

CFPB

Illuminated Pushbutton Switches



RoHS Compliant

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±0.4N : (6/9mm sq.)	
Electrical Life	500,000 operations at max. rating (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

Series Code & Actuator		Number of Poles		Terminal Style		LED Color		Button Color	Button Dimension	
Code	Type			Code	Terminal Style				Fig.	Button Dimension
P	Pushbutton			C	PC Straight				1	□11mm 11mm sq.
Fig.	Number of Poles	Switching Function		Combination		LED Color		Button Color	Fig.	Button Dimension
1	1 pole									
		Code	Switching Function							
		C	OFF — (ON)							
				1R	1	Non-illuminated				
				2R	2	Red	R	Red	2	□12mm 12mm sq.
				1O	1	Non-illuminated				
				3O	3	Orange	O	Orange	6	□6mm 6mm sq.
				1W	1	Non-illuminated	W	White clear	9	□9mm 9mm sq.
				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				

Switching function

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

LED Characteristics

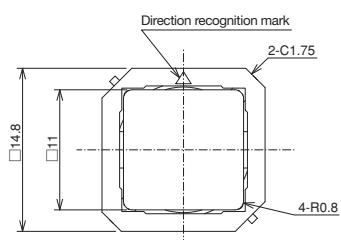
Part No.	LED Characteristics	
CFPB-1CC-■■■W		
Connecting Terminals		3—4

※Exclude Non - illuminated type.

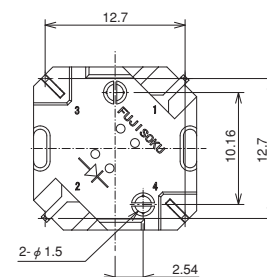
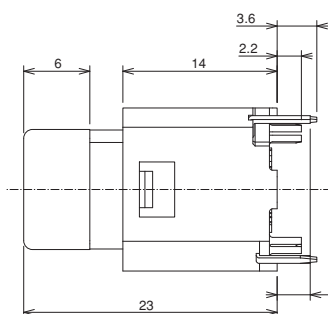
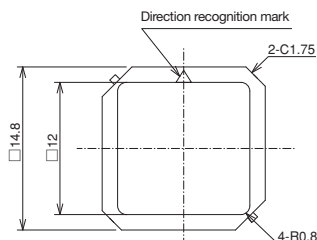
(ON) : Momentary

Dimension

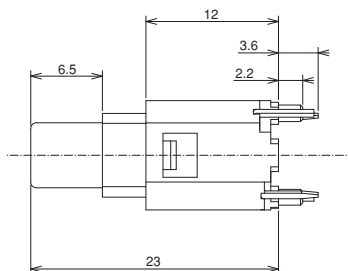
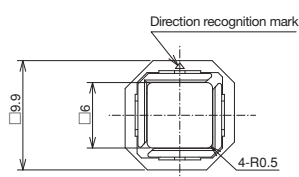
11mm Sq.



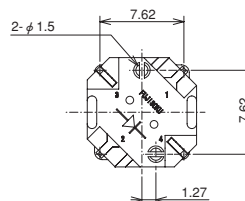
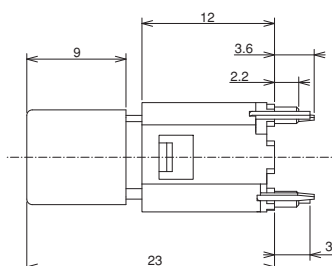
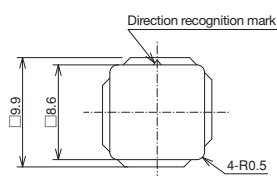
12mm Sq.



6mm Sq.

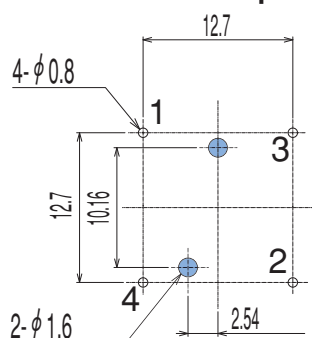


9mm Sq.

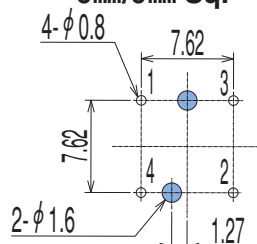


Pad Layouts

11mm · 12mm 11mm/12mm Sq.



6mm · 9mm 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

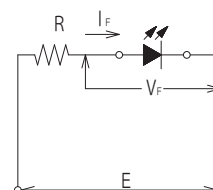
LED Drive circuit

- Case of static lighting system.

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

- Case of dynamic lighting system,

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



LED Specification

Item	Symbol	Absolute Maximum Rating※1				記号
		Red	Orange	Green	Yellow	
Power Dissipation	Pd	75	70	70	85	mW
Forward Current	IF	30	25	25	30	mA
Forward Voltage	VF	2.8	2.8	2.8	2.8	V
Puls Forward Current※2	IFRM	75	60	60	75	mA
Current Derating (Ta≤25℃)	△IF	0.40	0.33	0.33	0.40	mA/℃
Reverse Voltage	VR	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 IFRM
Pulse width <= 1 ms; Duty ratio <= 1/20.
※3. The above ratings are specified at ambient temperature Ta = 25℃.

Table of Part Numbers

□ 6mm / 6mm Sq.

Part No.	LED color	Button color
CFPB-1CC-1W6	Non-illuminated	White
CFPB-1CC-1R6	Non-illuminated	Red
☆CFPB-1CC-1G6	Non-illuminated	Green
☆CFPB-1CC-1Y6	Non-illuminated	Yellow
☆CFPB-1CC-1B6	Non-illuminated	Blue
☆CFPB-1CC-1O6	Non-illuminated	Orange
CFPB-1CC-2R6	Red	Red
☆CFPB-1CC-3O6	Orange	Orange
CFPB-1CC-4W6	Yellow	White
☆CFPB-1CC-5G6	Green	Green
☆CFPB-1CC-5Y6	Green	Yellow
☆CFPB-1CC-5B6	Green	Blue

□ 11mm / 11mm Sq.

Part No.	LED color	Button color
CFPB-1CC-1W1	Non-illuminated	White
CFPB-1CC-1R1	Non-illuminated	Red
☆CFPB-1CC-1G1	Non-illuminated	Green
☆CFPB-1CC-1Y1	Non-illuminated	Yellow
☆CFPB-1CC-1B1	Non-illuminated	Blue
☆CFPB-1CC-1O1	Non-illuminated	Orange
CFPB-1CC-2R1	Red	Red
☆CFPB-1CC-3O1	Orange	Orange
CFPB-1CC-4W1	Yellow	White
☆CFPB-1CC-5G1	Green	Green
☆CFPB-1CC-5Y1	Green	Yellow
☆CFPB-1CC-5B1	Green	Blue

□ 9mm / 9mm Sq.

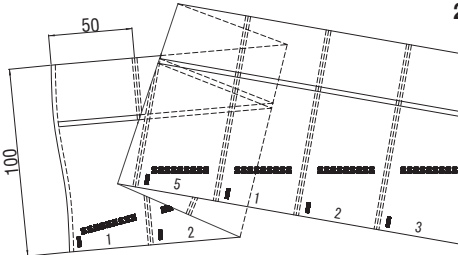
Part No.	LED color	Button color
CFPB-1CC-1W9	Non-illuminated	White
CFPB-1CC-1R9	Non-illuminated	Red
☆CFPB-1CC-1G9	Non-illuminated	Green
☆CFPB-1CC-1Y9	Non-illuminated	Yellow
☆CFPB-1CC-1B9	Non-illuminated	Blue
☆CFPB-1CC-1O9	Non-illuminated	Orange
CFPB-1CC-2R9	Red	Red
☆CFPB-1CC-3O9	Orange	Orange
CFPB-1CC-4W9	Yellow	White
☆CFPB-1CC-5G9	Green	Green
☆CFPB-1CC-5Y9	Green	Yellow
☆CFPB-1CC-5B9	Green	Blue

□ 12mm / 12mm Sq.

Part No.	LED color	Button color
CFPB-1CC-1W2	Non-illuminated	White
CFPB-1CC-1R2	Non-illuminated	Red
☆CFPB-1CC-1G2	Non-illuminated	Green
☆CFPB-1CC-1Y2	Non-illuminated	Yellow
☆CFPB-1CC-1B2	Non-illuminated	Blue
☆CFPB-1CC-1O2	Non-illuminated	Orange
CFPB-1CC-2R2	Red	Red
☆CFPB-1CC-3O2	Orange	Orange
CFPB-1CC-4W2	Yellow	White
☆CFPB-1CC-5G2	Green	Green
☆CFPB-1CC-5Y2	Green	Yellow
☆CFPB-1CC-5B2	Green	Blue

Packaging Specifications

Perforated plastic bags



25 pcs./pack × 2

☆ : Semi-standard product.