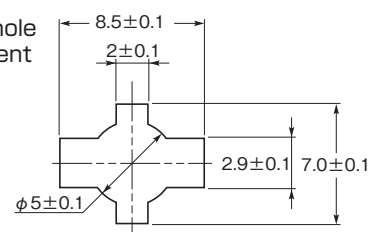
### Standard color

UL94V-2: Natural

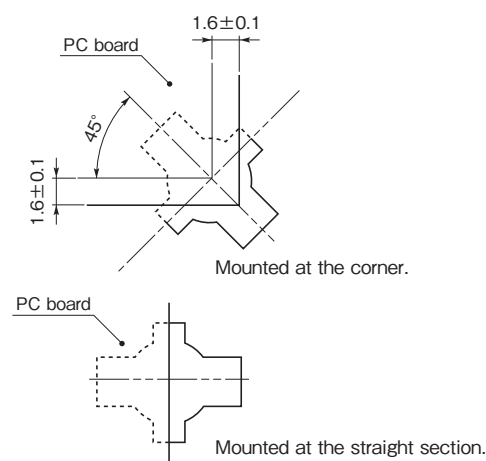
UL94V-0: White



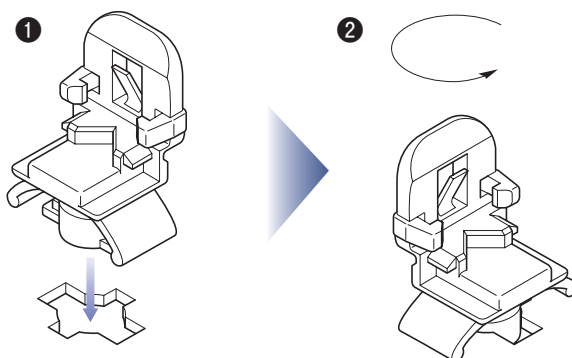
### ● Mounting hole measurement



### ● The position of mounting hole and P.C.B.



### Installation Manual



- ① Slot the edge lock spacer into the mounting hole.
- ② Turn 90° while edge lock spacer is pressed. Once it is locked inside the mounting hole, the installation is completed.
- ③ In case of uninstallation, turn 90° while it is pressed, pull it out.

Part No.		Dimensions (mm)				Packing unit (pieces)
		A	(B)	Applicable board thickness		
UL94V-2	UL94V-0			P.C. board		
ELS-7	ELS-7U	8	18.3	1.2 ~ 1.6	0.6 ~ 1.6	
ELS-8	ELS-8U	9	19.3			
						500



# Non-screw spacer

## NS series

### Re-usable type



### Feature

- Maintain an uniform distance between chassis and P.C.B. by only squeezing the fixing pin into the body without using screws and nuts.
- Easily removable from a chassis and P.C.B. by only pulling out the fixing pin.
- Re-usable

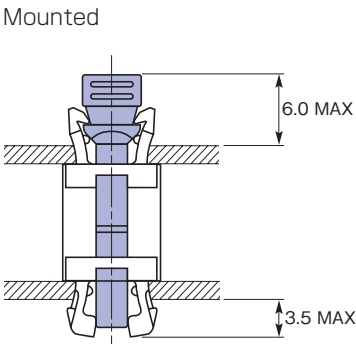
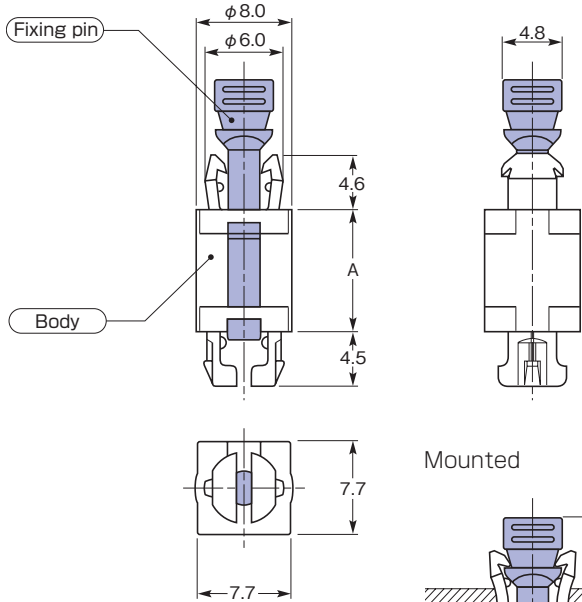
### Material

Nylon 66

### Standard color

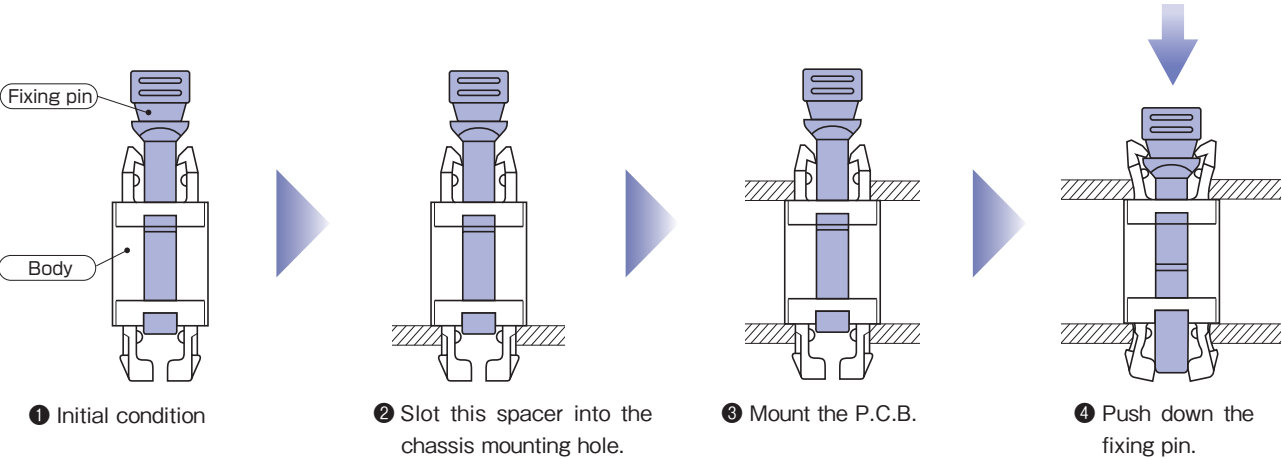
UL94V-2: Black

UL94V-0: Black



Part No.		Dimensions (mm)					Packing unit (pieces)
		A	Mounting hole		Applicable board thickness		
UL94V-2	UL94V-0			P.C.B.	Chassis	P.C.B.	Chassis
NS- 5	NS- 5U	5.7	φ 6.0	φ 6.0	0.5 ~ 2.3	0.5 ~ 2.3	500
NS- 7	NS- 7U	7.5					
NS-10	NS-10U	10.0					
NS-15	NS-15U	15.0					
NS-20	NS-20U	20.0					

### Installation Manual



① Initial condition

② Slot this spacer into the chassis mounting hole.

③ Mount the P.C.B.

④ Push down the fixing pin.

⑤ Reverse the procedure at the un-installation.

The fixing pin can be easily released by its head twisted 45° and pulled out with a plier.



# Snap-collar bush

## SB/SBW series



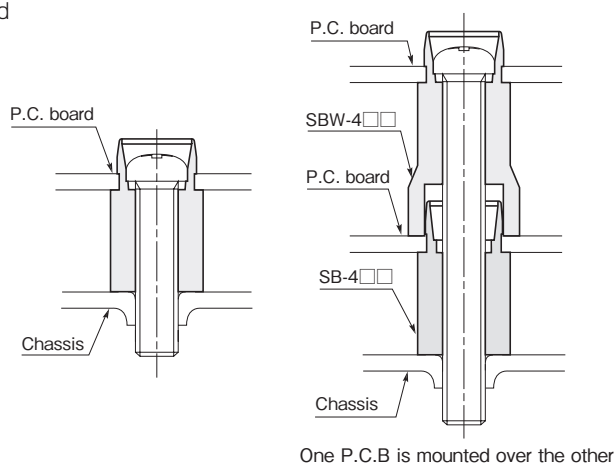
### Feature

- Support for the P.C.B. screw fixation.
- Easy handling owing to one-piece structure.
- The screw head is concealed into the bush resulting excellent insulation and protection.
- Multiple board stacking type is also available.

**Material** Nylon 6 UL94V-0

**Standard color** White

Mounted



One P.C.B is mounted over the other

Part No.	Dimensions (mm)			Figure	Packing unit (pieces)
	A	Mounting hole P.C.B.	Screw		
SB-305	5.7	φ 6.6	M3	1	200
SB-307	7.5				
SB-310	10.0				
SB-315	15.0				
SB-320	20.0				
SB-405	5.7	φ 7.5	M4	2	
SB-407	7.5				
SB-410	10.0				
SB-415	15.0				
SB-420	20.0				
SBW-410	12.5	φ 7.5	M4	3	
SBW-415	15.0				
SBW-420	20.0				
SBW-425	25.0				

※ The SBW series are for mounting boards on top of each other.

Fig. 1

Burr-like projection on the circumference to act as temporary stops.

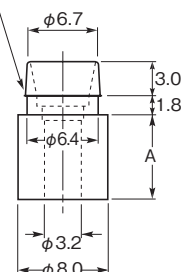


Fig. 2

Burr-like projection on the circumference to act as temporary stops.

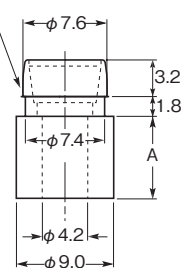
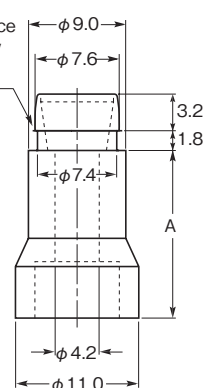


Fig. 3

Burr-like projection on the circumference to act as temporary stops.

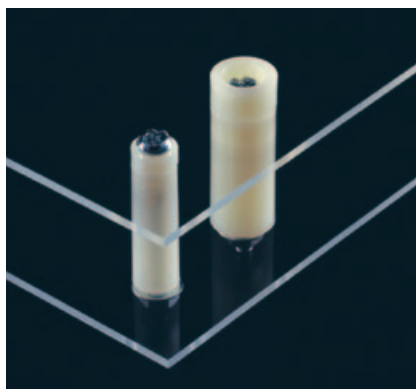


- The screw tightening torque  
68.6N·cm ~ 78.4N·cm  
(7kgf·cm ~ 8kgf·cm)



# One-touch collar bush

## NA • NB/TA • TB series



### Feature

- Maintain an uniform height of the P.C.B.
- Collar and bush shall be fitted onto the P.C.B., and screwed. Various height will be available by only changing the collar.
- Without any direct contact between P.C.B. and screws, it will avoid creating the damage such as crack.

Standard type

**Material**

ABS resin UL94HB

**Standard color**

Natural

Heat-resistant type

**Material**

Poly-carbonate UL94V-0

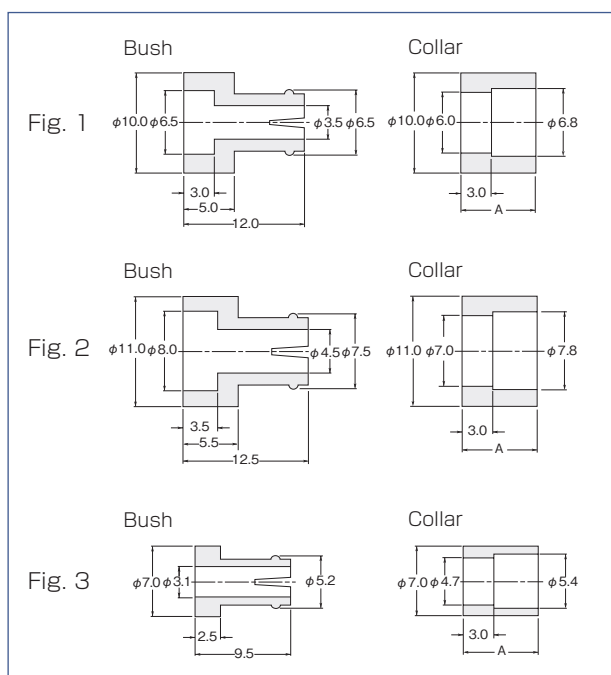
**Standard color**

Black

● The heat-resistant type is to have the suffix of "B". Example NB-300B

Bush				Collar			
Part No.	Figure	Mounting hole (mm)	Packing unit (pieces)	Part No.	A (mm)	Screw	Packing unit (pieces)
NB-300	1	φ 6.5	200	NA-305	5.7	M3	200
				NA-307	7.5		
				NA-310	10.0		
				NA-315	15.0		
				NA-320	20.0		
NB-400	2	φ 7.5	200	NA-405	5.7	M4	200
				NA-407	7.5		
				NA-410	10.0		
				NA-415	15.0		
				NA-420	20.0		
TB-300	3	φ 5.2	200	TA-305	5.7	M3	200
				TA-307	7.5		
				TA-310	10.0		
				TA-314	14.0		
				TA-320	20.0		

More range is also available. Please contact us for further information.



# Transistor spacer

## TR/TRC series



### Feature

- Prevent transistor spacer from inclining, also maintain an uniform height from the P.C.B.
- Compatible with transistors of any manufacturers.

Standard type

**Material**

Polyacetal UL94HB

**Standard color**

White

Flame-retardant type

**Material**

Nylon 6 UL94V-0

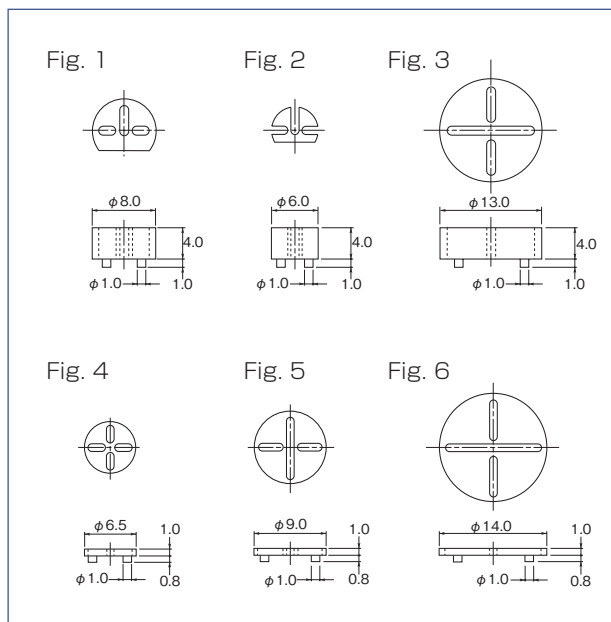
**Standard color**

Black

● The flame-retardant type is to have the suffix of "B". Example TR-1B

Part No.	Figure	Packing unit (pieces)
TR-1	1	1,000
TR-2	2	
TR-3	3	200
TRC-1	4	1,000
TRC-2	5	
TRC-3	6	

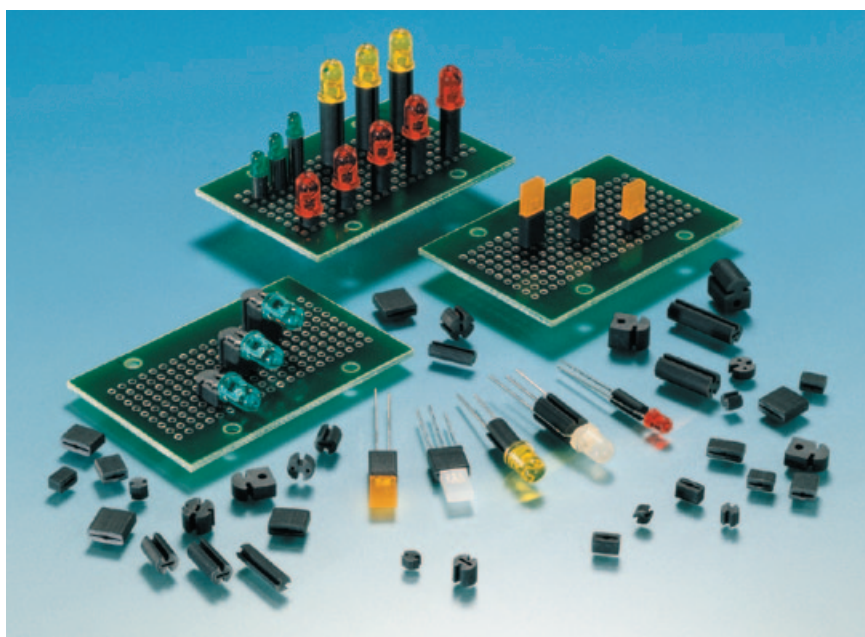
More range is also available. Please contact us for further information.





# LED spacer

## LH/LK series



### Feature

- Create an uniform height for LED fixation.
- Prevent LED from tipping over, and protects and insulate LED lead wire.
- Reliable due to the excellence in heat-resistance, cold-resistance and chemical-resistance, and can be used during the soldering and cleaning procedure.
- Spacer for 3 $\phi$ , 5 $\phi$ , square shaped, two-color LEDs also available
- Length outside the standard range indicated below can be also customized.

## LH-5 series



### Feature

- For  $\phi 5$  LED.
- Either the exterior channels (shown in Fig.1) or the central ellipse (shown in Fig.2) of a spacer can be used.
- Length outside the standard range indicated below can be also customized. (Please contact us for further information.)

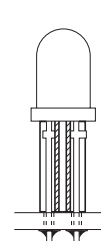
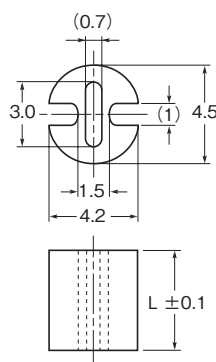


Fig. 1

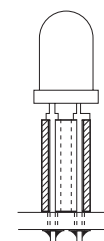


Fig. 1

### Material

Olefin elastomer UL94V-0

### Standard color

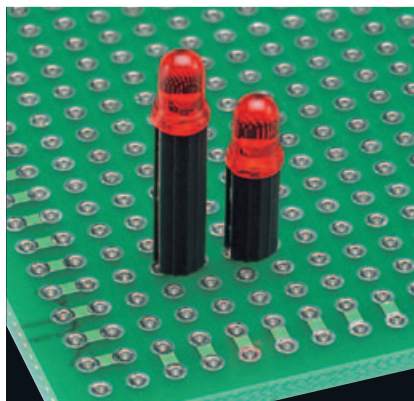
Black

Part No.	Dimensions (mm)	Part No.	Dimensions (mm)
	L		L
LH-5-1	1.0	LH-5- 9	9.0
LH-5-1.5	1.5	LH-5- 9.5	9.5
LH-5-2	2.0	LH-5-10	10.0
LH-5-2.5	2.5	LH-5-10.5	10.5
LH-5-3	3.0	LH-5-11	11.0
LH-5-3.5	3.5	LH-5-11.5	11.5
LH-5-4	4.0	LH-5-12	12.0
LH-5-4.5	4.5	LH-5-12.5	12.5
LH-5-5	5.0	LH-5-13	13.0
LH-5-5.5	5.5	LH-5-13.5	13.5
LH-5-6	6.0	LH-5-14	14.0
LH-5-6.5	6.5	LH-5-14.5	14.5
LH-5-7	7.0	LH-5-15	15.0
LH-5-7.5	7.5	Packing unit : 1,000 piece	
LH-5-8	8.0		
LH-5-8.5	8.5		

Packing unit : 1,000 pieces



## LH-3 series



## Feature

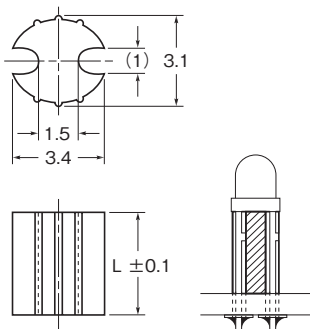
- For  $\phi 3$  LED.
- Length outside the standard range indicated below can be also customized.  
(Please contact us for further information.)

## Material

Olefin elastomer UL94V-0

## Standard color

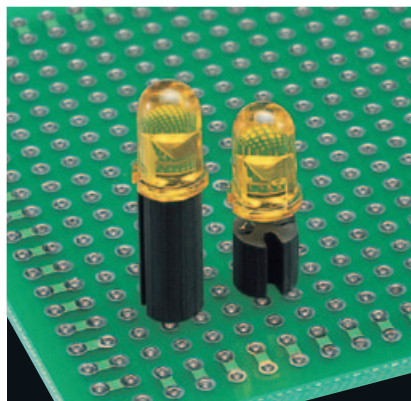
Black



Part No.	Dimensions (mm)
	L
LH-3- 1	1.0
LH-3- 2	2.0
LH-3- 3	3.0
LH-3- 4	4.0
LH-3- 5	5.0
LH-3- 6	6.0
LH-3- 7	7.0
LH-3- 8	8.0
LH-3- 9	9.0
LH-3-10	10.0
LH-3-11	11.0
LH-3-12	12.0
LH-3-13	13.0
LH-3-14	14.0
LH-3-15	15.0

Packing unit : 1,000 pieces

## LH-5S series



## Feature

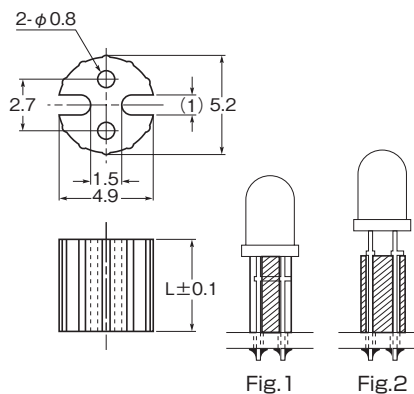
- For  $\phi 5$  LED.
- Projection on the circumference will prevent from tipping over.
- With either the outside groove shown in fig. 1 or the hole shown in Fig.2, this spacer can be used.
- Length outside the standard range indicated below can be also customized.  
(Please contact us for further information.)

## Material

Olefin elastomer UL94V-0

## Standard color

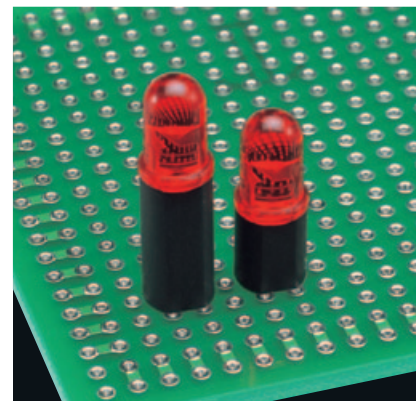
Black



Part No.	Dimensions (mm)
	L
LH-5S- 1	1.0
LH-5S- 2	2.0
LH-5S- 3	3.0
LH-5S- 4	4.0
LH-5S- 5	5.0
LH-5S- 6	6.0
LH-5S- 7	7.0
LH-5S- 8	8.0
LH-5S- 9	9.0
LH-5S-10	10.0
LH-5S-11	11.0
LH-5S-12	12.0
LH-5S-13	13.0
LH-5S-14	14.0
LH-5S-15	15.0

Packing unit : 1,000 pieces

## LH-5E series



## Feature

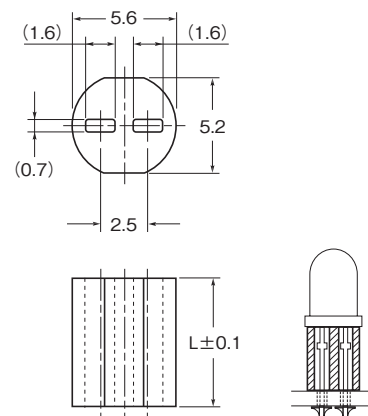
- For  $\phi 5$  LED.
- Improved for the protection and insulation character of wire, also prevention from tipping.
- Length outside the standard range indicated below can be also customized.  
(Please contact us for further information.)

## Material

Olefin elastomer UL94V-0

## Standard color

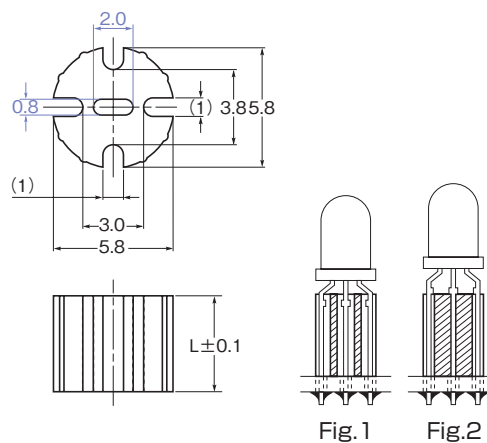
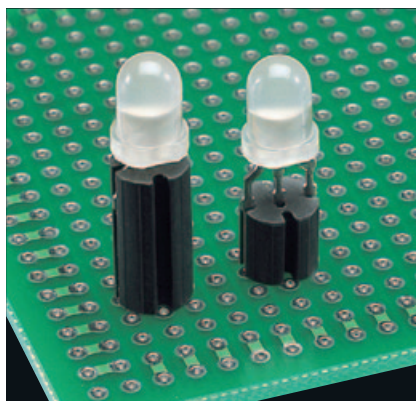
Black



Part No.	Dimensions (mm)
	L
LH-5E- 1	1.0
LH-5E- 2	2.0
LH-5E- 3	3.0
LH-5E- 4	4.0
LH-5E- 5	5.0
LH-5E- 6	6.0
LH-5E- 7	7.0
LH-5E- 8	8.0
LH-5E- 9	9.0
LH-5E-10	10.0
LH-5E-11	11.0
LH-5E-12	12.0
LH-5E-13	13.0
LH-5E-14	14.0
LH-5E-15	15.0

Packing unit : 1,000 pieces



**LH-36 series****Feature**

- For two-color LED.
- LEDs can be mounted in either of two ways; the central ellipse can be used in a lengthwise orientation (shown in Fig.1) or in crosswise orientation.(shown in Fig.2)
- Length outside the standard range can be also customized.  
(Please contact us for further information.)

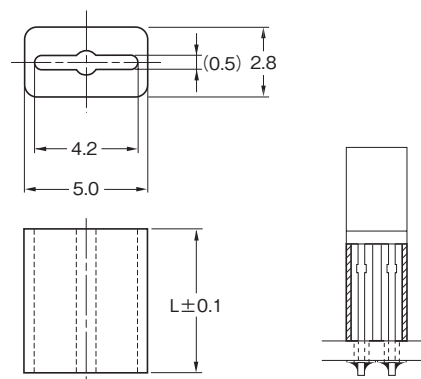
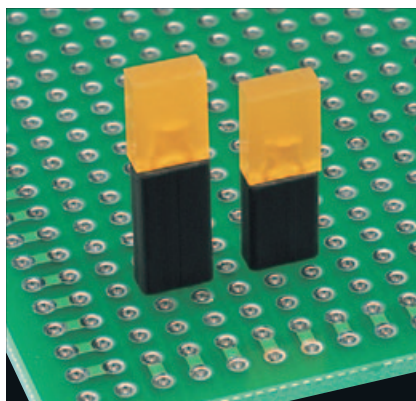
**Material**

Olefin elastomer UL94V-0

**Standard color**

Black

Part No.	Dimensions (mm)	Packing unit (pieces)
	L	
LH-36- 1	1.0	1,000
LH-36- 2	2.0	
LH-36- 3	3.0	
LH-36- 4	4.0	
LH-36- 5	5.0	
LH-36- 6	6.0	
LH-36- 7	7.0	
LH-36- 8	8.0	
LH-36- 9	9.0	
LH-36-10	10.0	
LH-36-11	11.0	
LH-36-12	12.0	
LH-36-13	13.0	
LH-36-14	14.0	
LH-36-15	15.0	

**LK series****Feature**

- Best suited for square LED.
- Length outside the standard range can be also customized.  
(Please contact us for further information.)

**Material**

Olefin elastomer UL94V-0

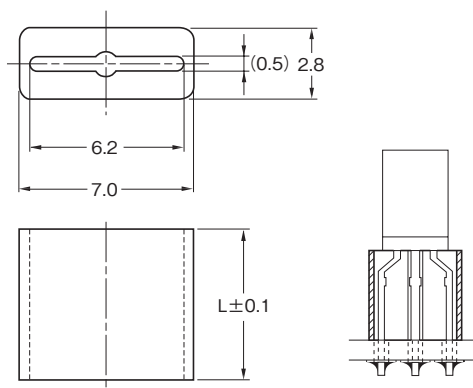
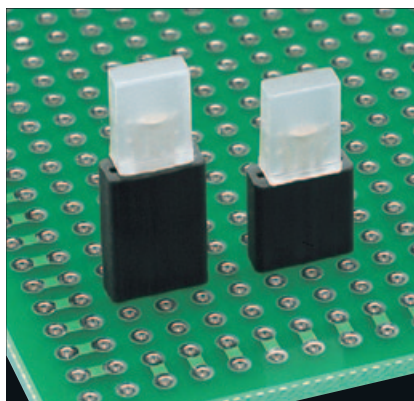
**Standard color**

Black

Part No.	Dimensions (mm)	Packing unit (pieces)
	L	
LK- 1	1.0	1,000
LK- 2	2.0	
LK- 3	3.0	
LK- 4	4.0	
LK- 5	5.0	
LK- 6	6.0	
LK- 7	7.0	
LK- 8	8.0	
LK- 9	9.0	
LK-10	10.0	
LK-11	11.0	
LK-12	12.0	
LK-13	13.0	
LK-14	14.0	
LK-15	15.0	



## LK-36 series



### Feature

- For two-color square LED.
- Length outside the standard range can be also customized.  
(Please contact us for further information.)

### Material

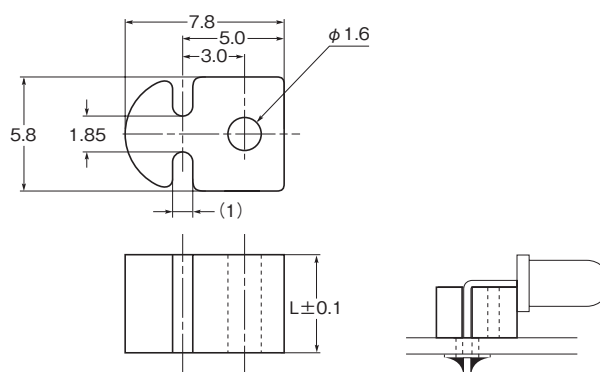
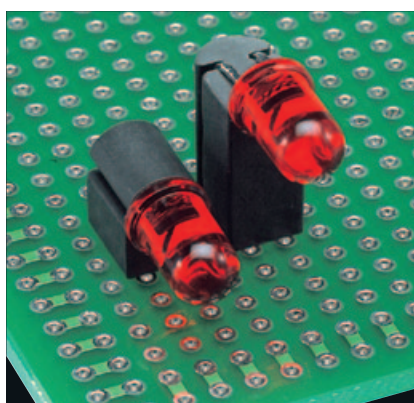
Olefin elastomer UL94V-0

### Standard color

Black

Part No.	Dimensions (mm)	Packing unit (pieces)
	L	
LK-36- 1	1.0	1,000
LK-36- 2	2.0	
LK-36- 3	3.0	
LK-36- 4	4.0	
LK-36- 5	5.0	
LK-36- 6	6.0	
LK-36- 7	7.0	
LK-36- 8	8.0	
LK-36- 9	9.0	
LK-36-10	10.0	
LK-36-11	11.0	
LK-36-12	12.0	
LK-36-13	13.0	
LK-36-14	14.0	
LK-36-15	15.0	

## Horizontal LED spacer LA-5 series



### Feature

- For the horizontal mounting of either  $\phi 3$  or  $\phi 5$  LED.
- The use of a square pin in  $\phi 1.6$  hole will secure the better fixation.
- Length outside the standard range can be also customized.  
(Please contact us for further information.)

### Material

Olefin elastomer UL94V-0

### Standard color

Black

Part No.	Dimensions (mm)	Packing unit (pieces)
	L	
LA-5- 3	3.0	1,000
LA-5- 4	4.0	
LA-5- 5	5.0	
LA-5- 6	6.0	
LA-5- 7	7.0	
LA-5- 8	8.0	
LA-5- 9	9.0	
LA-5-10	10.0	
LA-5-11	11.0	
LA-5-12	12.0	
LA-5-13	13.0	
LA-5-14	14.0	
LA-5-15	15.0	

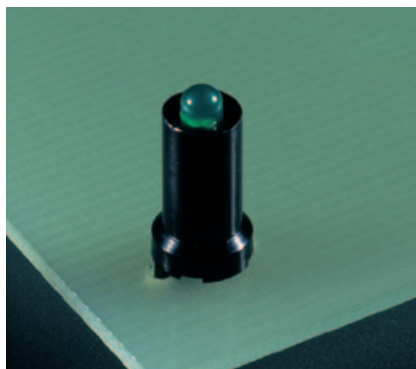


## LED holder

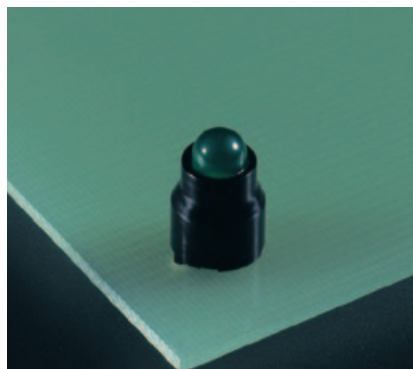
## LF series/LF5-9.2



## LF series



## LF5-9.2



## Feature

- Prevent the LED from tipping, and the light from dissipation.
- Best suited for the LED with the shaped wire.
- LF series for  $\phi 3$  LED.
- LF5-9.2 for  $\phi 5$  LED.

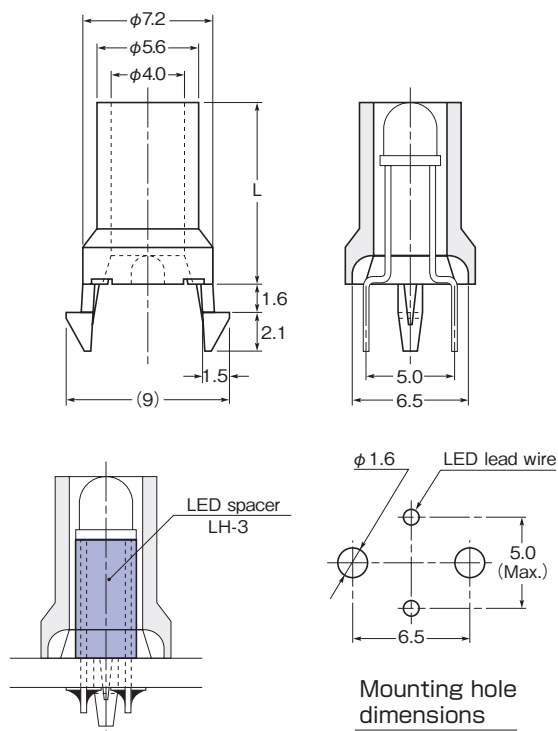
## Material

Nylon 6 UL94V-2

## Standard color

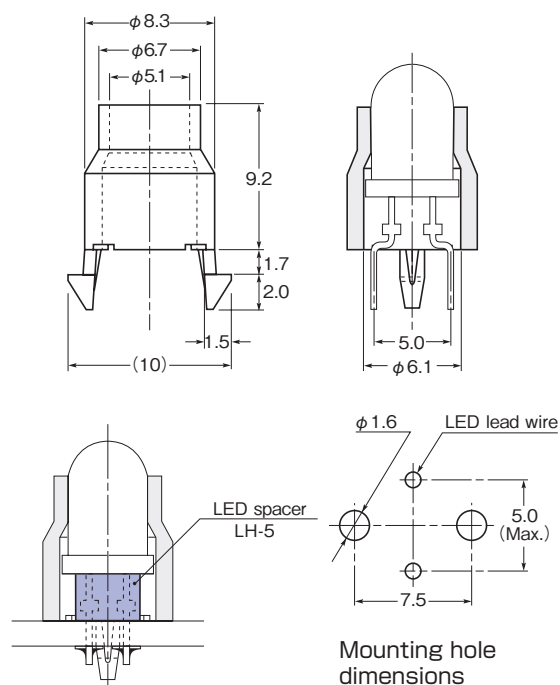
Black

## LF series



- We recommend the combined use between LED spacer and LH-3 in case the lead wire are not shaped. (Easily adjustable of LED height.)

## LF5-9.2



- We recommend the combined use between LED spacer and LH-5 in case the lead wire are not shaped. (Easily adjustable of LED height.)

## LF series

Part No.	Dimensions (mm)		Packing unit (pieces)
	L	Applicable board thickness	
LF- 8	8.0	1.6	500
LF-10	10.0		
LF-11	11.0		
LF-12	12.0		
LF-17	17.0		

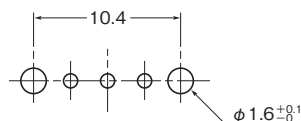
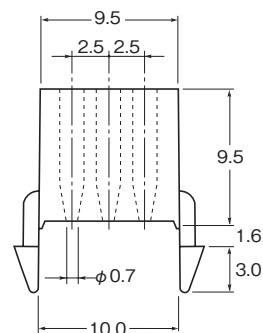
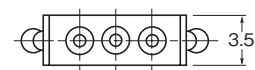
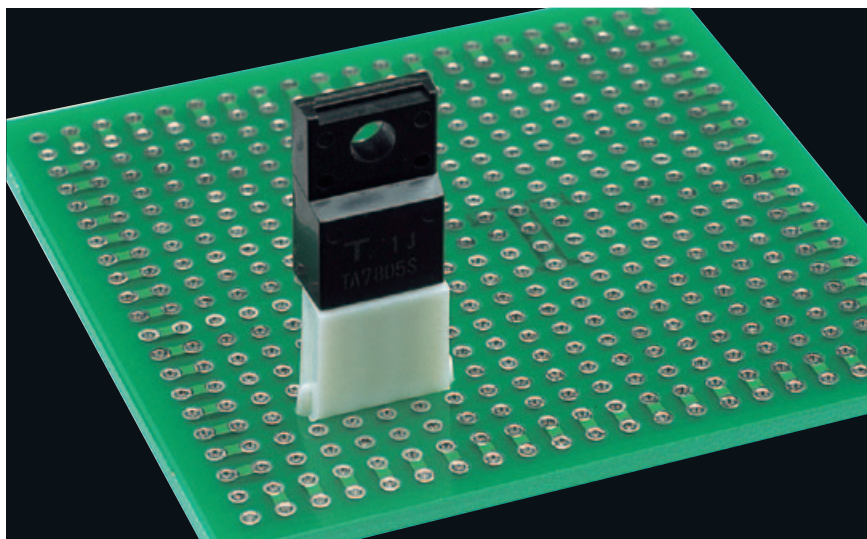
## LF5-9.2

Part No.	Applicable board thickness (mm)	Packing unit (pieces)
LF5-9.2	1.6	500



# Power transistor spacer

## PT-95U



Mounting hole dimensions

### Feature

- For power transistors (TO-220 type)
- Best suited for the protection of lead wire and the insulation.
- Best suited for the preventing from tipping during the soldering and transportation.
- The height of spacer is 9.5mm.

### Material

Nylon 66 UL94V-0

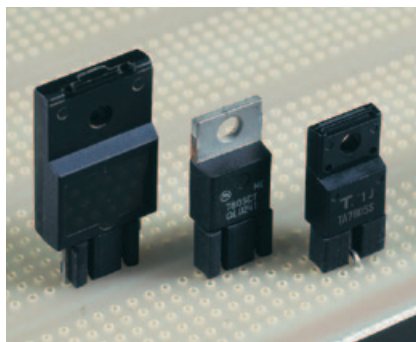
### Standard color

White

Part No.	Packing unit (pieces)
PT-95U	500

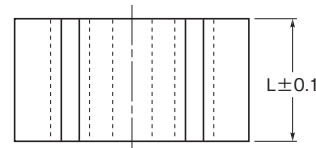
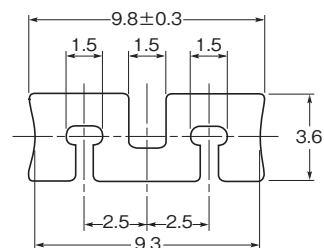
# Triadic-terminal spacer

## 3T series



### Feature

- For power transistors, triadic-terminal regulators etc.
- Reliable due to the excellence in heat-resistance, cold-resistance and chemical-resistance, and can be used during the soldering and cleaning procedure.
- Can be also used for 5-terminal electronic components.
- Length outside the standard range as below can be also customized. (Please contact us for further information.)



### Material

Olefin elastomer UL94V-0

### Standard color

Black

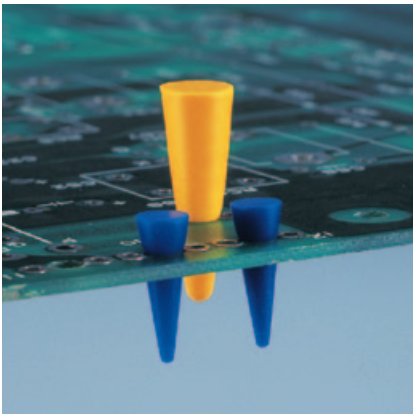
Part No.	Dimensions (mm)	Packing unit (pieces)
	L	
3T- 3	3.0	1,000
3T- 4	4.0	
3T- 5	5.0	
3T- 6	6.0	
3T- 7	7.0	
3T- 8	8.0	
3T- 9	9.0	
3T-10	10.0	
3T-11	11.0	
3T-12	12.0	
3T-13	13.0	
3T-14	14.0	
3T-15	15.0	





# Non-through packing

## NP series

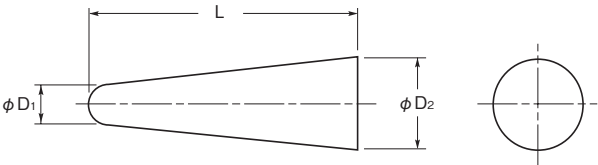


### Feature

- Hole stopping cap that prevent plating for adhering during through-hole plating.
- Protect tap hole., etc., during the plating of equipment casing or cabinets.
- Flexible and elastic. Can be used to plug round, elliptical, oval hole, etc. Excellent heat resistant and chemical resistant properties.
- Recycle.

### Material

Silicone rubber



Part No.	Dimensions (mm)			Color	Packing unit (pieces)
	φ D1	φ D2	L		
NP-1	0.8	4.0	15.0	Red	1,000
NP-2	1.3	5.5	15.0	Blue	
NP-3	3.0	7.5	22.0	Yellow	



## Automatic Insertion machine use Surface Mount type, Check Terminal



## HK-2 series

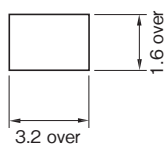
(3.2 x 1.6 type)

## Feature

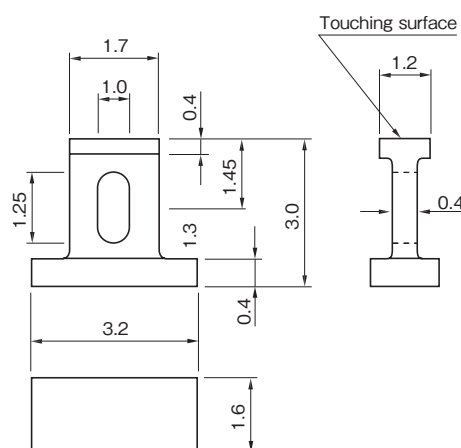
- HK-series are available to set chip-mounting machine.
- Packaging is by emboss taping.
- In case of using normal cream-soldering by reflow, land configuration is flat and size more than 1.6 mm × 3.2 mm.
- Material : Brass
- Surface treatment : HK-2-G Gold plated on nickel base.  
HK-2-S Sn plated on nickel base.

Part No.	Packaging conditions
HK-2-G	Reel (1000 pcs/reel)
HK-2-S	

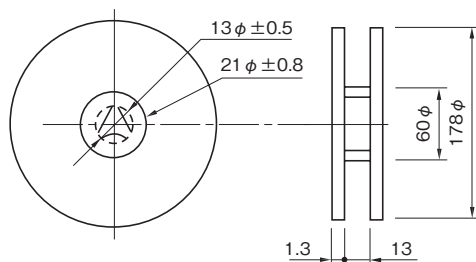
## Recommended land size



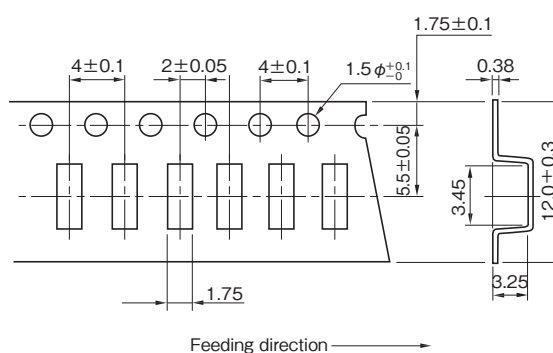
## Dimensions



## Reel dimensions



## Tape dimensions





## Automatic Insertion machine use Surface Mount type, Check Terminal



## HK-3 series

(2 x 1.25 type)

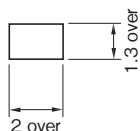


## Feature

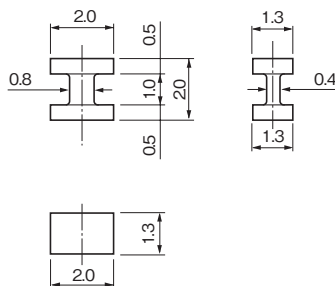
- HK-series are available to set chip-mounting machine.
- Suitable for small devices as the size is 2 × 1.25.
- Packaging is by emboss taping.
- In case of using normal cream-soldering by reflow, land configuration is flat and size more than 2 mm × 1.3 mm.
- Material : Brass
- Surface treatment : HK-3-G Gold plated on nickel base.  
HK-3-S Sn plated on nickel base.

Part No.	Packaging conditions
HK-3-G-T	Reel (1500 pcs/reel)
HK-3-G	Bulk (1000 pcs/Pack)
HK-3-S-T	Reel (1500 pcs/reel)
HK-3-S	Bulk (1000 pcs/Pack)

## Recommended land size

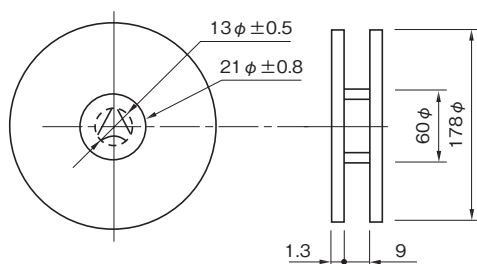


## Dimensions

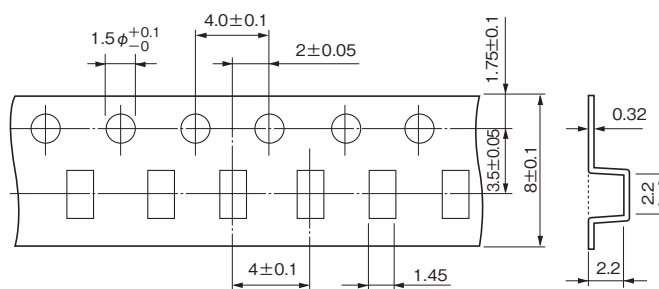


HK-3-□-T (Taping version)

## Reel dimensions



## Tape dimensions





## Automatic Insertion machine use Surface Mount type, Check Terminal



## HK-4 series

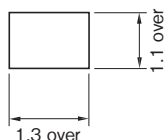
(1.2 x 1.0 type)

## Feature

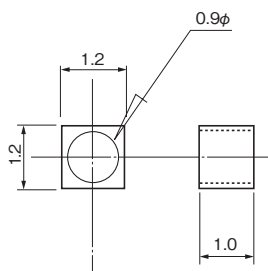
- HK-series are available to set chip-mounting machine.
- Suitable for small devices as the size is extremely small  $1.2 \times 1.0$ .
- Shall be used by oscilloscope hooked inner hole.
- In case of using normal cream-soldering by reflow, land configuration is flat and size more than  $1.3 \text{ mm} \times 1.1 \text{ mm}$ .
- Material : Brass
- Surface treatment : HK-4-G Gold plated on nickel base.  
HK-4-S Sn plated on nickel base.

Part No.	Packaging conditions
HK-4-G-T	Reel (3000 pcs/reel)
HK-4-G	Bulk (1000 pcs/Pack)
HK-4-S-T	Reel (3000 pcs/reel)
HK-4-S	Bulk (1000 pcs/Pack)

## Recommended land size

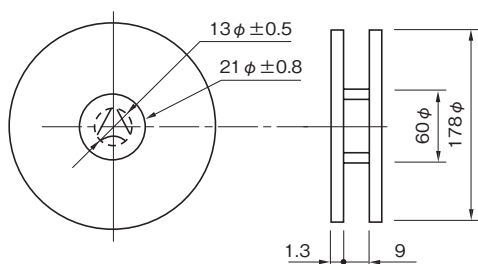


## Dimensions

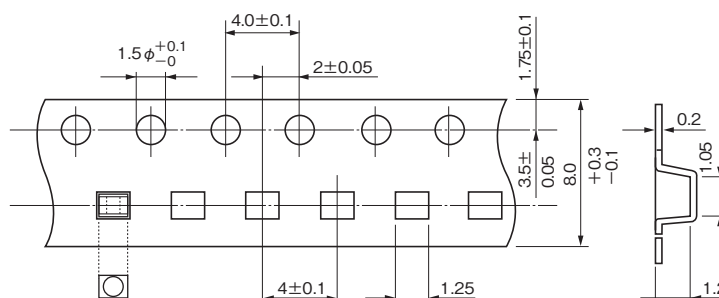


HK-4-□-T (Taping version)

## Reel dimensions



## Tape dimensions





## Automatic Insertion machine use Surface Mount type, Check Terminal



## HK-5 series

(2.5 x 3.0 type)

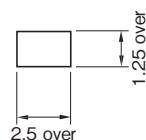


## Feature

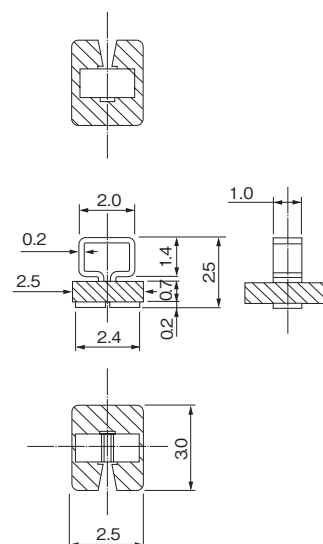
- Colored check terminal to be set on chip-mounting machine.
- Choice of 10 colors.
- Size : 2.5 × 3.0.
- In case of using normal cream-soldering by reflow, land configuration is flat and size more than 1.25 mm × 2.5 mm.
- Stored in emboss tape.
- Applicable temperature -40 ~ +150°C.
- Material : Pin ..... Phosphor bronze 0.2t  
Resin part (lined part) ..... Fluorine (UL94V-0) Color (10 colors)
- Surface treatment : HK-5-G Gold plated on nickel base.  
HK-5-S Sn plated on nickel base.
- How to order : Example HK-5-G ← Please designate the color.  
Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Grey, White.

Part No.	Packaging conditions
HK-5-G □	Reel (1000 pcs/reel)
HK-5-S □	
HK-5-G-B □	Bulk (1000 pcs/Pack)
HK-5-S-B □	

## Recommended land size

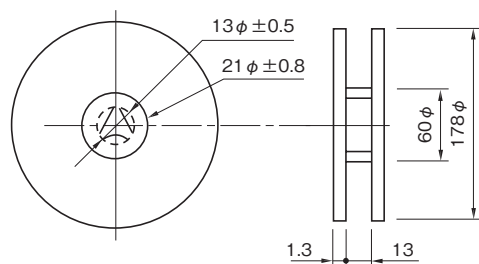


## Dimensions



HK-5-G □ /HK-5-S □ (Taping version)

## Reel dimensions



## Tape dimensions

