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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.) $1.3^{+0.6}_{-0.4}$N : (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℃～+60℃
Storage Temperature Range		−25℃～+70℃

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

■Part Numbering

CFPB — 1 C C — 1 W 1

Series Code & Actuator

Code	Type
P	Pushbutton

Number of Poles

Fig.	Number of Poles
1	1 pole

Terminal Style

Code	Terminal Style
C	PC Straight

Switching Function

Code	Switching Function
C	OFF — (ON)

LED Color / Button Color

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		

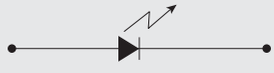
Button Dimension

Fig.	Button Dimension
1	□11mm 11mm sq.
2	□12mm 12mm sq.
6	□6mm 6mm sq.
9	□9mm 9mm sq.

■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

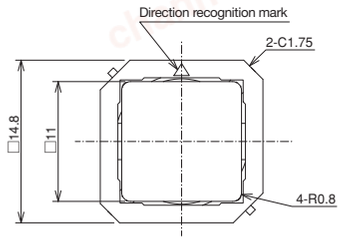
※Exclude Non - illuminated type.

(ON) : Momentary

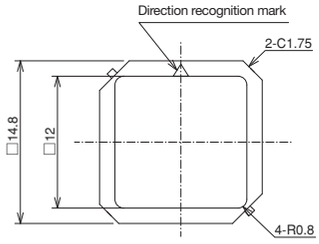
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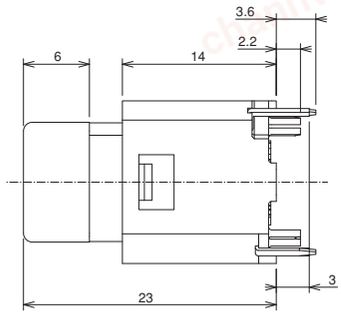
■Dimension

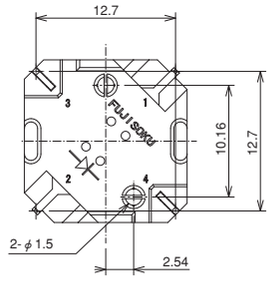
□ 11mm Sq.



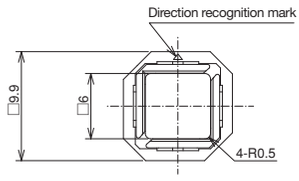
□ 12mm Sq.

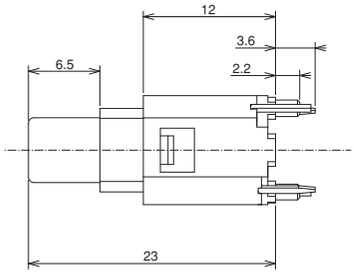




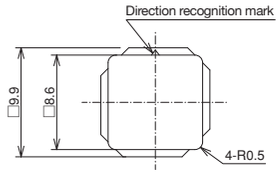


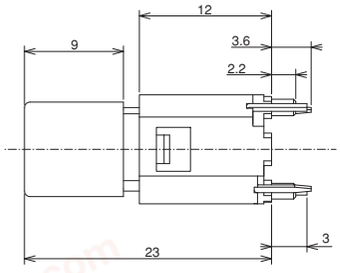
□ 6mm Sq.

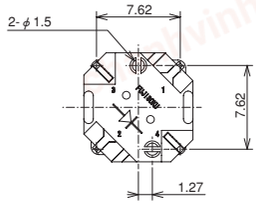




□ 9mm Sq.

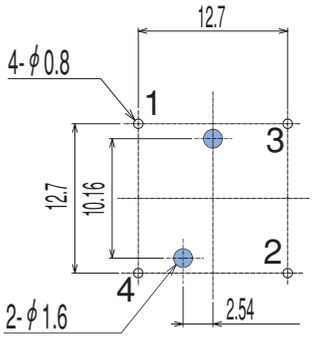




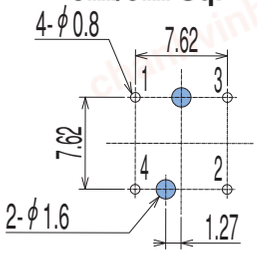


■Pad Layouts

□ 11mm・12mm
11mm/12mm Sq.



□ 6mm・9mm
6mm/9mm Sq.



■Soldering Specifications

(1) flow soldrering
260℃ max., 3 ～ 5 sec. max. (total 10 sec. max)
Pre Heating: 80 ～ 120℃ , 120 sec. max.
No. of flows: 1 time max.

(2) Manual soldering
Device : Solder iron
380℃ 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

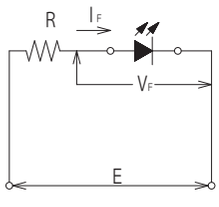
■LED Drive circuit

●Case of static lighting system.

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

●Case of dynamic lighting system,

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



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CFPB

■LED Specification

Item	Symbol	Absolute Maximum Rating※1				記 号
		Red	Orange	Green	Yellow	
Power Dissipation	Pd	75	70	70	85	mW
Forward Curent	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 I_{FRM}
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

☐ 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

☐ 11mm / 11mm Sq.

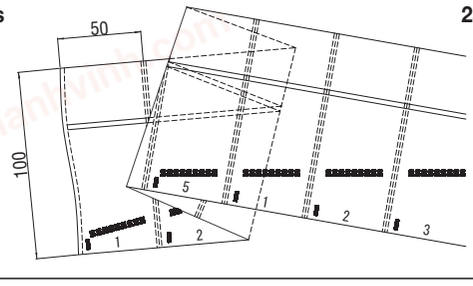
Part No.	LED color	Button color
CFPB-1CC-1W1	Non-illuminated	White
CFPB-1CC-1R1	Non-illuminated	Red
☆**CFPB-1CC-1G1**	Non-illuminated	Green
☆**CFPB-1CC-1Y1**	Non-illuminated	Yellow
☆**CFPB-1CC-1B1**	Non-illuminated	Blue
☆**CFPB-1CC-1O1**	Non-illuminated	Orange
CFPB-1CC-2R1	Red	Red
☆**CFPB-1CC-3O1**	Orange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

☐ 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.