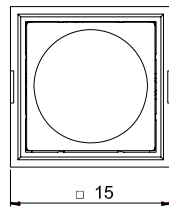


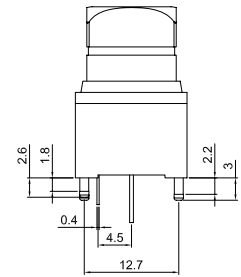
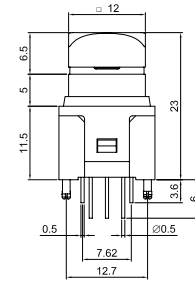
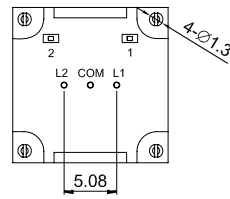
# Pushbutton Switches

## Silent Pushbutton Switch with LED

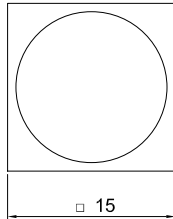
## PB59 Series



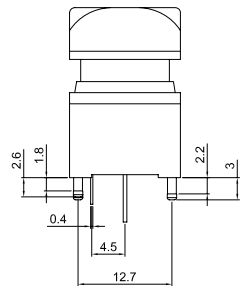
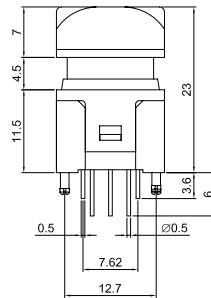
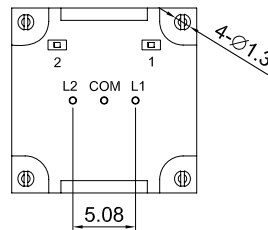
"BOTTOM VIEW"



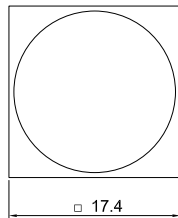
**PB59MTAA... A Type Actuator with A Type Cap**



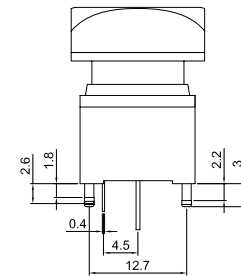
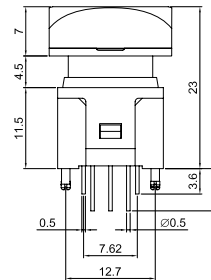
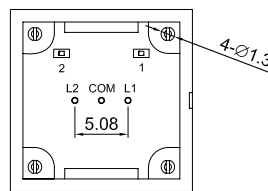
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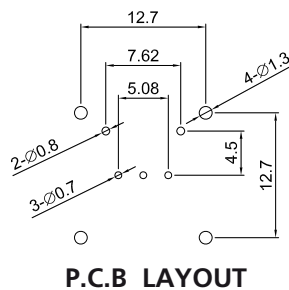
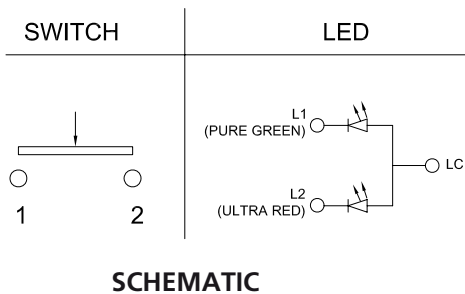
**PB59MTBB... B Type Actuator with B Type Cap**



"BOTTOM VIEW"



**PB59MTBC... B Type Actuator with C Type Cap**



LED SPECIFICATIONS					
ATTENTION LEDs are Electrostatic Sensitive devices	Unit	Value / LED Color			
		Ultra Green	Pure Green	Ultra Red	
FORWARD CURRENT	$I_f$	mA	30	20	20
REVERSE VOLTAGE	$V_r$	V	5.0	5.0	5.0
REVERSE CURRENT	$I_r$	$\mu$ A	10	10	10
FORWARD VOLTAGE@20mA	$V_f$	V	1.7-2.5	3.1-3.8	1.7-2.6
LUMINOUS INTENSITY@20mA	$I_v$	mcd	20	100	60

## How to order:

PB59

**1 OPERATION:**

**M** Momentary

**2 ACTUATION:**

**T** Tactile Actuation  
**N** Non-Tactile Actuation

**3 ACTUATOR & CAP:**

**A** A Type Actuator (only for Cap A)  
**B** B Type Actuator (only for Cap B & C)

**4 CAP TYPE:**

**A** 12mm Square Cap  
**B** 15mm Square Cap  
**C** 17.4mm Square Cap

**5 COLOR LED 1 (L1 CHIP):**

**N** Without LED  
**G** Ultra Blue  
**F** Ultra Green  
**C** Ultra Red  
**B** Ultra White  
**E** Ultra Yellow  
**PF** Pure Green

**6 COLOR LED 2 (L2 CHIP):**

**N** Without LED  
**G** Ultra Blue  
**F** Ultra Green  
**C** Ultra Red  
**B** Ultra White  
**E** Ultra Yellow  
**PF** Pure Green

**7 DIFFUSER PLATE COLOR:**

**B** White (Std.)  
**C** Red  
**F** Green  
**G** Blue  
**E** Yellow  
**BB** White (when indicate the cap color)

**8 CAP COLOR:**

**J** Transparent (Std.)  
**C** Red  
**F** Green  
**G** Blue  
**E** Yellow  
**JJ** Transparent (when indicate the diffuser color)

### SPECIFICATIONS

1. POLE - POSITION : DPST 、 SPST
2. MOMENTARY TYPE : OFF - <ON>
3. OPERATING TEMPERATURE RANGE : -20°C ~ 70°C
4. RATING : 100 mA 12V DC
5. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITIONS	CRITERIA
5-1	CONTACT RESISTANCE	DC 1.5V 100 mA , BY METHOD OF VOLTAGE DROP	200 mΩ MAX.
5-2	INSULATION RESISTANCE	DC 500V	100 MΩ MIN.
5-3	DIELECTRIC STRENGTH	AC 500V(50-60HZ) FOR 1 MINUTE	BREAKDOWN IS NOT ALLOWABLE

6. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITIONS	CRITERIA
6-1	OPERATING FORCE	ALONG THE DIRECTION TO APPLY A STATIC LOAD AT END OF ACTUATOR	250 ± 100gf
6.2	TRAVEL	ALONG OPERATIONAL DIRECTION , TO APPLY A STATIC LOAD ON TOP OF THE STEM DEPRESSIN STEM GRADUALLY UNTIL IT STOPS MOVEMENT	4.5 ± 0.2mm
6-3	SOLDERABILITY	260±5°C IN 3 SECONDS	SOLDER COVERAGE 75% MIN.

7. SOLDERING HEAT RESISTANCE :
  - 7.1. MANUAL: 300±5°C IN 3 SECONDS
  - 7.2. WAVE SOLDERING: 260±5°C IN 3 SECONDS

### 8. DURABILITY :

8.1. OPERATING LIFE WITHOUT LOAD : 1,000,000 MIN.

8.2. OPERATING LIFE WITH LOAD : 200,000 MIN.

#### 8.3. SPECIFICATIONS :

8.3.1. CONTACT RESISTANCE : 300 m $\Omega$  MAX.

8.3.2. OPERATING FORCE : WITHIN THE RANGE  $\pm 30\%$  OF SPECIFICATION

8.3.3. INSULATION RESISTANCE : 500V DC 10 M $\Omega$  MIN.

8.3.4. DIELECTRIC STRENGTH : 500V AC FOR 1 MINUTE, BREAKDOWN IS NOT ALLOWABLE

### 9. ENVIRONMENTAL PERFORMANCE :

	ITEM	TEST CONDITIONS	CRITERIA
9-1	COLD	-20 $\pm$ 2 $^{\circ}$ C FOR 96 HOURS	1. IT SHOULD MEET THE REQUIREMENTS OF ITEM 5 STATED 2. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL
9-2	DRY HEAT	70 $\pm$ 2 $^{\circ}$ C FOR 96 HOURS	1. THE CONTACT RESISTANCE SHOULD BE LESS THAN 300 m $\Omega$ 2. IT SHOULD MEET THE REQUIREMENTS OF 5-2 AND 5-3 3. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL
9-3	DAMP HEAT	40 $\pm$ 2 $^{\circ}$ C , RH 90%~95% FOR 96 HOURS	1. THE CONTACT RESISTANCE SHOULD BE LESS THAN 300 m $\Omega$ 2. THE INSULATION RESISTANCE SHOULD BE HIGHER THAN 10 M $\Omega$ 3. DIELECTRIC STRENGTH SHOULD MEET 5-3 STATED 4. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL

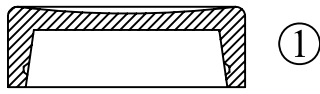
### 10. LED SPECIFICATIONS :

LED SPECIFICATIONS WILL BE FURNISHED DEPENDING ON DIFFERENT LED COLOR DEMAND

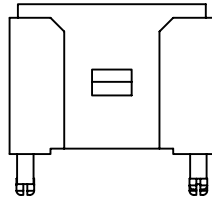
# Pushbutton Switches

## Silent Pushbutton Switch with LED

PB59 Series



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⑤



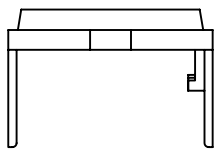
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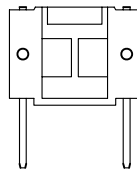
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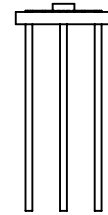
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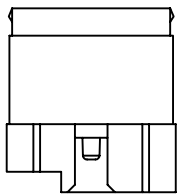
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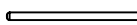
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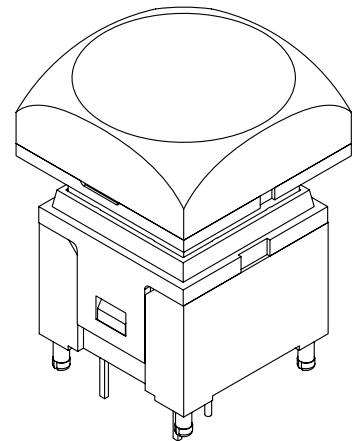


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⑧

DIMENSION	TOLERANCE
BELOW 10 mm	± 0.3
10~100 mm	± 0.5
ABOVE 100 mm	± 0.8
ANGLE	± 3°



NO.	PART NAME	QUALITY	MATERIAL	SPECIAL DEAL
1	KNOB	1	PC	TRANSPARENT
2	FLUORESCENT PLATE	1	PC+FLUORESCENT POWER	WHITE
3	COVER	1	PA66	WHITE
4	ACTUATOR	1	PA66	WHITE
5	BASE FRAME	1	PA66+GF33%	BLACK
6	TERMIANL BOARD	1	PA66+GF33%	BLACK
	TERMIANL	1	BRASS	SILVER PLATING 0.5μm MIN
7	TWEAK SPRING	1	SUS304	
8	SLIDE PIN	4	SUS304	
9	MOVING CONTACT	1	PHOSPHOR BRONZE	GOLD FLASH
10	SPRING	2	SUS304	
11	LED	1		RED/GREEN