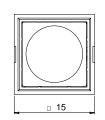
# **Pushbutton Switches**

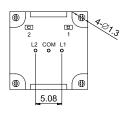
### Silent Pushbutton Switch with LED

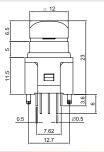
### **PB59 Series**

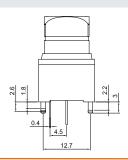




"BOTTOM VIEW"

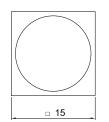




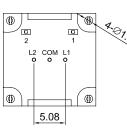


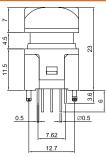
PB59MTAA... A Type Actuator with A Type Cap

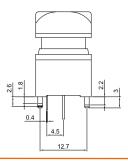




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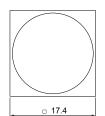




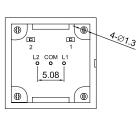


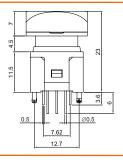
PB59MTBB... B Type Actuator with B Type Cap

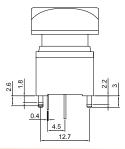




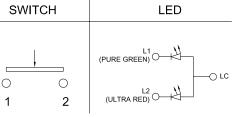
"BOTTOM VIEW"



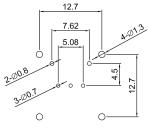




PB59MTBC... B Type Actuator with C Type Cap







P.C.B LAYOUT

LED SPECIFICATIONS						
ATTENTION (*) 0 (*)		Value / LED Color				
ATTENTION (+) O (-) LEDs are Electrostatic Sensitive devices	Unit	Ultra Green	Pure Green	Ultra Red		
FORWARD CURRENT If	mA	30	20	20		
REVERSE VOLTAGE Vr	V	5.0	5.0	5.0		
REVERSE CURRENT Ir	μА	10	10	10		
FORWARD VOLTAGE@20mA Vf	V	1.7-2.5	3.1-3.8	1.7-2.6		
LUMINOUS INTENSITY@20mA Iv	mcd	20	100	60		

## How to order

		• • • •	• •					
	1	2	3	4	5	6	7	8
PB59								

- OPERATION:
- M Momentary
- **2** ACTUATION:
- T Tactile Actuation
- Non-Tactile Actuation
- **E** ACTUATOR & CAP:
- A Type Actuator (only for Cap A)
- B B Type Actuator (only for Cap B & C)
- 4 CAP TYPE:

specifications are restricted to QA test criteria W: D.L. JIN, CHK: D.F. LEE, APP: H.Z. QIU

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

- 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 YellowPF Pure Green

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

#### **B** CAP COLOR:

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

## **Silent Pushbutton Switch with LED**

## **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	DC 1.5V 100 mA,BY METHOD OF	200 mΩ MAX.
	RESISTANCE	VOLTAGE DROP	
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
-	OPERATING	ALONG THE DIRECTION TO APPLY A	250 ± 100gf
	FORCE	STATIC LOAD AT END OF ACTUATOR	
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℃ 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℃ IN 3 SECONDS

# **Pushbutton Switches**

### Silent Pushbutton Switch with LED

**PB59 Series** 

#### 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:  $300 \text{ m}\Omega$  MAX.
  - 8.3.2. OPERATING FORCE: WITHIN THE RANGE ±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±2°C FOR 96	1.	IT SHOULD MEET THE REQUIREMENTS OF
		HOURS	ITEM 5 STATED	
			2.	MECHANICAL PERFORMANCE SHOULD
				REMAIN TO NORMAL
9-2	DRY HEAT	70±2℃ FOR 96	1.	THE CONTACT RESISTANCE SHOULD BE
		HOURS		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±2℃,RH 90%~95%	1.	THE CONTACT RESISTANCE SHOULD BE
		FOR 96 HOURS		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

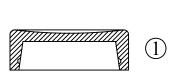
#### 10. LED SPECIFICATIONS:

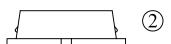
LED SPECIFICATIONS WILL BE FURNISHED DEPENDING ON DIFFERENT LED COLOR DEMAND

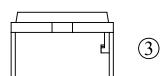
# **Pushbutton Switches**

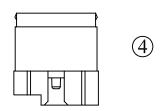
# **Silent Pushbutton Switch with LED**

## PB59 Series

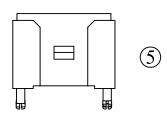


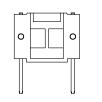






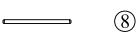








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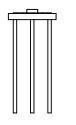




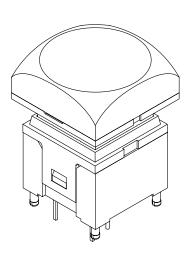












NO.	PART NAME	QUALITY	MATERIAL	SPECIAL DEAL
1	KNOB	1	PC	TRANSPARENT
2	FLUORESCENT PLATE	1	PC+FLUORESCENT POWER	WHITE
3	COVER	1	PA66	WHITE
4	ACTUATOR	1	PA66	WHITE
5	BASE FRAME	1	PA66+GF33%	BLACK
6	TERMIANL BOARD	1	PA66+GF33%	BLACK
	TERMIANL	1	BRASS	SILVER PLATING 0.5µm MIN
7	TWEAK SPRING	1	SUS304	
8	SLIDE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