SPECIFICATIONSHEET

NEW

Illuminated Tactile Switches PF series

RoHS compliant

lead-free

General Specification

CIRCUIT: SPST
FUNCTION: MOMENTARY
CONTACT RATING: 1~50mA @ 5V~24VDC (resistive load)
OPERATING FORCE: Standard Force: 170 ± 40gf; High Force: 260 ± 50fg
TOTAL TRAVEL: 0.25 +0.2/-0.1mm
ELECTRICAL LIFE: 170gf (standare force): 500,000 operations min.
260gf (high force) : 300,000 operations min.
CONTACT RESISTANCE: 100 mΩ max. (initialvalue)
INSULATION RESISTANCE: 100 MΩ min.
DIELECTRIC STRENGTH: 500 RMS @ sea level.
OPERATING TEMPERATURE: -25°C to 70°C.

Materials

MATERIALS
CASE: PBT(UL94V-0).
HOUSING: PBT(UL94V-0).
ACTUATOR: PC
TERMINAL/CONTACT: Brass,silver plated.

How to Order

MODEL NO.	CAP SIZE	CAP COLOR	LED Q'TY	LED COLOR	CONTACT MATERIAL	—	LED BRIGHTNESS	OPERATING FORCE	TEXT OCMBINATIONS
PF									

Cap size
0 10x10mm

Cap color

ITEM NO	COLOR
Single Color Led	
0	Transparent
1	Milky white
3	Red
4	Orange
6	Green
7	Blue
Dual Color Led	
0	Transparent
1	Milky white

Led Q'ty

ITEM NO	COLOR
Single Color Led	
0	Without Led
1	One Led
Dual Color Led	
2	Two Led

Contact material
S Silver

Led brightness
0 Without LED
Single Color LED only
A Super Brightness

Operating force
1 Standard
2 High force

Text combinations

Text combinations		LED color
Single Color Led		
0	Without text combinations	
Dual Color Led		
0	Without text combinations	
1	"OFF" and "ON"	Dual Color LED has only "B" and "G" options
2	"CLOSE" and "OPEN"	
3	"✕" and "O"	

Led color

ITEM NO	COLOR
Single Color Led	
0	Without Led
1	White
3	Red
5	Yellow
6	Green
7	Blue
Dual Color Led	
B	Red+Blue
G	Red+Green
Without text combinations	
C	Yellow+Green
D	Yellow+Red
F	Blue+Green

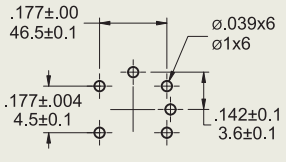
Example:
Single Color Led: PF-0113S-A10
Dual Color Led:
PF-002BS-A11(text combinations)
PF-002CS-A10(Without text combinations)

Tel: +44 (0)1724 273200 sales@eledis.com www.eledis.com
Deltron Emcon House, Hargreaves Way, Sawcliffe Industrial Park, Scunthorpe, North Lincolnshire DN15 8RF

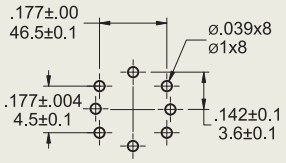
SPECIFICATIONSHEET

Mounting/Circuit Options

P.C.B MOUNTING

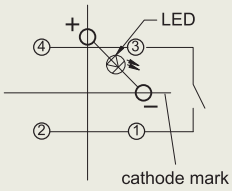


Single Color Led
TOP VIEW

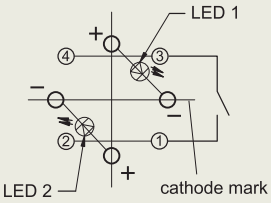


Dual Color Led
TOP VIEW

CIRCUIT



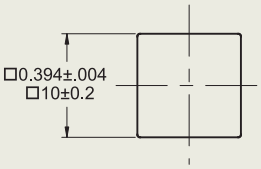
Single Color Led
TOP VIEW

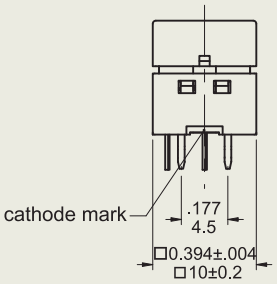


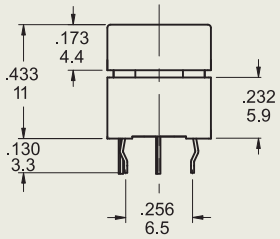
Dual Color Led
TOP VIEW

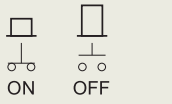
Dimensions

Part No. Shown: PF-0113S-A10

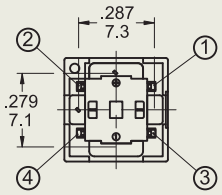




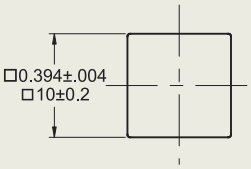


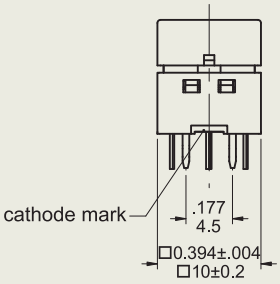


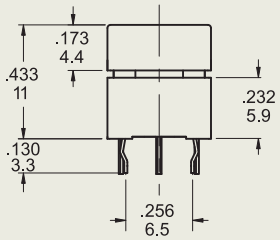
Switch Circuit Diagram

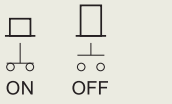


Part No. Shown:PF-002GS-A13

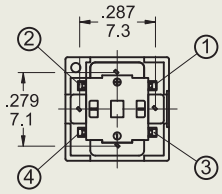








Switch Circuit Diagram



LED Electro-optical Data

* The LED specification for refereence only

Single Color Led							
Lens Appearance	Color	Electro-optical Data(AT 20mA)				Peak wavelength (mm)	Viewing Angle 2θ 1/2 (deg)
		Vf (V)		Iv (mcd)			
		Typ.	Max.	Typ.	Min.		
Water Clear	White	3.2	3.7	270	160	X 0.25 Y 0.29	150°
	Red	2.0	2.5	95	50	635	
	Yellow	2.0	2.5	150	80	585	
	Green	3.3	3.7	280	200	520	
	Blue	3.1	3.6	50	20	460	
Dual Color Led							
Lens Appearance	Color	Electro-optical Data(AT 20mA)				Peak wavelength (mm)	Viewing Angle 2θ 1/2 (deg)
		Vf (V)		Iv (mcd)			
		Typ.	Max.	Typ.	Min.		
Water Clear	Red	2.0	2.5	95	50	635	150°
	Green	3.3	3.7	280	200	520	
	Blue	3.1	3.6	50	20	460	
	Yellow	2.0	2.5	150	80	585	

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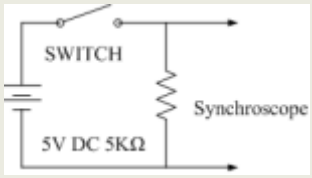
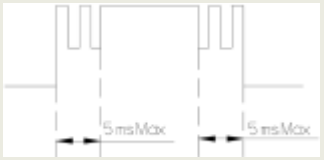
PF SERIES SPECIFICATION
Test Sequence

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
1	Visual Examination	Visual Examination check with & without external force applied	There shall be no defects that affect the serviceability of the product.
2	Contact Resistance	@ 5VDC, 1mA for both silver plated contacts	100mΩ Max.
3	Insulation Resistance	Measurements shall be made following application of 250 V/DC potential across terminals and cover.	100MΩ min/250VDC 100mA
4	Dielectric Withstand Voltage	500 VAC (50Hz or 60Hz) shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.
5	Bounce	3 to 4 operations at a rate of 1 cycle per second. 	5ms max. 
6	Actuation Force	Model-1305N Mechanical Test 500gram 1000gram 2000gram	Standard force switches: 170g +/- 40 grams High force switches: 260g +/- 50 grams
7	Stroke	Placing the switch such that the direction of switch operation is vertical and then gradually increasing the load applied to the stem, the stroke distance for the stem to come to a stop shall be measured.	$0.25\ ^{+0.20}_{-0.10}$ mm
8	Solder Heat Resistance	Through Hole Type: **Wave Soldering** (1) Soldering Temperature:260+/- 5°C. (2) Duration of Solder Immersion: 5 ±1 Seconds. (3) PCB is 1.6mm in thickness. **Manual Soldering** (1) Soldering Temperature: 350+/-5°C. (2) Duration of Solder Heat: 3 ±1 Seconds.	Shall be free from pronounced backlash and falling-off or breakage of terminals. Shall conform to the limits in items 2 to 4.
9	Vibration resistance	Shall be tested in accordance with Method 201A of MIL-STD-202F. (a) Frequency: 10-55-10Hz in 1 min./cycle. (b) Direction: 3 vertical directions including the directions of operation (c) Test time: 2 hours in each direction	Shall conform to the limits in items 2 to 4.
10	Shock resistance	Shall be tested in accordance with Method 213B condition A of MIL-STD-202F (a) Acceleration: 50g (b) Action time: 11+/-1ms (c) Testing direction: 6 sides (d) Test cycle: 3 times in each direction	Shall conform to the limits in items 2 to 4.

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11	Operating Life	Measurements shall be made following the test below: (a) 50mA, 24VDC max. (b) Rate of operation: 2 seconds/cycle. (c) Electrical Life Test: Standard Force: 500,000 cycles High Force: 300,000 cycles	Shall conform to the limits in items 3 & 4.
		(d) Mechanical Life Test: Standard Force: 500,000 cycles High Force: 300,000 cycles	Shall conform to the limit in item 2.
12	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: (a) Temperature -25±3°C. (b) Time 96 hours.	Shall conform to the limits in items 2 to 4.
13	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: (a) Temperature 70±3°C . (b) Time 96 hours.	Shall conform to the limits in items 2 to 4.

Precautions in Handling

(1) Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.

(2) Do not wash the switch after soldering.

(3) Observe Precautions for handling electrostatic sensitive devices..

(4) Please make sure there is no flux over the surface of the PCB.