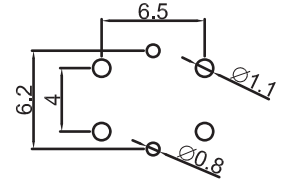
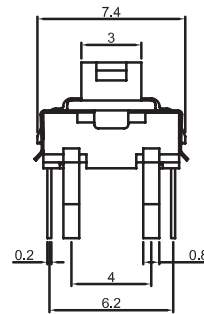
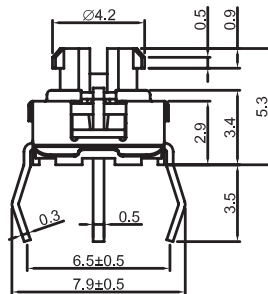
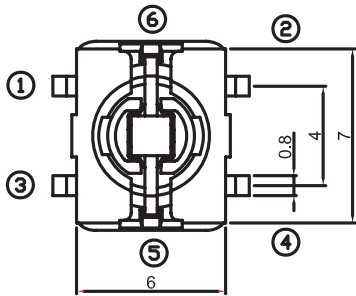
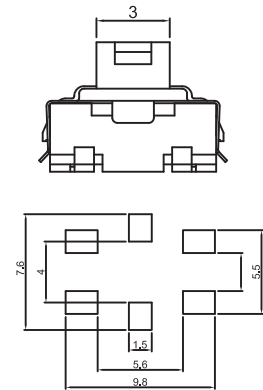
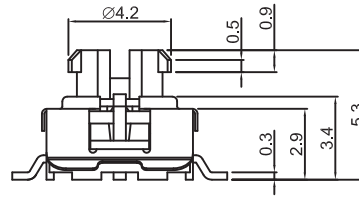
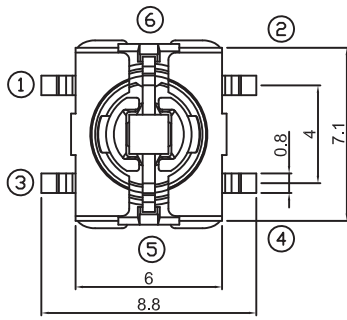


# Tactile Switches

## Watertight IP67 Bi-Color Tactile Switches

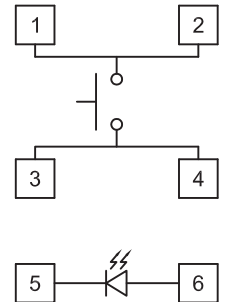
## TPL Series



### General Specifications:

| SWITCH SPECIFICATIONS       |  |
|-----------------------------|--|
| POLE - POSITION             | Momentary action , SPST                                |
| CONTACT RATING              | 12 V DC , 50 mA  |
| CONTACT RESISTANCE          | 50 mΩ MAX. 5 V DC ; 1 A ,<br>by Method of Voltage DROP |
| INSULATION RESISTANCE       | 1000 MΩ MIN. 100 V DC for 1 minute                     |
| DIELECTRIC STRENGTH         | Breakdown is not Allowable ;<br>250 V AC for 1 Minute  |
| OPERATING FORCE             | 200 ± 80 gf ; 450 ± 150 gf                             |
| OPERATING LIFE              | 100,000 cycles   |
| OPERATING TEMPERATURE RANGE | -20°C ~ 70°C   |
| TOTAL TRAVEL                | 0.20 ± 0.10 mm   |

| LED SPECIFICATIONS                                    |      |                   |         |         |         |         |
|---|------|-------------------|---------|---------|---------|---------|
| ATTENTION<br>LEDs are Electrostatic Sensitive devices | Unit | Value / LED Color |         |         |         |         |
|   |      | Blue              | Green   | Red     | Yellow  |         |
| FORWARD CURRENT                                       | If   | mA                | 20      | 20      | 20      | 20      |
| REVERSE VOLTAGE                                       | Vr   | V                 | 5.0     | 5.0     | 5.0     | 5.0     |
| REVERSE CURRENT                                       | Ir   | μA                | 10      | 10      | 10      | 10      |
| FORWARD VOLTAGE@20mA                                  | Vf   | V                 | 3.5-3.8 | 2.0-2.5 | 2.0-2.5 | 2.0-2.5 |
| LUMINOUS INTENSITY@20mA                               | Iv   | mcd               | 45      | 20      | 80      | 80      |



CIRCUIT

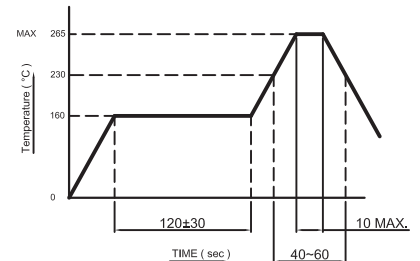
### How to order:

TPL

- |                       |                      |                           |                            |
|-----------------------|----------------------|---------------------------|----------------------------|
| <b>1</b> OPERATION:   | <b>7</b> CAP TYPE:   | <b>9</b> LED1 BRIGHTNESS: | <b>11</b> LED2 BRIGHTNESS: |
| N Non-Lock            | N Without Cap        | U Ultra (standard)        | U Ultra (standard)         |
| <b>2</b> POLE:        | B B Type             | N Without LED             | N Without LED              |
| 1 Single Pole         | C C Type             |                           |                            |
| <b>3</b> POSITION:    | D D Type             | <b>10</b> LED1 COLOR:     | <b>12</b> LED2 COLOR:      |
| 1 1 Position          | E E Type             | G Blue                    | G Blue                     |
| <b>4</b> FORCE:       | F F Type             | F Green                   | F Green                    |
| H 450 gf              | G G Type             | C Red                     | C Red                      |
| L 200 gf              | <b>8</b> CAP COLOR:  | B White                   | B White                    |
| <b>5</b> TERMINATION: | (blank) Without Cap  | E Yellow                  | E Yellow                   |
| S SMT                 | J Transparent (std.) | N Without LED             | N Without LED              |
| T THT                 | K Green              |                           |                            |
| <b>6</b> ACTUATOR:    | L Red                |                           |                            |
| A Standard Type       | M Yellow             |                           |                            |
|                       | N Blue               |                           |                            |
|                       | O Silver             |                           |                            |
|                       | P Black              |                           |                            |

General Tolerance: +/-0.2mm

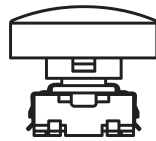
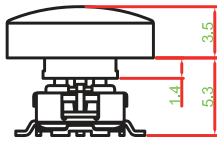
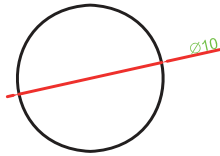
### Reflow Soldering:



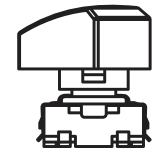
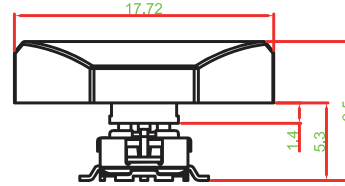
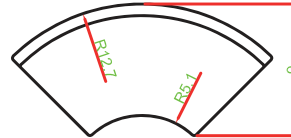
- MATERIALS:**  
 Cover: Stainless Steel  
 Actuator: LCP+GF  
 Base: LCP+GF  
 Terminals: Brass with Silver plated  
 Spring Plate:  
 Phosphor Bronze with Silver plated

## CAPS TYPE OPTION:

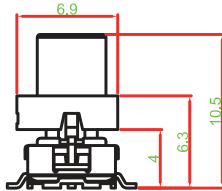
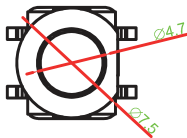
B TYPE



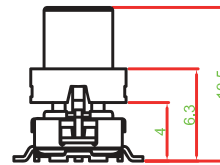
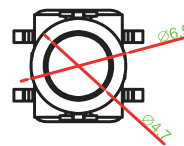
C TYPE



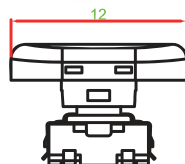
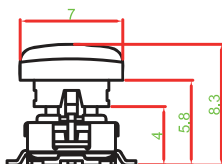
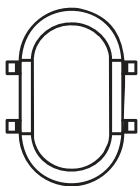
D TYPE



E TYPE



F TYPE



G TYPE

