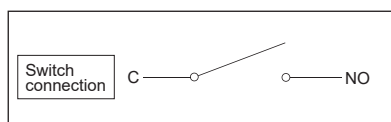
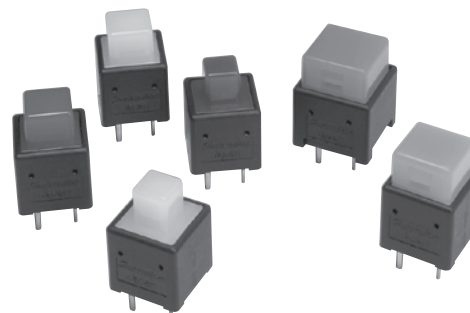


## KC Illuminated Pushbutton Switch

PCB mounted switches with high resistance for micro-load

- Depth behind panel : Only 12 mm, Total length is unified to 18 mm.
- LED Full-Face, Dual-Color illumination available.
- Terminal shape : PCB
- Accessories : Flange, Spacer



### CHARACTERISTICS

Button Size	Square : □6mm, □8mm, □10mm, □12mm
Contact Material	Silver contact (Gold-plated)
Rating (Resistive Load)	DC 24 V 50 mA
Insulation Resistance	More than 100 MΩ at DC 500 V
Dielectric Strength	AC 600 V RMS between NC and NO terminal AC 1000 V RMS between terminals and ground 50/60 Hz for 60 sec. at normal ambient temperature and humidity
Contact Resistance	Less than 50 mΩ (Initial value) at DC 6 V 0.05 A
Vibration Resistance	10 to 55 Hz, Amplitude 1.5 mm
Mechanical Life	More than 2,000,000 operations
Electrical Life (Resistive Load)	More than 2,000,000 operations at max. rated load
Operating Force	2.5 N max.
Total Travel	2.5 mm max.
Weight	3.5 g
Ambient Operating Temperature	−15°C to 50°C (No Freeze, No Condensation)
Ambient Operating Humidity	80%RH max. (No Condensation)
Ambient Storage Temperature	−25°C to 65°C (No Freeze, No Condensation)
Ambient Storage Humidity	80%RH max. (No Condensation)

[https://www.sunmulon.co.jp/english/products/switch\\_e/kc.html](https://www.sunmulon.co.jp/english/products/switch_e/kc.html)



- |  |                                 |   |
|--|---------------------------------|---|
| ◇Dimensions : page KC-4                              | ◇Accessories : page KC-5        | ◇Ordering code : page KC-6~7              |
| ◇Internal connection arrangements : page KC-9        | ◇LED specifications : page KC-9 | ◇Terminals / PCB hole cutout : page KC-10 |
| ◇Accessories' dimensions / Panel cutout : page KC-11 |                                 |   |

SPECIFICATIONS

		6	8	10	12
Shape	Button	A	A	A	A
	Filter	N/A	N/A	A	A
	Flange	N/A	N/A	A	A
Housing size	□12.5 mm	A	A	A	N/A
	□14.5 mm	N/A	N/A	N/A	A
Illumination type	Full-Face	A	A	A	A
	Dual-Color	A	A	A	A
Contact	SPST (1a)	A	A	A	A
Terminal	PCB	A	A	A	A
RoHS (10 Substances)		Conform to standards			

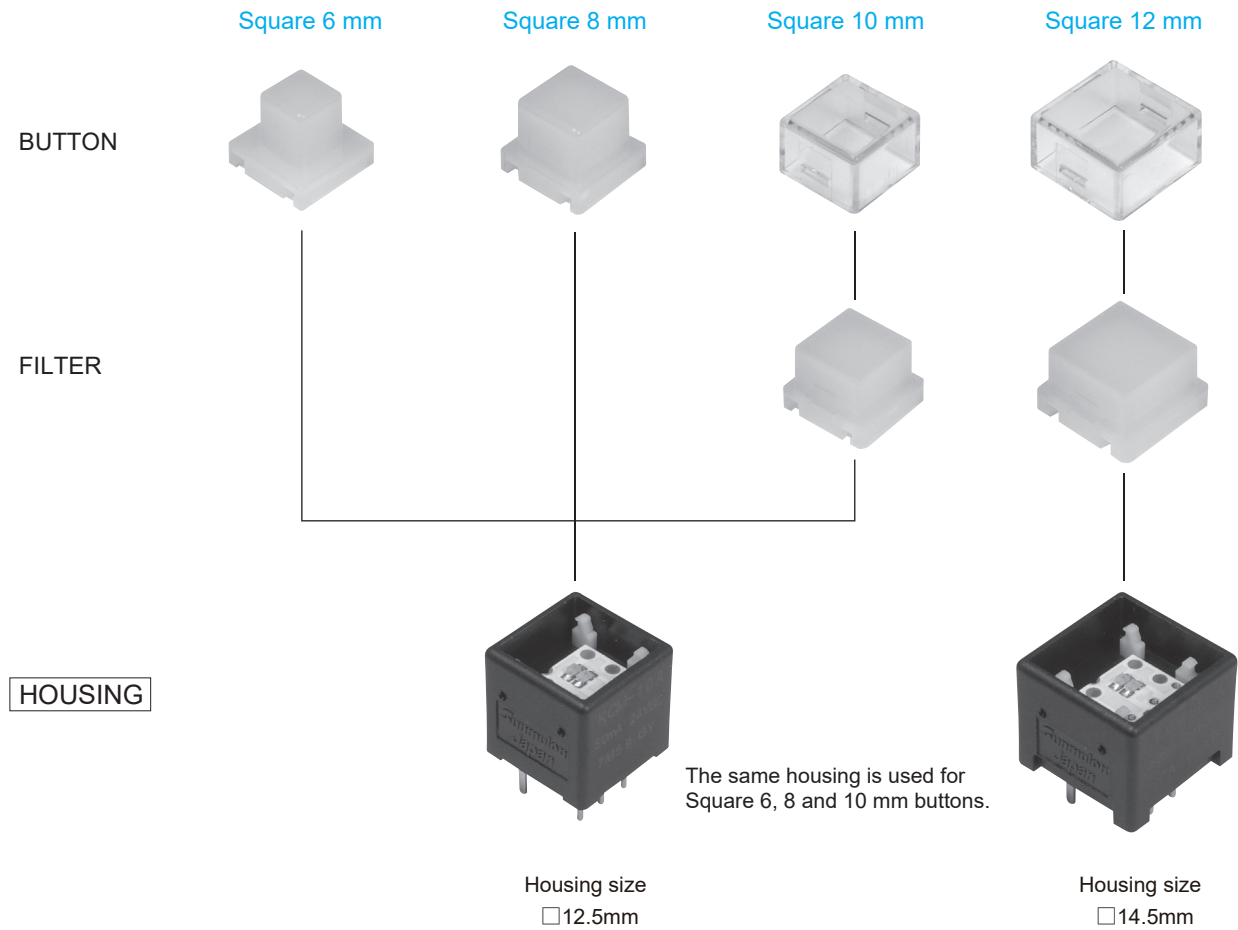
A : Applicable    N/A : Not applicable

CONTACT RATINGS

● Gold-plated

Max load	DC 24V 50mA (Resistive Load)
Min. load	DC1.5V 10μA (Resistive Load)

STRUCTURE

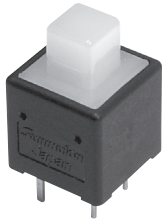


## ILLUMINATION TYPES

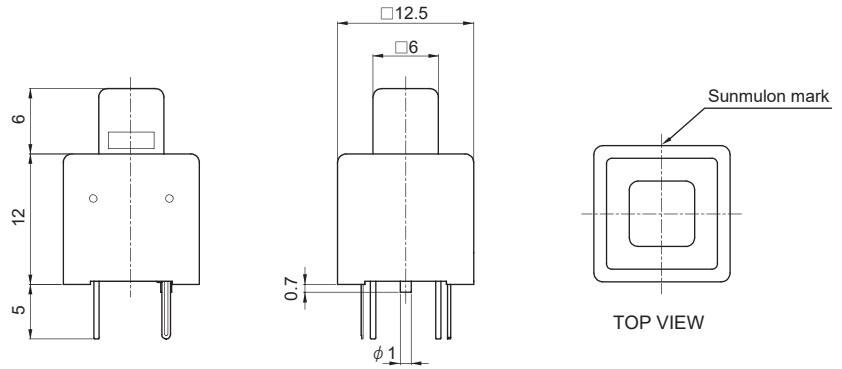
Common for each button size.												
LED color symbol	70	Red	80	Green	90	Yellow	14	Super Blue	16	Super White	18	Super Green
※ Yellow (90) is actually “ORANGE Yellow” not Lemon Yellow.												
Full-Face	7	8	9	14	16	18						
Dual-Color	7•8	7•14	7•16	7•18	8•9	9•7	9•14	9•16	9•18	14•16	16•18	18•14

## DIMENSIONS

6 mm Button



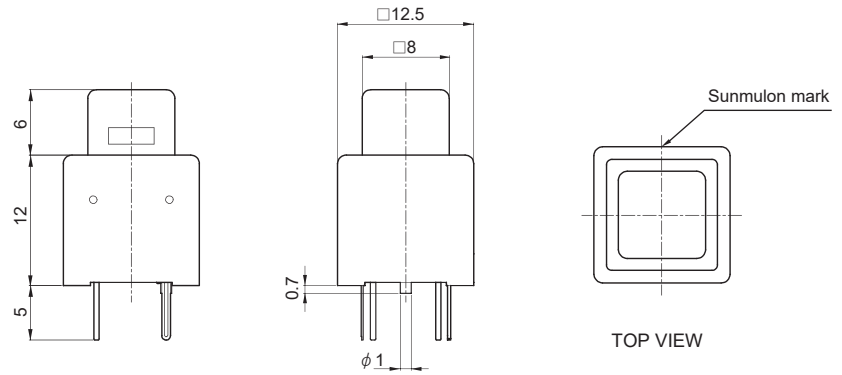
3D  
DXF



8 mm Button



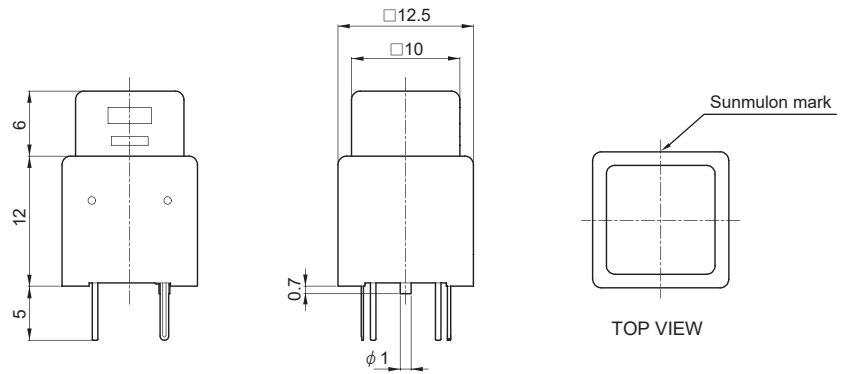
3D  
DXF



10 mm Button



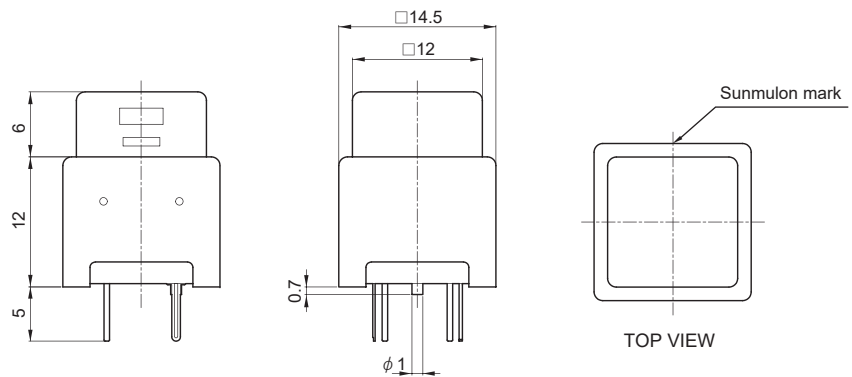
3D  
DXF



12 mm Button







3D  
DXF



3D, DXF data download site : <https://www.sunmulon.co.jp/download/>

Tolerance :  $\pm 0.4\text{mm}$

## ACCESSORIES

Name	Appearance	Classification	Part no.		Precautions for use
Cosmetic flange  3D DXF		For 10 mm button	Black	KC-4130-K	- Cannot be used with 6 mm button and 8 mm button.
		For 12 mm button	Black	KC-4140-K	
Spacer		Common for each button	KC-4144		- The height from the board to the panel can be adjusted in 1 mm increments. Up to 3 pieces of spacer can be used.
Removing tool		For removal button	SJ-0001		- Be used to remove button from housing.

3D・DXF data download site : <https://www.sunmulon.co.jp/download/>

◇Accessories' dimensions / Panel cutout : KC-11

## ORDERING CODE 【Full-Face】

6·8 Square

Assembled Part

KC □ — □ S0 □ □ KN X C □

### ● OPERATION

M	Momentary with click-feel
S	Momentary without click-feel

### ● BUTTON SIZE

06	6 mm
08	8 mm

### ● BUTTON SHAPE

S0	Square
----	--------

### ● LED COLOR

7	Red
8	Green
9	Yellow ※1)
14	Super-Blue
16	Super-White
18	Super-Green
X	Without LED

### ● BUTTON COLOR

R	Red
G	Green
Y	Yellow ※1)
M	Milk-white
B	Blue

### ● LED CIRCUIT

D	Full-Face
X	Without LED

### ● TERMINAL

C	PCB
---	-----

### ● FILTER COLOR

X	Without filter
---	----------------

### ● HOUSING COLOR

KN	Black without flange
----	----------------------

### ● NOTES

※1) The color of "Yellow" for LED (9), button (Y) is actually "Orange Yellow" not Lemon Yellow.

To specify Without button, please specify the following 10 square type.  
6, 8 and 10 square are all the same housing.

10·12 Square

Assembled Part

KC □ — □ S0 □ □ KN □ C □

### ● OPERATION

M	Momentary with click-feel
S	Momentary without click-feel

### ● BUTTON SIZE

10	10 mm
12	12 mm

### ● BUTTON SHAPE

S0	Square
----	--------

### ● LED COLOR

7	Red
8	Green
9	Yellow ※1)
14	Super-Blue
16	Super-White
18	Super-Green
X	Without LED

### ● HOUSING COLOR

KN	Black without flange
----	----------------------

### ● BUTTON COLOR ※2)

R	Red
G	Green
Y	Yellow ※1)
M	Milk-white
B	Blue
C	Clear
X	Without button

### ● LED CIRCUIT

D	Full-Face
X	Without LED

### ● TERMINAL

C	PCB
---	-----

### ● FILTER COLOR ※2)

1	Red
2	Green
3	Yellow ※1)
4	Milk-white
6	Blue
X	Without filter

### ● NOTES

※1) The color of "Yellow" for LED (9), button (Y) and filter (3) is actually "Orange Yellow" not Lemon Yellow.

※2) Specify a filter of the same color as the button except Clear button, or either the button or the filter as Milky-white.

10 and 12 square cannot be used only with buttons without filters due to their structure.

◇Dimensions : page KC-4

◇Accessories : page KC-5

◇Internal connection arrangements : page KC-9

◇LED specifications : page KC-9

◇Terminals / PCB hole cutout : page KC-10

◇Accessories' dimensions / Panel cutout : page KC-11

## ORDERING CODE 【Dual-Color】

6・8 Square

Assembled Part

KC  —  S3   1 2 M KN X C

### ● OPERATION

M	Momentary with click-feel
S	Momentary without click-feel

### ● BUTTON SIZE

06	6 mm
08	8 mm

### ● BUTTON SHAPE

S3	Square
----	--------

### ● LED COLOR

7	Red	Put the color numbers into frame 1, 2.  (Dual-Color combination) 78・714・716・718 89・97・914・916・918 1416・1618・1814
8	Green	
9	Yellow	
14	Super-Blue	
16	Super-White	
18	Super-Green	

Yellow (9) is actually "ORANGE Yellow" not Lemon Yellow.

### ● LED CIRCUIT

A	Anode common (+)
K	Cathode common (—)

### ● TERMINAL

C	PCB
---	-----

### ● FILTER COLOR

X	Without filter
---	----------------

### ● HOUSING COLOR

KN	Black without flange
----	----------------------

### ● BUTTON COLOR

M	Milky-white
---	-------------

To specify Without button, please specify the following 10 square type.  
6, 8 and 10 square are all the same housing.

10・12 Square

Assembled Part

KC  —  S3   1 2  KN  C

### ● OPERATION

M	Momentary with click-feel
S	Momentary without click-feel

### ● BUTTON SIZE

10	10 mm
12	12 mm

### ● BUTTON SHAPE

S3	Square
----	--------

### ● LED COLOR

7	Red	Put the color numbers into frame 1, 2.  (Dual-Color combination) 78・714・716・718 89・97・914・916・918 1416・1618・1814
8	Green	
9	Yellow	
14	Super-Blue	
16	Super-White	
18	Super-Green	

Yellow (9) is actually "ORANGE Yellow" not Lemon Yellow.

### ● LED CIRCUIT

A	Anode common (+)
K	Cathode common (—)

### ● TERMINAL

C	PCB
---	-----

### ● FILTER COLOR ※1)

4	Milky-white
X	Without filter

### ● HOUSING COLOR

KN	Black without flange
----	----------------------

### ● BUTTON COLOR ※1)

C	Clear
M	Milky-white
X	Without button

### ● NOTES

※1) 10 and 12 square cannot be used only with buttons without filters due to their structure.

◇Dimensions : page KC-4

◇Internal connection arrangements : page KC-9

◇Accessories' dimensions / Panel cutout : page KC-11

◇Accessories : page KC-5

◇LED specifications : page KC-9

◇Terminals / PCB hole cutout : page KC-10

## REPLACEMENT PARTS

### ● Full-Face BUTTON/FILTER

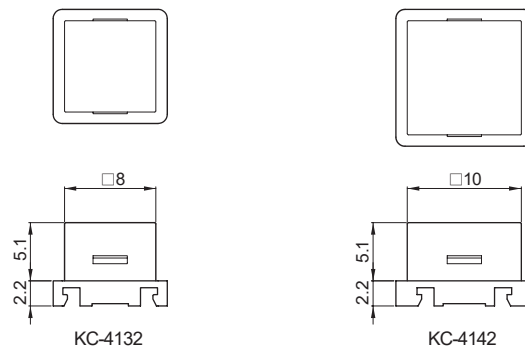
		Red	Green	Yellow	Blue	Milk-white	Clear
BUTTON	6 mm	KC-4322-LR	KC-4322-LG	KC-4322-LY	KC-4322-LB	KC-4322-LM	
	8 mm	KC-4323-LR	KC-4323-LG	KC-4323-LY	KC-4323-LB	KC-4323-LM	
	10 mm	KC-4131-LR	KC-4131-LG	KC-4131-LY	KC-4131-LB	KC-4131-LM	KC-4131-CC
	12 mm	KC-4141-LR	KC-4141-LG	KC-4141-LY	KC-4141-LB	KC-4141-LM	KC-4141-CC
FILTER	6 mm						
	8 mm						
	10 mm	KC-4132-LR	KC-4132-LG	KC-4132-LY	KC-4132-LB	KC-4132-LM	
	12 mm	KC-4142-LR	KC-4142-LG	KC-4142-LY	KC-4142-LB	KC-4142-LM	

### ● Dual-Color BUTTON/FILTER

		Milk-white	Clear
BUTTON	6 mm	KC-4322-LM	
	8 mm	KC-4323-LM	
	10 mm	KC-4131-LM	KC-4131-CC
	12 mm	KC-4141-LM	KC-4141-CC
FILTER	6 mm		
	8 mm		
	10 mm	KC-4132-LM	
	12 mm	KC-4142-LM	

## FILTER DIMENSIONS

TOP VIEW

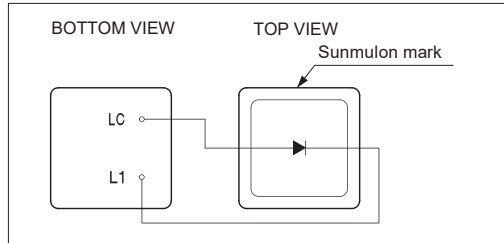


Tolerance :  $\pm 0.4\text{mm}$

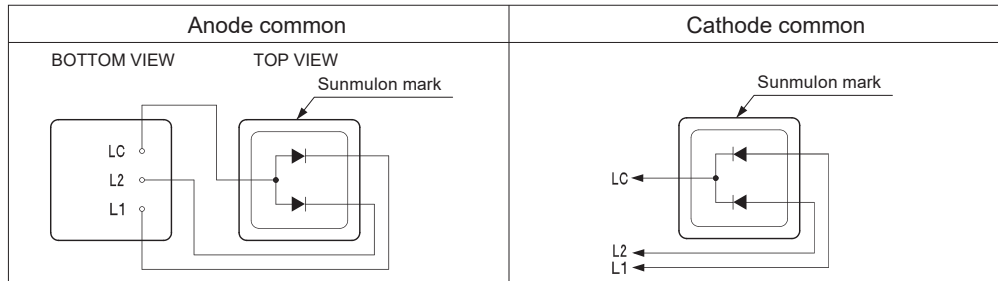


## INTERNAL CONNECTION ARRANGEMENT

### ● Full-Face (Common for each button size)



### ● Dual-Color (Common for each button size)



### ● Dual-Color combination

Terminals	LED Color											
LC-L1	Red	Green	Yellow	Red	Red	Red	Yellow	Yellow	Yellow	Super Blue	Super White	Super Green
LC-L2	Green	Yellow	Red	Super White	Super Green	Red	Super Blue	Super White	Super Green	Super White	Super Green	Super Blue

## LED SPECIFICATIONS

### ● Full-Face • Dual-Color

(Ta=25°C)

	Red	Green	Yellow	Super Blue	Super White	Super Green
Max. Forward Current $I_{FM}$ (mA)	30	25	30	20		
DC Reverse Voltage $V_R$ (V)	5			5	5	3
Forward Voltage $V_F$ (Typ.) (V)	2.0	2.1	2.0	2.9	2.9	3.0
Pulse Lighting	Pulse Width PW ( $\mu$ s)			100		1000
	Duty Ratio DR			$10^{-1}$		1/20
	Allowable forward current $I_{FP}$ (mA)			100		48

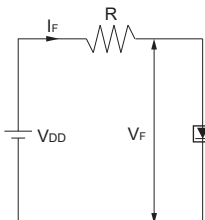
Forward Voltage  $V_F$  of LED color : Red • Green • Yellow 【 $I_F=20\text{mA}$ 】  
Super Blue • Super White • Super Green 【 $I_F=5\text{mA}$ 】

### ● Wiring Diagram

Refer to the following formula to calculate external resistance values.

$$R = \frac{V_{DD} - V_F}{I_F}$$

$V_{DD}$  : Supply Voltage  
 $V_F$  : Forward Voltage  
 $I_F$  : Forward Current



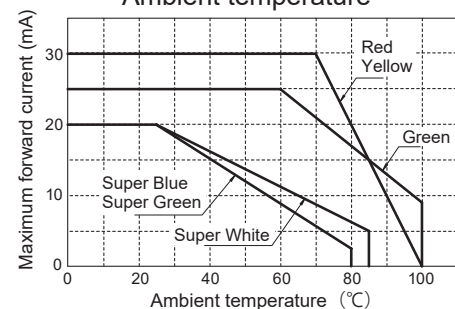
$I_F$  (Forward Current) : Refer to the Rated Current in the table on the left, on the left, and be sure to set less than  $I_{FM}$  (Max. Forward Current).

### ● Reference external resistor

Since LED protection resistors are not built-in, connect resistors in series referring to the table below.

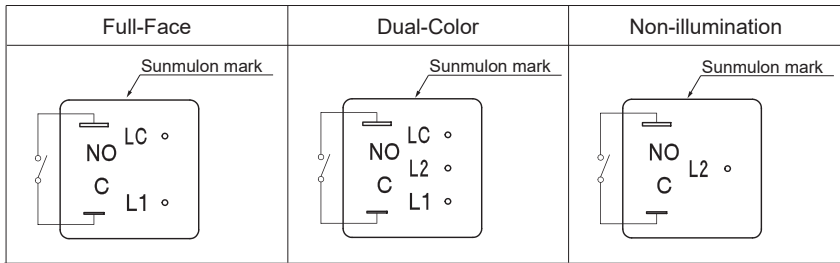
Voltage	Red	Green	Yellow	Super Blue	Super White	Super Green
DC 5V	620 $\Omega$ 1/8W	220 $\Omega$ 1/8W	510 $\Omega$ 1/8W	430 $\Omega$ 1/8W	910 $\Omega$ 1/8W	910 $\Omega$ 1/8W
DC12V	2k $\Omega$ 1/8W	750 $\Omega$ 1/2W	1.8k $\Omega$ 1/8W	2.2k $\Omega$ 1/8W	4.7k $\Omega$ 1/8W	4.7k $\Omega$ 1/8W
DC24V	4.3k $\Omega$ 1/4W	1.6k $\Omega$ 1W	3.9k $\Omega$ 1/2W	5.1k $\Omega$ 1/2W	11k $\Omega$ 1/8W	11k $\Omega$ 1/8W
Reference forward current (mA)	5	13	6	5	2	2

### ● Maximum forward current — Ambient temperature

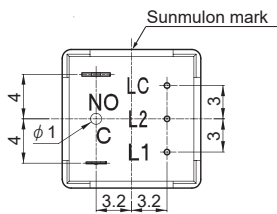


## TERMINALS / PCB HOLE CUTOUT

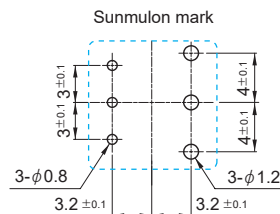
### ● TERMINALS LAYOUT (BOTTOM VIEW)



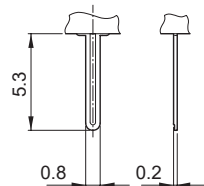
### ● TERMINALS DIMENSIONS (BOTTOM VIEW)



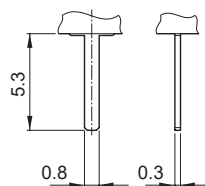
### ● PCB hole cut-out (TOP VIEW)



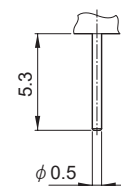
## TERMINAL SHAPE



COM Terminal



NO Terminal



LC/L1/L2 Terminal

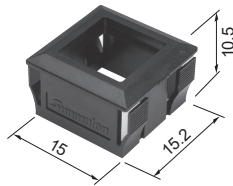
Tolerance :  $\pm 0.4$  mm

## ACCESSORIES

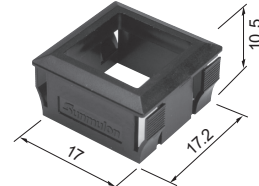
### COSMETIC FLANGE

10 mm Button	KC-4130-K
12 mm Button	KC-4140-K

※ Cannot be used with 6 mm button and 8 mm button.



10 mm Button



12 mm Button

Mounting design	Panel cutout
<p>10 mm Button</p>	<p>Panel cutout</p> <p>Recommended panel thickness : 1 to 3.2 mm</p>
<p>12 mm Button</p>	<p>Recommended panel thickness : 1 to 3.2 mm</p>

※ If the panel is to be finished (e.g. coated), make sure that the panel meets the specified dimensions after the coating.

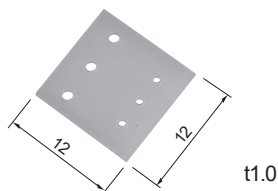
In case the panel cut dimension is too small, it may cause malfunction.

※ After the panel-cutting process, make sure to remove burrs on the surface.

### SPACER

Part no.	KC-4140
----------	---------

※ Up to 3 pieces of spacer can be used.

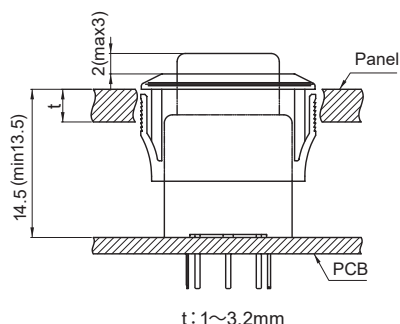


3D, DXF data download site : <https://www.sunmulon.co.jp/download/>

Tolerance :  $\pm 0.4\text{mm}$

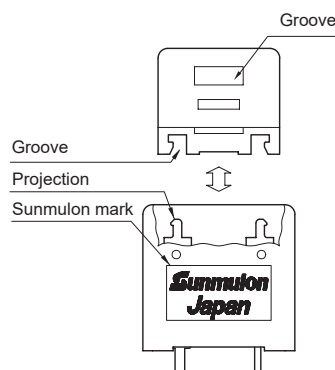
## ASSEMBLY & DISASSEMBLY

### 1. Installing Cosmetic flange for 10 and 12 mm button



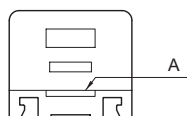
The installation is as shown above.

### 2. Fitting and Removing button and filter



Align the groove on the button, the projection on the housing, and fit the button until click.  
Be sure to remove with the removing tool (SJ-0001).  
Hang the button with the removing tool in the groove, and pull it straight out.

### 3. Removing Button



Removing the part A by pushing it open.  
Do not reuse buttons that have been removed and deformed.

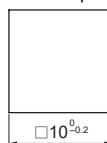
## PRECAUTIONS FOR CORRECT USE

1. Solder quickly and correctly at 350°C max. and for 3 seconds or less. Be careful not to touch the soldering iron to the main body.
2. Wait for one minute during and after soldering before exerting any external force on the solde.
3. Character films are not included. If preparing the character film separately, use a heat-resistant film with a thickness of 0.1 mm.  
For dimensions, please refer to the figure below.
4. The LEDs cannot be replaced because they are assembled into the housing.
5. Flux compatibility is for terminal only. Be careful not to allow flux to penetrate the sliding parts.

10 mm square



12 mm square



※ For handling instructions and precautions other than the above, please refer to "Safety Precautions for All Illuminated Pushbutton Switches".

Tolerance :  $\pm 0.4$  mm

As of June 2023

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## Safety Precautions for All Illuminated Pushbutton Switches

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### 1. Notes on contents of Catalogs

- (1) Rated values, performance values, and specification values of Sunmulon products listed in this catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
- (2) The ambient operating temperature(humidity) is guaranteed by evaluation based on characteristics, and does not guarantee continuous use for a long period of time near the upper or lower limit of the ambient operating temperature(humidity) or permanent use at that temperature(humidity).
- (3) Reference data and reference values listed in catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.
- (4) The specifications / appearance and accessories of Sunmulon products listed in catalogs are subject to change or termination of sales without notice, for improvement or other reasons.
- (5) The content of catalogs is subject to change without notice.

### 2. Note on applications

- (1) If using Sunmulon products in combination with other products, confirm the following suitability by yourself. Sunmulon shall provide no guarantees regarding the combination suitability.
  - (a) Regulations, standards, or laws to which your machinery, equipment, etc. must conform
  - (b) Functionality and safety of your machinery and equipment
- (2) Wiring and installation that ensures the Sunmulon product used in your system, machine, device, or the like can perform and function according to its specifications.
- (3) When using Sunmulon products, be cautious when implementing the following.
  - (a) Use of Sunmulon products with sufficient allowance for rating and performance.
  - (b) Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that Sunmulon product fails.
- (4) Sunmulon products are designed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use Sunmulon product for these applications, unless otherwise agreed upon between you and Sunmulon, Sunmulon shall provide no guarantees whatsoever regarding Sunmulon products.
  - (a) Safety devices intended for human body protection
  - (b) Direct control of transport equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.)
  - (c) Space equipment, submarine equipment
  - (d) Nuclear power control equipment, radiation related equipment
  - (e) Combustion equipment, electric heat equipment
  - (f) Disaster prevention and security equipment
  - (g) Elevating equipment
  - (h) Amusement facilities
  - (i) Facilities subject to government or industry regulations
  - (j) Use in applications that require a high degree of safety, any other equipment, instruments, or the like that could endanger life or human health

### 3. Warranty

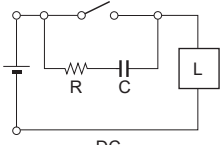
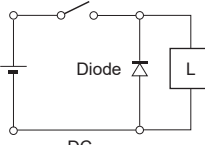
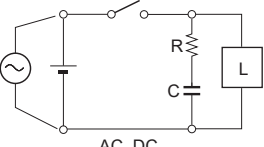
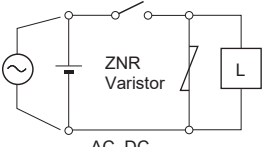
- (1) The warranty period for Sunmulon products shall be 1 year after purchase or delivery to the specified location.
- (2) Warranty scope should a failure occur in Sunmulon product during the above warranty period for reasons attributable to Sunmulon, then Sunmulon shall provide that product, free of charge, the same quantity. Further, in no event shall liability of Sunmulon exceed the individual price of the product on which liability is asserted.
- (3) Failures caused by the following reasons shall be deemed outside the scope of this warranty.
  - (a) The product was handled or used deviating from conditions / environment listed in the catalogs
  - (b) The failure was caused by reasons other than Sunmulon product
  - (c) Modification or repair was performed by a party other than Sunmulon
  - (d) Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and catalogs
  - (e) The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from Sunmulon
  - (f) The failure was due to other causes not attributable to Sunmulon (including cases of force majeure such as natural disasters and other disasters)
- (4) The warranty listed in this Safety Precautions is the full and complete warranty for Sunmulon products, and Sunmulon shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to Sunmulon product.

### 4. Handling precautions for switch

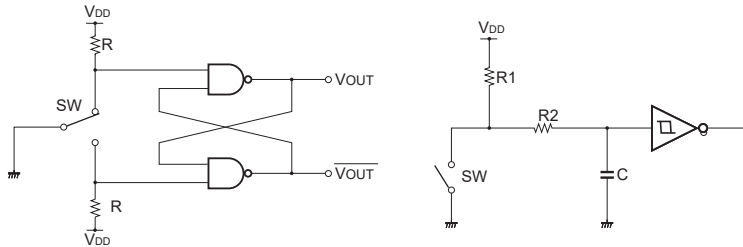
- (1) Do not perform wiring with power supplied to the switch. Do not touch the terminals or other charged parts of the switch while power is being supplied. Doing so may result in electric shock.
- (2) Be careful of electrostatic breakdown when handling.
- (3) Do not drop or otherwise apply strong force to the switch.
- (4) Do not place heavy objects on the switch.
- (5) Do not operate or use the housing (switch unit) by itself. Use the switch with assembled the illuminated part (LED module or button).
- (6) Pushbutton switches are designed to be operated by fingertips. Operating the switch using a sharp object (screwdrivers, tweezers, etc.), hard object (metal, etc.), or with a large or sudden force, may cause deform or damage the switch.
- (7) Do not use the switch under loads that exceed the rated switching capacity or other contact ratings. Doing so may result in welding of the contact, or burnout accidents.

## Safety Precautions for All Illuminated Pushbutton Switches

(8) For inductive load, the arc by back EMF may cause contact failure. Insertion of arc prevention circuit as the following is recommended.

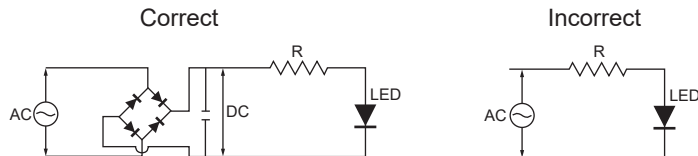
Circuit	Element selection	Circuit	Element selection
 <p style="text-align: center;">DC</p>	<p> <math>C : 1 \text{ to } 0.5 \mu\text{F} \times \text{switch current (A)}</math>  <math>R : 0.5 \text{ to } 1 \Omega \times \text{switch voltage (V)}</math> </p> <p>The values may change according to the characteristics of the load. Determine ideal capacitance and resistance values through testing.</p>	 <p style="text-align: center;">DC</p>	<p>The diode must withstand a peak inverse voltage 4 times higher than the power supply voltage and regarding a forward current must as high or higher than the load current.</p>
 <p style="text-align: center;">AC, DC</p>		 <p style="text-align: center;">AC, DC</p>	<p>Use a varistor that can withstand the power supply voltage sufficiently. (1.5 times or more)</p>

(9) Following circuits show examples of an anti-chattering circuit.



(10) Illumination

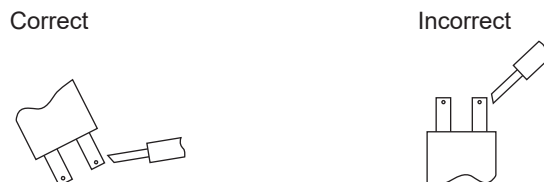
- (a) Do not apply a voltage between the LED terminal that is greater than the rated voltage. Doing so may damage the LED, cause lighting failure.
- (b) LEDs cannot be lit directly by AC circuit should be provided rectifier smoothing circuit for products other than AC input type.



- (c) When wiring, pay attention to the polarity of the terminals.
- (d) Simultaneous lighting may not be possible with Dual-Color illumination or Split-Face illumination (2, 3, or 4 split illumination), check the catalog.
- (e) Apply voltage directly to LEDs of Non-built-in resistor type will damage the LEDs, so connect an appropriate external resistor.

(11) Wiring

- (a) Do not apply a soldering iron to the switch housing. Doing so may deform the terminals and cause defects.
- (b) See catalog for models compatible with flux prevention measures terminal. Be careful not to allow flux to penetrate sliding parts such as buttons. Use non-corrosive rosin solution as flux for dip soldering.
- (c) For soldering other than flux-preventive models, hand solder with the terminals facing down to prevent flux from penetrating into the switch.



- (d) The housing of KA, K2, and K9 series are designed for reflow soldering.
- (e) Use the appropriate wire size for the applied voltage and current, and solder properly. Use of the product with incomplete soldering may cause abnormal heat generation, resulting in a fire hazard.
- (f) After wiring is completed, maintain an appropriate insulation distance.

## Safety Precautions for All Illuminated Pushbutton Switches

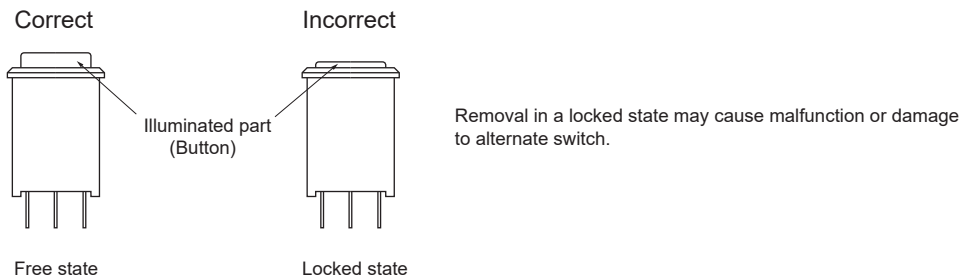
(12) Usage environment

- (a) Do not use in the presence of flammable or explosive gases such as gasoline, thinner, LPG, etc.
- (b) Avoid using the product in places where corrosive or silicon gas is generated, high temperature, high humidity, sea breeze or direct sunlight.
- (c) Provide appropriate protection when using the product in places where it is exposed to water, oil, metal powder, or dust.
- (d) Do not use the product in a place subject to vibration or shock. It may cause malfunction or damage.
- (e) When installed in a close grouping or continuously lit, the ambient temperature may exceed the specified value due to heat generation. Take measures such as ventilation and lowering the operating voltage.
- (f) When checking the actual equipment, load conditions and operating environment should be the same as the actual operating conditions.
- (g) The ambient temperature for storage is  $-25^{\circ}\text{C}$  to  $65^{\circ}\text{C}$  (No freeze, no condensation).

(13) When wiping off dirt on the exterior of the switch and accessories such as side plates, wipe lightly with a soft, dry cloth. Organic solvents such as thinner, benzene, alcohol, or other acidic chemicals may cause deformation, discoloration, or malfunction.

(14) Store the product away from malignant gases, dust, high temperature and high humidity, and keep it in our packing condition.

(15) When removing the illuminated part (or button) from the alternate switch housing, switch state should be in a free state.



(16) Periodic inspection and replacement

- (a) Although mechanical and electrical durability are listed in the specifications column, deterioration of various parts (deterioration of resins and corrosion of metal parts) is possible due to the operating environment and method of use. We ask that you implement inspections for Sunmulon products to prevent accidents from occurring by conducting periodic inspections and replacements.
- (b) When the switch is left unused or stored for long periods, contact reliability may deteriorate due to oxidation of contacts, which may cause continuity failure, etc. Therefore, it is necessary to check the operation before use.

(17) Service scope

The price of Sunmulon products do not include the cost of services, such as dispatching technicians.