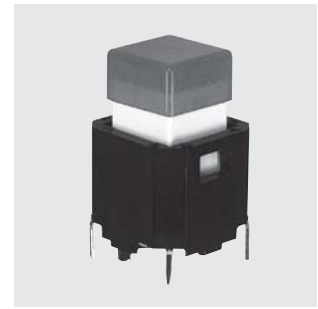# CFPB

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±0.6/0.4N : (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℃〜+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

Number of Poles

Terminal Style

LED Color　Button Color　Button Dimension

Code	Type
P	Pushbutton

Fig.	Number of Poles
1	1 pole

Switching Function

Code	Switching Function
C	OFF － （ON）

Terminal Style

Code	Terminal Style
C	PC Straight

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 11mm sq.
2	□12mm 12mm sq.
6	□6mm 6mm sq.
9	□9mm 9mm sq.

■ Switching function

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

（ON）：Momentary

■ LED Characteristics

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

※Exclude Non - illuminated type.

■Dimension

□ 11mm Sq.

Direction recognition mark
2-C1.75
14.8
□11
4-R0.8

□ 12mm Sq.

Direction recognition mark
2-C1.75
14.8
□12
4-R0.8

3.6
2.2
6
14
12.7
10.16
12.7
3
23
FUJI SOKU
3
1
2
4
2-φ1.5
2.54

□ 6mm Sq.

Direction recognition mark
9.9
□6
4-R0.5

12
6.5
3.6
2.2
23

□ 9mm Sq.

Direction recognition mark
9.9
□8.6
4-R0.5

12
9
3.6
2.2
23
3
2-φ1.5
7.62
FUJISOKU
3
1
2
4
7.62
1.27
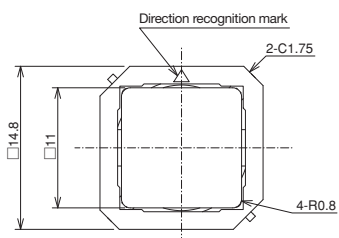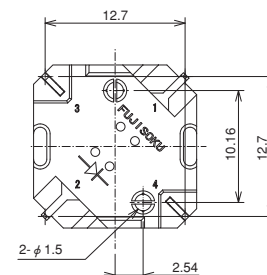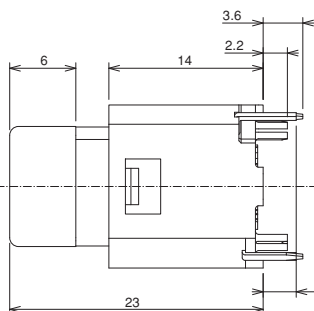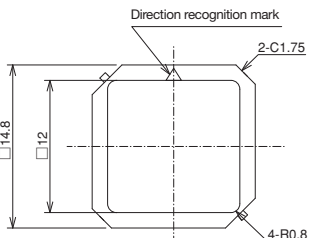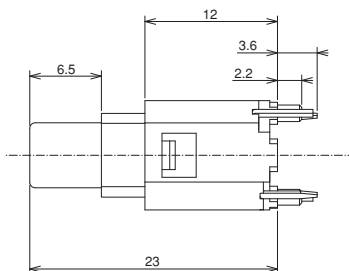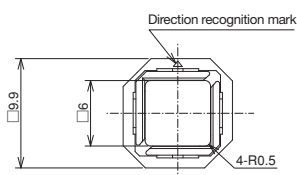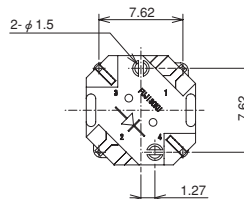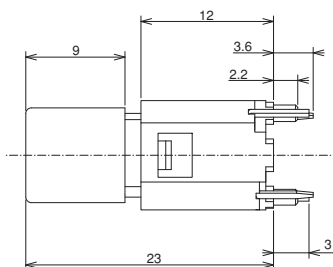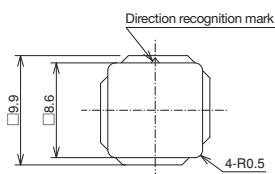
■Pad Layouts

□ 11mm · 12mm
11mm/12mm Sq.

12.7
4-φ0.8
1
3
12.7
10.16
2
4
2-φ1.6
2.54

□ 6mm · 9mm
6mm/9mm Sq.

4-φ0.8
7.62
1
3
7.62
4
2
2-φ1.6
1.27
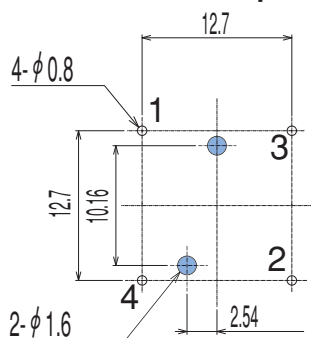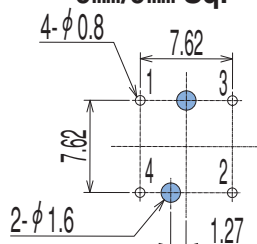
■Soldering Specifications

（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.
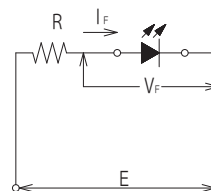
（2）Solvent : Alcohol type

■LED Drive circuit

●Case of static lighting system.

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

●Case of dynamic lighting system,

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

R
I_F
V_F
E

■LED Specification

Item	Symbol	Absolute Maximum Rating[1]				記号
		Red	Orange	Green	Yellow	
Power Dissipation	P_d	75	70	70	85	mW
Forward Current	I_F	30	25	25	30	mA
Forward Voltage	V_F	2.8	2.8	2.8	2.8	V
Puls Forward Current[2]	I_{FRM}	75	60	60	75	mA
Current Derating (Ta≤25℃)	$\triangle I_F$	0.40	0.33	0.33	0.40	mA/℃
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_{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.