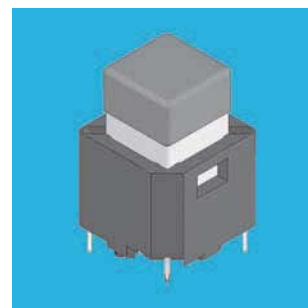


## NEW

## RoHS Compliance



1. Full Surface illumination by LED
2. Conductive rubber contact for soft and quiet operation
3. Wide varieties of buttons to choose from.

|                               |                                                                                      |                       |
|-------------------------------|--------------------------------------------------------------------------------------|-----------------------|
| Rating                        | Max.                                                                                 | DC5V 5mA or DC20V 1mA |
|                               | Min.                                                                                 | DC5V 1mA              |
| Initial contact resistance    | 200 Ω Max (20mV 1.5mA 1kHz Max)                                                      |                       |
| Dielectric strength           | 250VAC 1 minute                                                                      |                       |
| Initial insulation resistance | 100MΩ (100VDC)                                                                       |                       |
| Stroke                        | 1.5mm (□11, 12mm) 1.3mm (□6, 9mm)                                                    |                       |
| Operating force               | 1.7±0.5N (□11, 12mm) 173±51gf                                                        |                       |
|                               | 1.3 ± <sup>0.6</sup> <sub>0.4</sub> N (□6, 9mm) 132 ± <sup>61</sup> <sub>40</sub> gf |                       |
| Electrical life               | 500,000 operations at max. rating (□11, 12mm)                                        |                       |
|                               | 300,000 operations at max. rating (□6, 9mm)                                          |                       |
| Operating temperature range   | -10°C ~ +60°C                                                                        |                       |
| Storage temperature range     | -25°C ~ +70°C                                                                        |                       |

※For the information on LED Drive circuit, see the next page.

**CFPB – 1 C C – 1 W 1 W**

Number of poles

## Terminal style

LED color

Button color

Button Dimension

### Packaging specifications

### Switching function

| Combination | LED color |                 | button color |             |
|-------------|-----------|-----------------|--------------|-------------|
| 1R          | 1         | Non-illuminated | R            | Red         |
| 2R          | 2         | Red             |              |             |
| 1O          | 1         | Non-illuminated | O            | Orange      |
| 3O          | 3         | Orange          |              |             |
| 1W          | 1         | Non-illuminated | W            | White clear |
| 4W          | 4         | Yellow          |              |             |
| 1B          | 1         | Non-illuminated | B            | Blue        |
| 5B          | 5         | Green           |              |             |
| 1G          | 1         | Non-illuminated | G            | Green       |
| 5G          | 5         | Green           |              |             |
| 1Y          | 1         | Non-illuminated | Y            | Yellow      |
| 5Y          | 5         | Green           |              |             |

| Fig. | button dimension                                                                           |
|------|--------------------------------------------------------------------------------------------|
| 1    |  11mm |
| 2    |  12mm |
| 6    |  6mm  |
| 9    |  9mm  |

|      |                |
|------|----------------|
| Code | packaging spec |
| W    | Tray           |

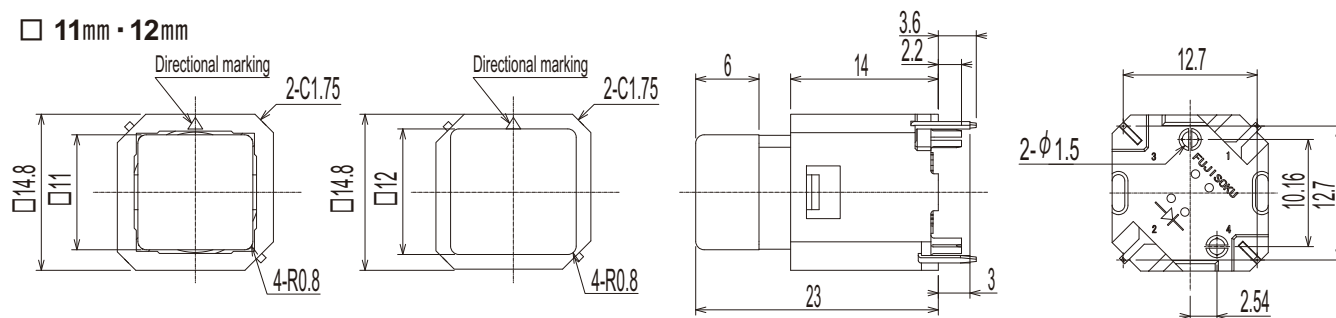
|                       |                                                                                     |                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Switching function    |  |  |
| Part No.              |                                                                                     |                                                                                     |
| <b>CFPB-1CC-■■■■W</b> | OFF                                                                                 | (ON)                                                                                |
| Connecting terminals  | —                                                                                   | 1—2                                                                                 |

|                      |     |
|----------------------|-----|
| Lighting             |     |
| Part No.             |     |
| <b>CFPB-1CC-■■■W</b> |     |
| Connecting terminals | 3—4 |

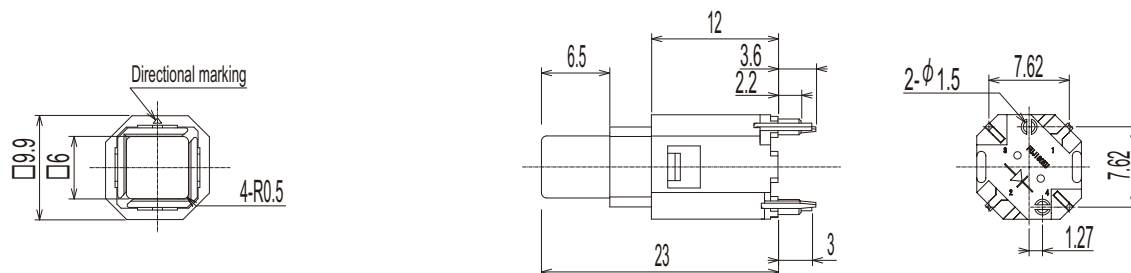
※Exclude Non -illuminated type.

## Dimension

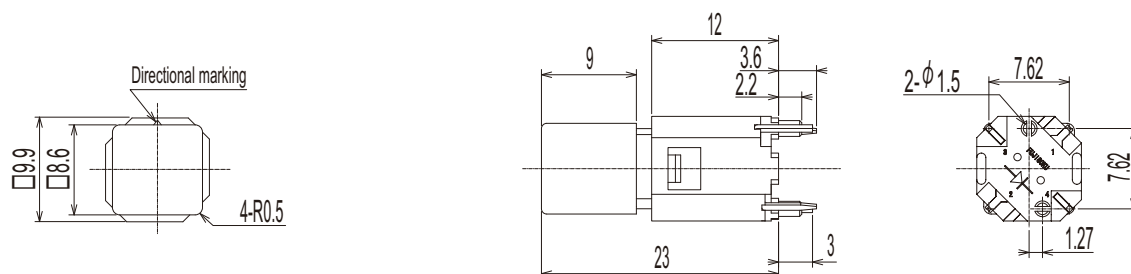
### □ 11mm · 12mm



### □ 6mm



### □ 9mm



## Soldering

### (1) flow soldering

265°C Max 3 sec Max

(Pre Heat : 80~120°C, 120 sec Max)

flow : one time maximum

### (2) Hand soldering

Device : Solder iron

380°C Max, 3 sec Max

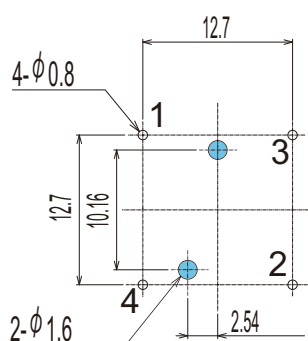
## Flux Cleaning

(1) When PC board cleaning is required, brushing on the soldering face shall be provided so that the CFPB is not exposed to the cleaning solution.

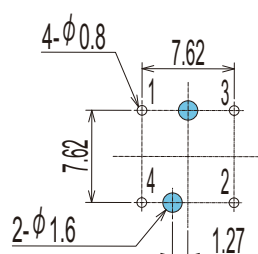
(2) Solvent : Alcohol type

## Pad Layouts

### □ 11mm · 12mm



### □ 6mm · 9mm



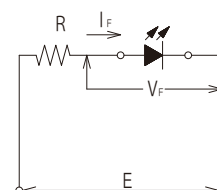
## LED Drive Circuit

● Case of static lighting system.

$$R = \frac{E - V_F}{I_F}$$

● Case of dynamic lighting system.

$$R = \frac{E - V_F}{I_{FM}}$$



## LED Specifications

| Item                               | Symbol          | Absolute Maximum Rating <sup>※1</sup> |        |       |        | Unit   |
|------------------------------------|-----------------|---------------------------------------|--------|-------|--------|--------|
|                                    |                 | Red                                   | Orange | Green | Yellow |        |
| Power Dissipation                  | P <sub>d</sub>  | 75                                    | 70     | 70    | 85     | mW     |
| Forward Current                    | I <sub>F</sub>  | 30                                    | 25     | 25    | 30     | mA     |
| Puls Forward Current <sup>※2</sup> | I <sub>FM</sub> | 75                                    | 60     | 60    | 75     | mA     |
| Current Derating<br>(Ta ≤ 25 °C)   | ΔI <sub>F</sub> | 0.40                                  | 0.33   | 0.33  | 0.40   | mA/ °C |
| Reverse Voltage                    | V <sub>F</sub>  | 4                                     | 4      | 4     | 4      | V      |

※1. "Absolute Maximum Ratings" are the values that must not exceed under any conditions. Please have the necessary safety margin when designing the circuit.

※2. Measurement of I<sub>FM</sub> is done under the condition of Pulse width ≤ 1ms and Duty ratio ≤ 1/20.

※3. The above ratings are specified when the ambient temperature (Ta) is 25 °C.

## Table of Part Numbers

□ 6mm

| Part No.        | LED color       | Button color |
|-----------------|-----------------|--------------|
| CFPB-1CC-1W6W   | Non-illuminated | White        |
| CFPB-1CC-1R6W   | Non-illuminated | Red          |
| ☆ CFPB-1CC-1G6W | Non-illuminated | Green        |
| ☆ CFPB-1CC-1Y6W | Non-illuminated | Yellow       |
| ☆ CFPB-1CC-1B6W | Non-illuminated | Blue         |
| ☆ CFPB-1CC-1O6W | Non-illuminated | Orange       |
| CFPB-1CC-2R6W   | Red             | Red          |
| ☆ CFPB-1CC-3O6W | Orange          | Orange       |
| CFPB-1CC-4W6W   | Yellow          | White        |
| ☆ CFPB-1CC-5G6W | Green           | Green        |
| ☆ CFPB-1CC-5Y6W | Green           | Yellow       |
| ☆ CFPB-1CC-5B6W | Green           | Blue         |

☆ : Semi-standard products.

□ 11mm

| Part No.        | LED color       | Button color |
|-----------------|-----------------|--------------|
| CFPB-1CC-1W1W   | Non-illuminated | White        |
| CFPB-1CC-1R1W   | Non-illuminated | Red          |
| ☆ CFPB-1CC-1G1W | Non-illuminated | Green        |
| ☆ CFPB-1CC-1Y1W | Non-illuminated | Yellow       |
| ☆ CFPB-1CC-1B1W | Non-illuminated | Blue         |
| ☆ CFPB-1CC-1O1W | Non-illuminated | Orange       |
| CFPB-1CC-2R1W   | Red             | Red          |
| ☆ CFPB-1CC-3O1W | Orange          | Orange       |
| CFPB-1CC-4W1W   | Yellow          | White        |
| ☆ CFPB-1CC-5G1W | Green           | Green        |
| ☆ CFPB-1CC-5Y1W | Green           | Yellow       |
| ☆ CFPB-1CC-5B1W | Green           | Blue         |

☆ : Semi-standard products.

□ 9mm

| Part No.        | LED color       | Button color |
|-----------------|-----------------|--------------|
| CFPB-1CC-1W9W   | Non-illuminated | White        |
| CFPB-1CC-1R9W   | Non-illuminated | Red          |
| ☆ CFPB-1CC-1G9W | Non-illuminated | Green        |
| ☆ CFPB-1CC-1Y9W | Non-illuminated | Yellow       |
| ☆ CFPB-1CC-1B9W | Non-illuminated | Blue         |
| ☆ CFPB-1CC-1O9W | Non-illuminated | Orange       |
| CFPB-1CC-2R9W   | Red             | Red          |
| ☆ CFPB-1CC-3O9W | Orange          | Orange       |
| CFPB-1CC-4W9W   | Yellow          | White        |
| ☆ CFPB-1CC-5G9W | Green           | Green        |
| ☆ CFPB-1CC-5Y9W | Green           | Yellow       |
| ☆ CFPB-1CC-5B9W | Green           | Blue         |

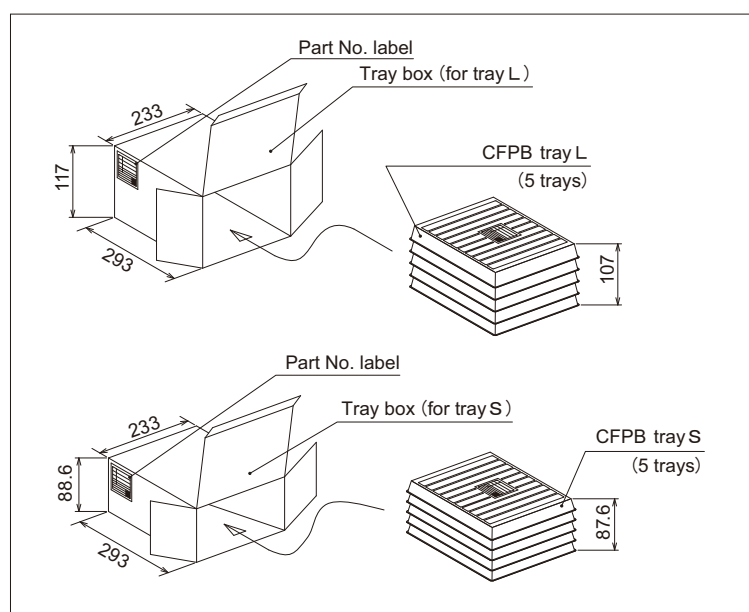
☆ : Semi-standard products.

□ 12mm

| Part No.        | LED color       | Button color |
|-----------------|-----------------|--------------|
| CFPB-1CC-1W2W   | Non-illuminated | White        |
| CFPB-1CC-1R2W   | Non-illuminated | Red          |
| ☆ CFPB-1CC-1G2W | Non-illuminated | Green        |
| ☆ CFPB-1CC-1Y2W | Non-illuminated | Yellow       |
| ☆ CFPB-1CC-1B2W | Non-illuminated | Blue         |
| ☆ CFPB-1CC-1O2W | Non-illuminated | Orange       |
| CFPB-1CC-2R2W   | Red             | Red          |
| ☆ CFPB-1CC-3O2W | Orange          | Orange       |
| CFPB-1CC-4W2W   | Yellow          | White        |
| ☆ CFPB-1CC-5G2W | Green           | Green        |
| ☆ CFPB-1CC-5Y2W | Green           | Yellow       |
| ☆ CFPB-1CC-5B2W | Green           | Blue         |

☆ : Semi-standard products.

## Packaging Specifications



**COPAL ELECTRONICS** Group  
FUJISOKU CORPORATION

