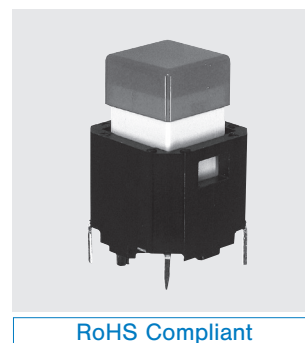


CFPB

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.	5 VDC 5 mA or 20 VDC 1 mA
	Min.	5 VDC 1 mA
Initial Contact Resistance	200 Ω Max. (20 mV 1.5 mA 1kHz Max.)	
Dielectric Strength	250 VAC 1 minute	
Insulation Resistance	100 MΩ (100 VDC)	
Travel	1.5 mm (11/12 mm sq.) 1.3 mm (6/9 mm sq.)	
Operating Force	1.7±0.5 N (11/12 mm sq.)	
	1.3±0.4 N : (6/9 mm sq.)	
Electrical Life	500,000 operations at max. rating (11/12 mm sq.)	
	300,000 operations at max. rating (6/9 mm sq.)	
Operating Temperature Range	-10°C~+60°C	
Storage Temperature Range	-25°C~+70°C	

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	R	Red		2	□12mm 12mm sq.
				2R	2	Red				6	□6mm 6mm sq.
				1O	1	Non-illuminated	O	Orange		9	□9mm 9mm sq.
				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					

Switching function

Switching Function		
Part No.	CFPB-1CC-■■■	CFPB-1CC-■■■
Connecting Terminals	—	1-2

LED Characteristics

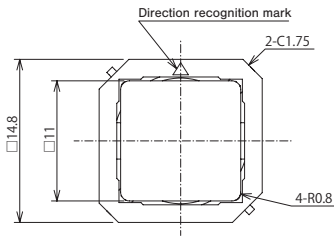
LED Characteristics	
Part No.	CFPB-1CC-■■■
Connecting Terminals	3-4

※Exclude Non - illuminated type.

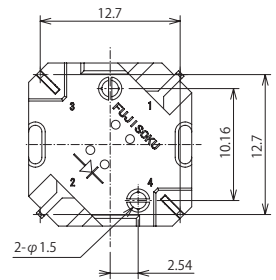
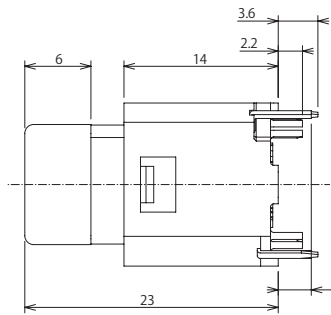
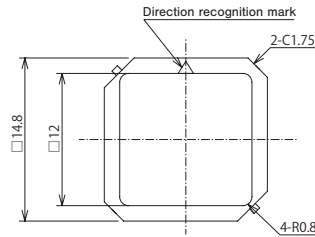
(ON) : Momentary

Dimension

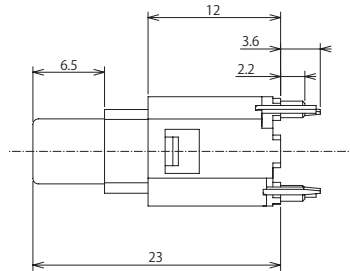
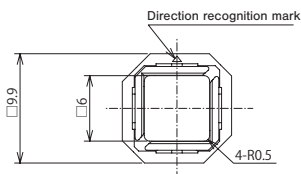
□ 11mm Sq.



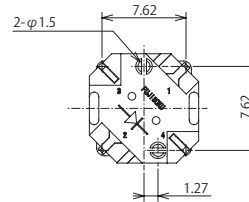
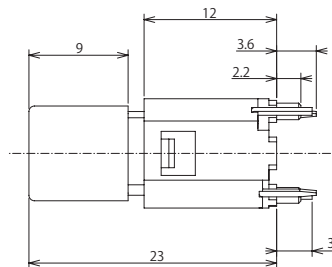
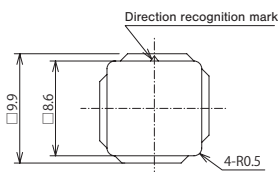
□ 12mm Sq.



□ 6mm Sq.

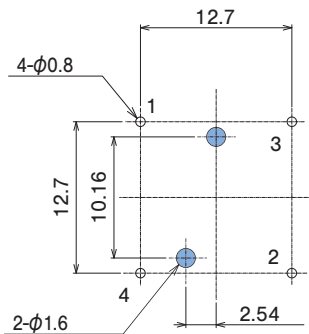


□ 9mm Sq.

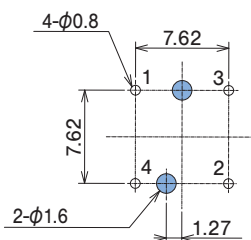


Pad Layouts

□ 11mm/12mm Sq.



□ 6mm/9mm Sq.



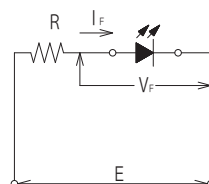
Soldering Specifications

- (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

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

LED Specification

Item	Symbol	Absolute Maximum Rating ^{※1}				Unit
		Red	Orange	Green	Yellow	
Forward Current	I _F	30	30	25	25	mA
Puls Forward Current ^{※2}	IFP	100	100	100	100	mA
Forward Voltage	V _F	2.8	2.8	2.8	2.8	V
Reverse Voltage	V _R	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_{FP}
Duty ratio:1/10, Frequency:1kHz

※3. The above ratings are specified at ambient temperature Ta = 25°C.

Table of Part Numbers

☐ 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

☐ 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

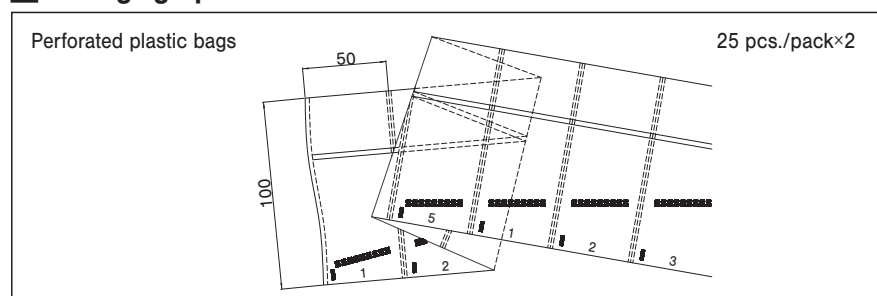
☐ 11mm Sq.

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

☐ 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



☆ : Semi-standard product.