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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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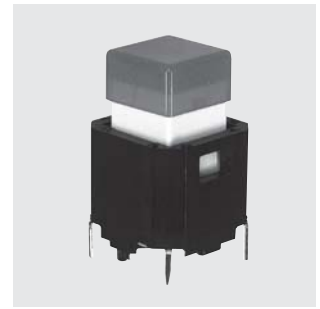


# CFPB



RoHS Compliant

## Illuminated Pushbutton Switches



### Features

1. Full Surface Illumination by LED.
2. Conductive Rubber Contact For Soft and Quiet Operation
3. Available in Four Sizes  
6mm sq., 9mm sq., 11mm sq., 12mm sq.

### Specifications

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	
Insulation Resistance	100MΩ (100VDC)	
Travel	1.5mm (11/12mm sq.) 1.3mm (6/9mm sq.)	
Operating Force	1.7±0.5N (11/12mm sq)	
	1.3 +0.6/-0.4N (6/9mm sq.)	
Electrical Life	500,000 operations at maxrating (11/12mm sq.)	
	300,000 operations at max. rating (6/9mm sq.)	
Operating Temperature Range	-10°C~+60°C	
Storage Temperature Range	-25°C~+70°C	

※Information on LED drive circuit are shown on the next page.

### Part Numbering

**CFPB - 1 C C - 1 W 1 W**

Series Code & Actuator

Code	Type
P	Pushbutton

Number of Poles

1

Terminal Style

Code	Terminal Style
C	Straight

LED Color

1

Button Color

W

Button Dimension

1

Packaging Specifications

W

Fig.	Number of Poles	Switching Function		Combination	LED Color	Button Color		Fig.	Button Dimension	Code	Packaging Specifications	
		Code	Switching Function									
1	1 pole	C	OFF - (ON)	1R	1	Non-illuminated	R	Red	1	□11mm sq.	W	Tray
				2R	2	Red			2	□12mm sq.		
				10	1	Non-illuminated	O	Orange				
				30	3	Orange	W	White clear				
				1W	1	Non-illuminated			6	□6mm sq.		
				4W	4	Yellow			9	□9mm sq.		
				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						

### Switching function

Part No.	Switching Function	OFF	(ON)
CFPB-1CC-■■■■W			
Connecting Terminals		-	1-2

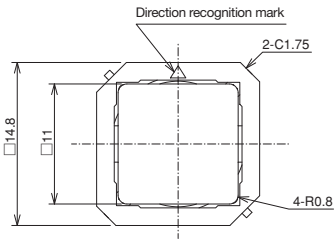
### LED Characteristics

Part No.	LED Characteristics
CFPB-1CC-■■■■W	
Connecting Terminals	3-4

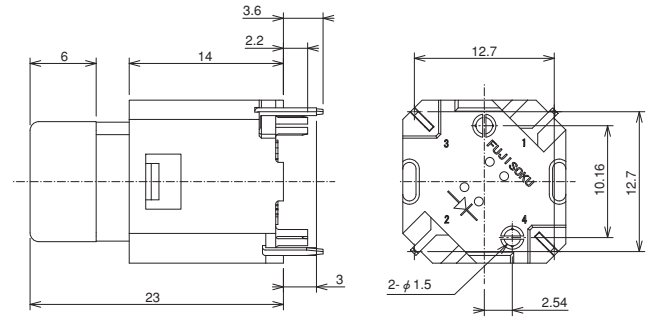
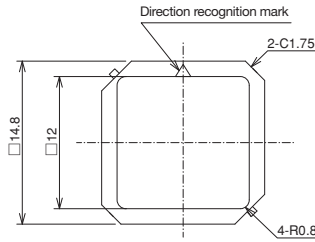
※Exclude Non - illuminated type.

Dimension

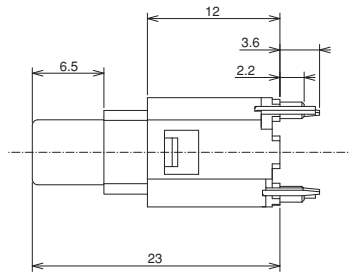
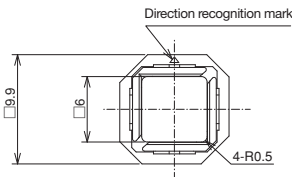
11mm Sq.



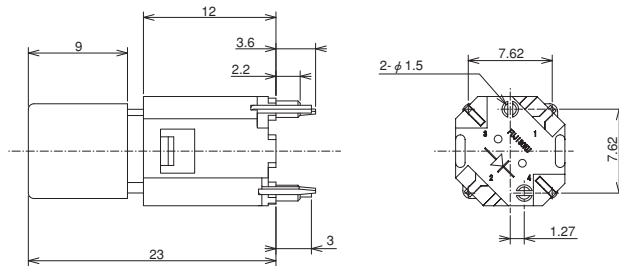
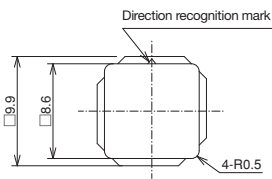
12mm Sq.



6mm Sq.

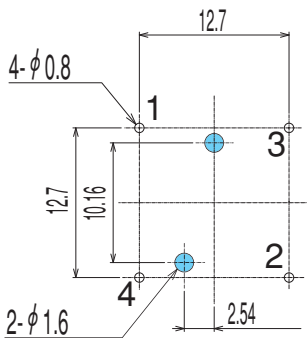


9mm Sq.

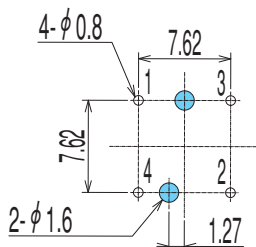


Pad Layouts

11mm/12mm Sq.



6mm/9mm Sq.



Soldering Specifications

- (1) flow soldering  
260°C max., 3 ~ 5 sec. max. (total 10 sec. max)  
Pre Heating: 80 ~ 120°C , 120 sec. max.  
No. of flows: 1 time max.
- (2) Manual soldering  
Device : Solder iron  
380°C Max, 3 sec Max

Flux Cleaning

- (1) The CFPB series are not washable. To wash the PC board, clean the soldering surface of the PC board with a brush so that the switch is not exposed to the cleaning solution.
- (2) Solvent : Alcohol type

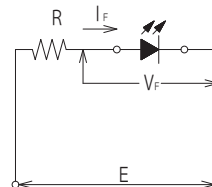
LED Drive circuit

- Case of static lighting system.

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

- Case of dynamic lighting system,

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



# CFPB

## LED Specification

Item	Symbol	Absolute Maximum Rating <sup>※1</sup>				Code
		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
Forward Voltage	V <sub>F</sub>	2.8	2.8	2.8	2.8	V
Puls Forward Current <sup>※2</sup>	I <sub>FRM</sub>	75	60	60	75	mA
Current Derating (Ta ≤ 25°C)	ΔI <sub>F</sub>	0.40	0.33	0.33	0.40	mA/°C
Reverse Voltage	V <sub>R</sub>	4	4	4	4	V

- ※1. "Absolute Maximum Rating" is the limit value that must not be exceeded even momentarily. Be sure to consider the safety margin for designing the circuit.  
 ※2. Measurement conditions of I<sub>FRM</sub>  
 Pulse width ≤ 1 ms; Duty ratio ≤ 1/20.  
 ※3. The above ratings are specified at ambient temperature Ta = 25°C.

## Table of Part Numbers

□ 6mm Sq.

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

□ 9mm Sq.

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

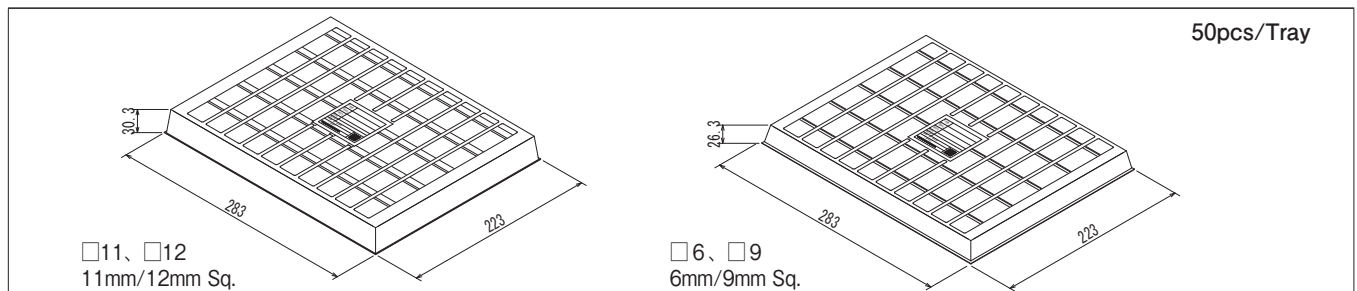
□ 11mm Sq.

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

□ 12mm Sq.

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

## Packaging Specifications



☆ : Semi-standard product.