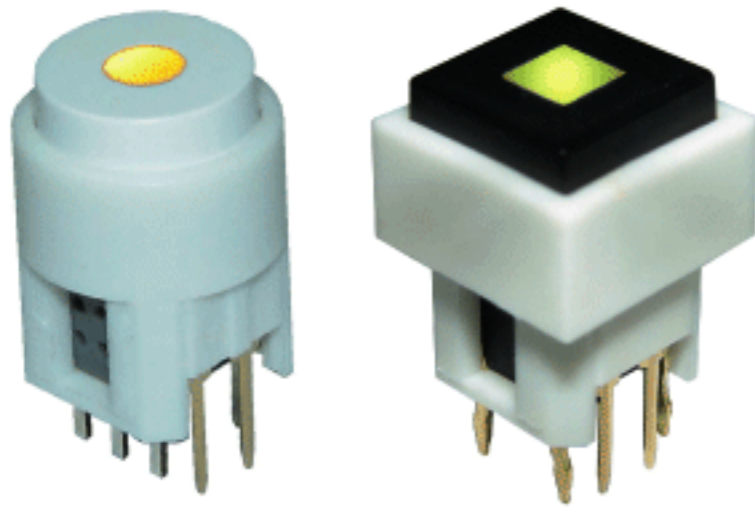


# SPA-CV Series Dual-LED Pushbutton Switches (W/LED)

LICO



## SPECIFICATION:

Item	: SPA-A Type & SPA-M Type.	: SPA-T Type.
Current rating	: 100mA.	: 50mA.
Voltage rating	: 30V DC.	: 12V DC.
Led rating	: See the table below.	: See the table below.
Circuit	: DPDT.	: SPST.
Total travel	: Max. 1.9mm; Lock 1.5mm.	: 0.3±0.2mm.
Contact resistance	: 100mΩ Max. (initial)	: 100mΩ Max. (initial)
Insulation resistance	: 100MΩ Min. at 500V DC.	: 100MΩ Min.
Operating temperature	: -36°C ~ +65°C.	: +10°C ~ +60°C.
Operating force	: 200±80g.	: 180±50g.
Electrical life	: 10,000 Cycles Min.	: 800,000 Cycles Min.
Soldering temperature	: 250°C Max. for 3 sec.	: 250°C Max. for 3 sec.

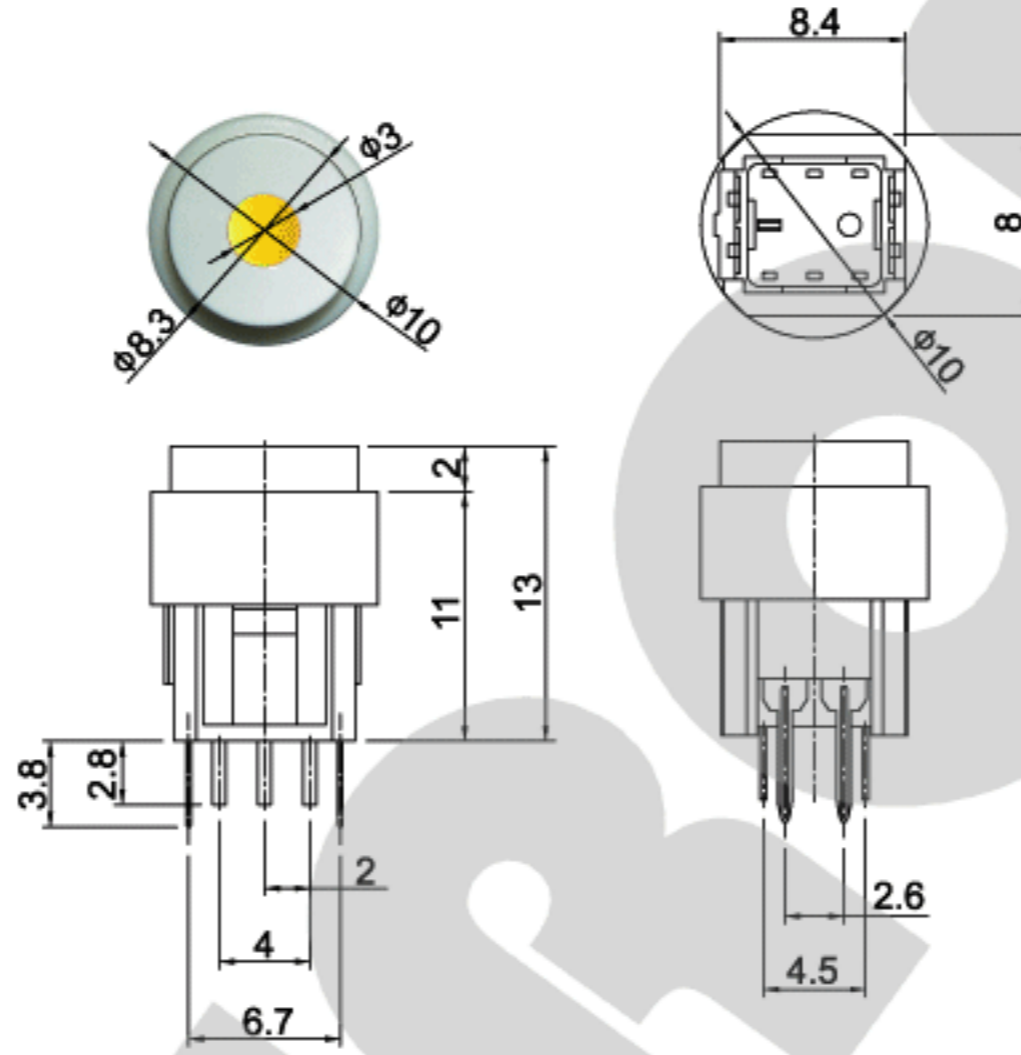
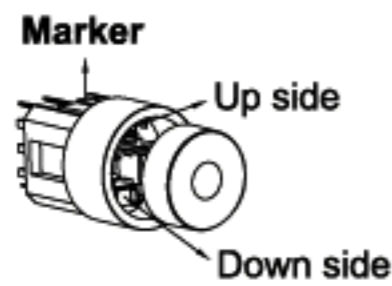
## MATERIALS:

S/W Button	: Polyacetal. (POM)	Housing	: Polyamide. (PA)
S/W Base	: Polyamide. (PA)	Lens	: Polycarbonate. (PC)
S/W Terminal	: Brass with Silver plated.	Contact	: Phosphor bronze (PBS) with Silver plated.
Spring	: Piano wire.	Cover	: Acrylonitrile Butadiene Styrene. (ABS)
Cap	: Polycarbonate. (PC)	Led terminal	: Phosphor bronze (PBS) with Gold plated.
Act. Dome	: Stainless steel with Silver plated.		

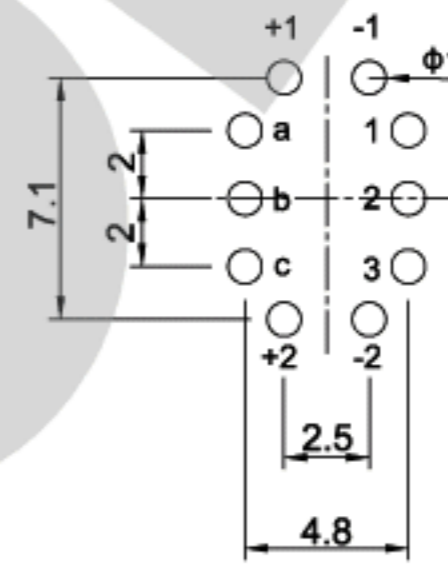
## NEW DPDT (Lock)



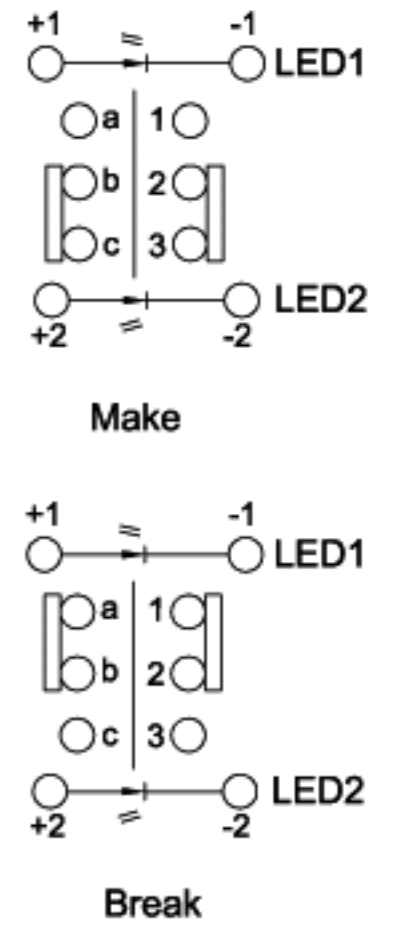
SPA-A-SA-CV04-23



## P.C.B. LAYOUT



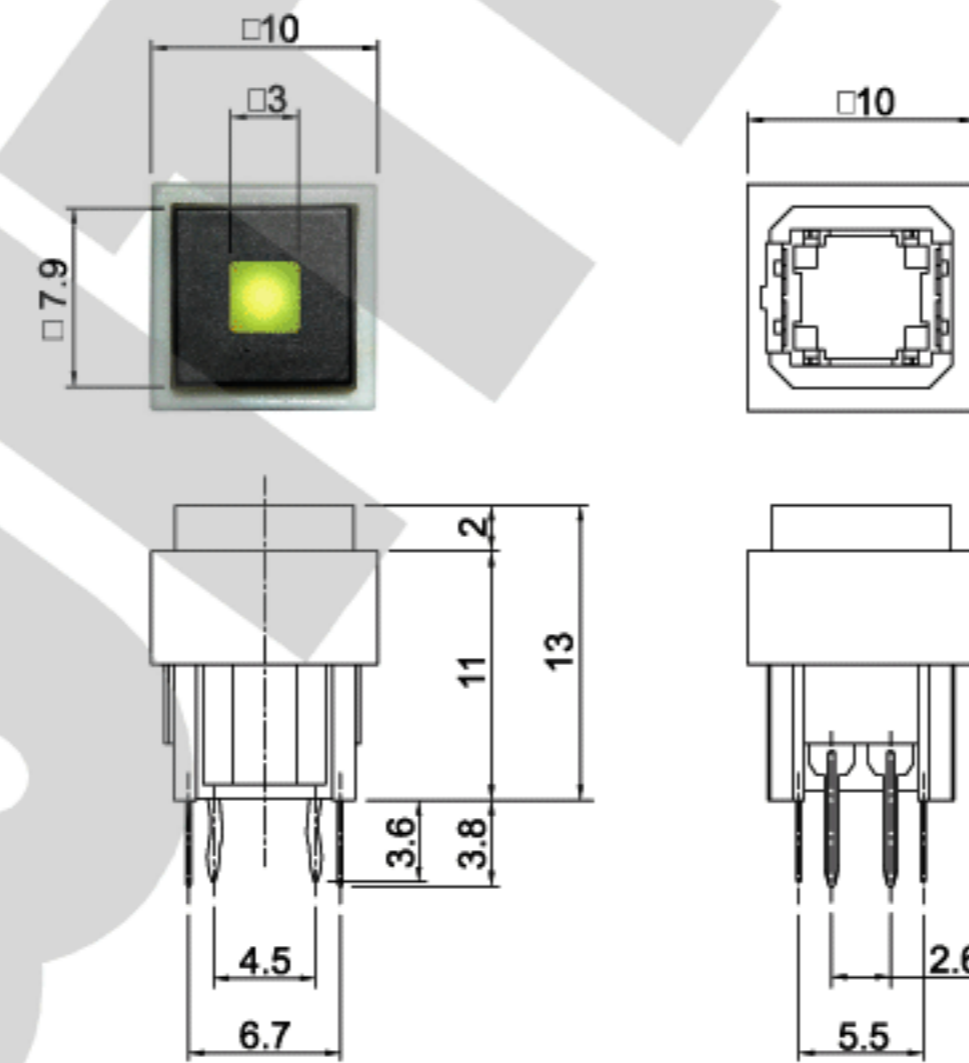
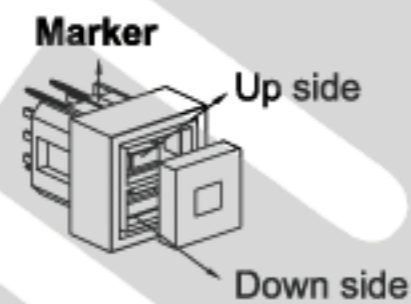
## CIRCUIT DIAGRAM



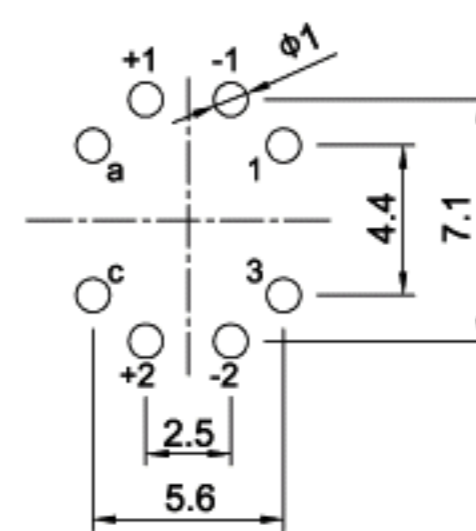
## NEW SPST (Tact)



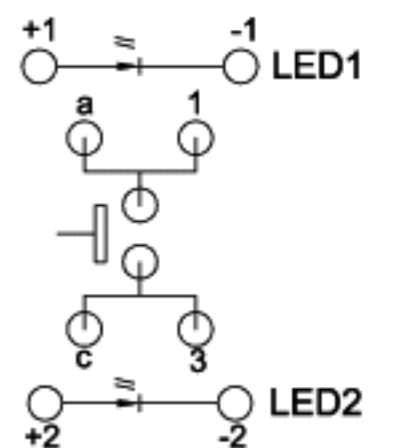
SPA-T-CA-CV05-23



## P.C.B. LAYOUT



## CIRCUIT DIAGRAM



## HOW TO ORDER

SPA - **FUNCTION** - **HOUSING TYPE** - CV + **CAP COLOR** -

A : LOCK  
M : MOMENTARY  
T : TACT

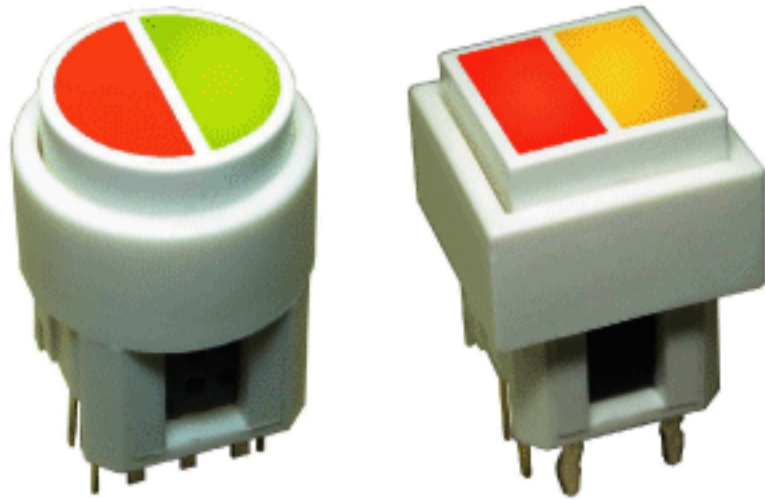
SA : SPHERICAL  
CA : CUBOIDAL

04 WHITE  
05 BLACK

CODE	LED COLOR	
	UP	DOWN
12	RED	YELLOW
13	RED	GREEN
1P3	RED	PURE GREEN
14	RED	WHITE
17	RED	BLUE
23	YELLOW	GREEN
2P3	YELLOW	PURE GREEN
24	YELLOW	WHITE
27	YELLOW	BLUE
3P3	GREEN	PURE GREEN
34	GREEN	WHITE
37	GREEN	BLUE
P34	PURE GREEN	WHITE
P37	PURE GREEN	BLUE
47	WHITE	BLUE

# SPA-2V Series Dual-LED Pushbutton Switches (W/LED)

LICO



## SPECIFICATION:

Item	: SPA-A Type & SPA-M Type.	: SPA-T Type.
Current rating	: 100mA.	: 50mA.
Voltage rating	: 30V DC.	: 12V DC.
Led rating	: See the table below.	: See the table below.
Circuit	: DPDT.	: SPST.
Total travel	: Max. 1.9mm; Lock 1.5mm.	: 0.3±0.2mm.
Contact resistance	: 100mΩ Max. (initial)	: 100mΩ Max. (initial)
Insulation resistance	: 100MΩ Min. at 500V DC.	: 100MΩ Min.
Operating temperature	: -36°C ~ +65°C.	: +10°C ~ +60°C.
Operating force	: 200±80g.	: 180±50g.
Electrical life	: 10,000 Cycles Min.	: 800,000 Cycles Min.
Soldering temperature	: 250°C Max. for 3 sec.	: 250°C Max. for 3 sec.

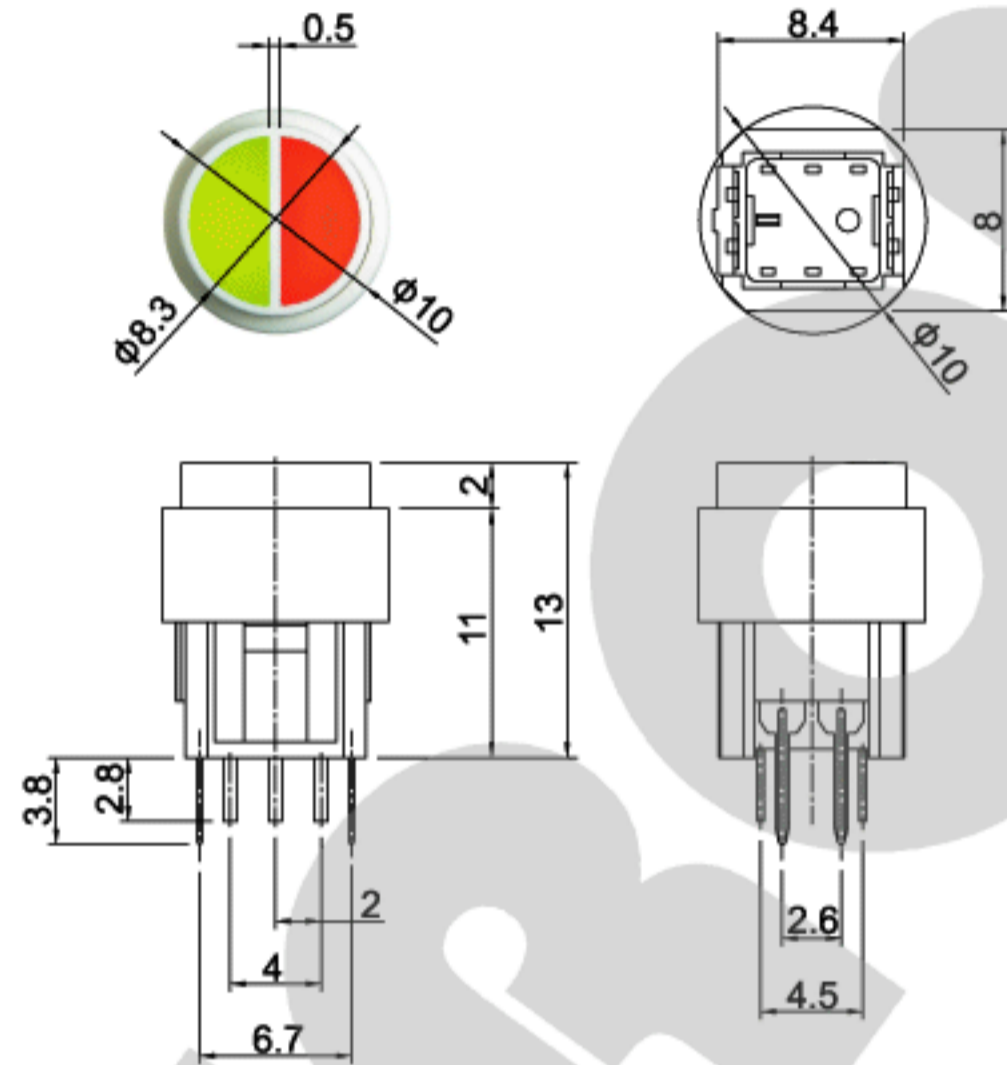
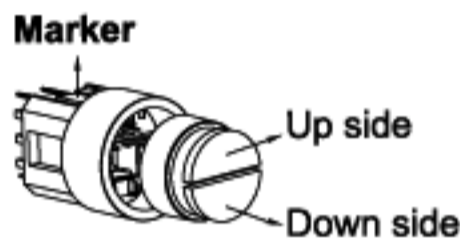
## MATERIALS:

S/W Button	: Polyacetal. (POM)	Housing	: Polyamide. (PA)
S/W Base	: Polyamide. (PA)	Lens	: Polycarbonate. (PC)
S/W Terminal	: Brass with Silver plated.	Contact	: Phosphor bronze (PBS) with Silver plated.
Spring	: Piano wire.	Cover	: Acrylonitrile Butadiene Styrene. (ABS)
Cap	: Polycarbonate. (PC)	Led terminal	: Phosphor bronze (PBS) with Gold plated.
Act. Dome	: Stainless steel with Silver plated.		

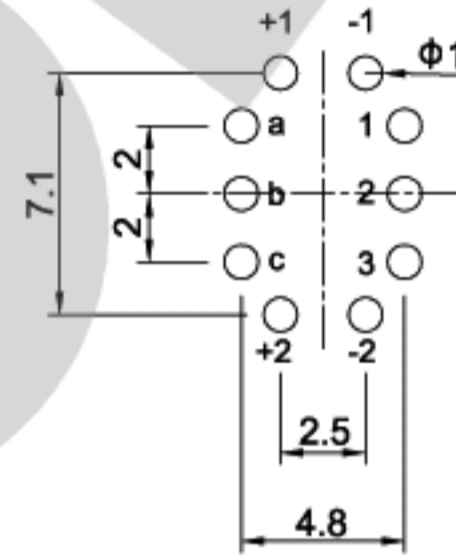
## NEW DPDT (Lock)



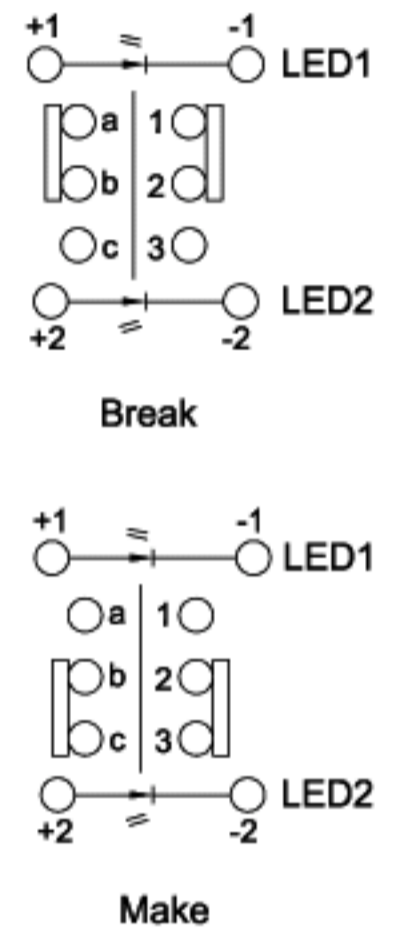
SPA-A-SA-2V13-13



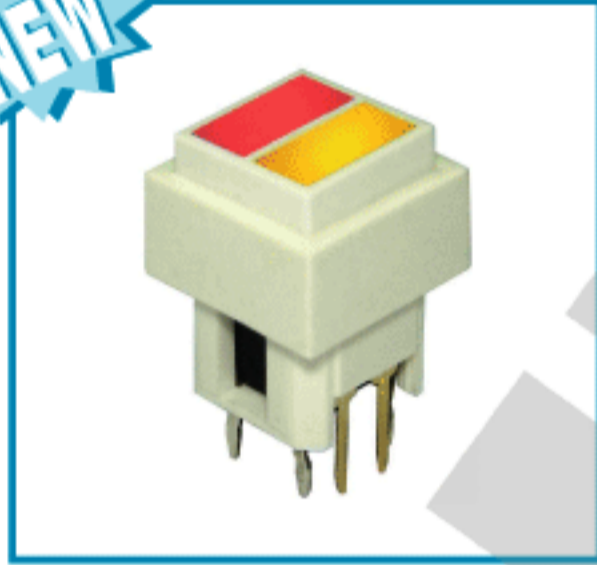
## P.C.B. LAYOUT



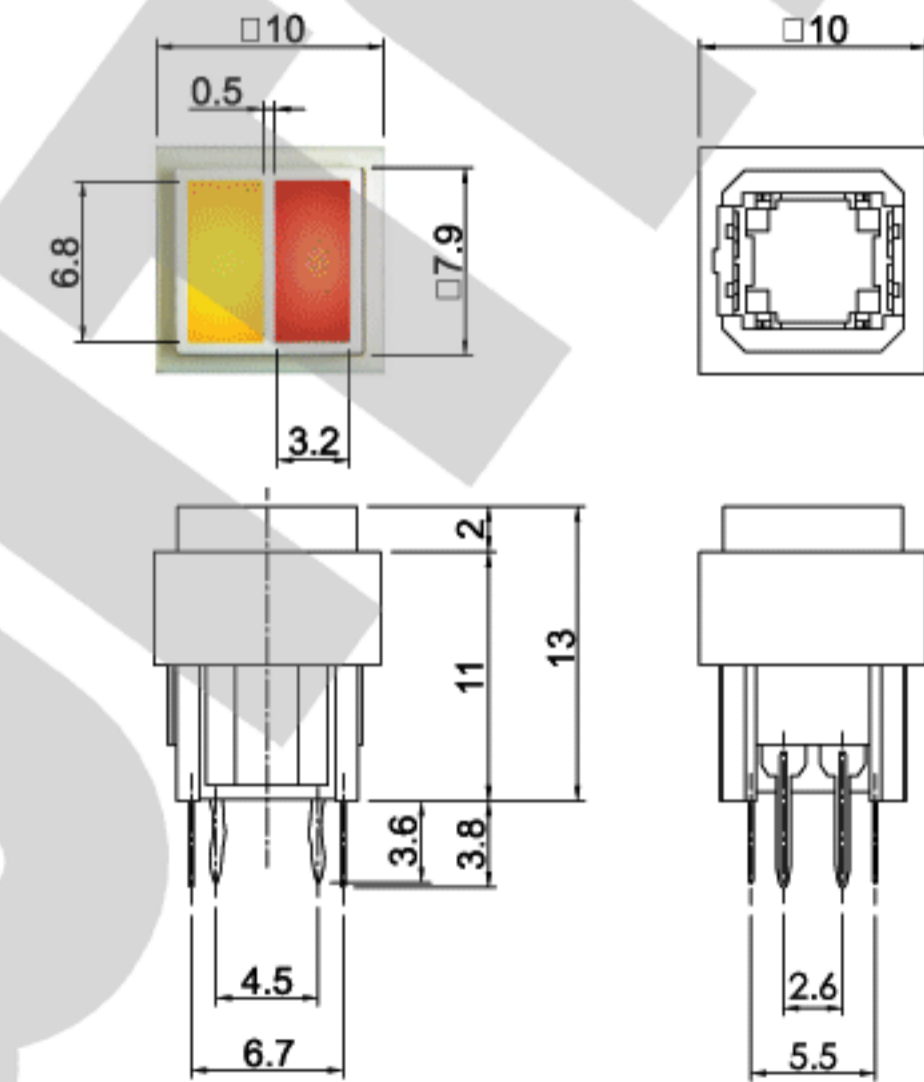
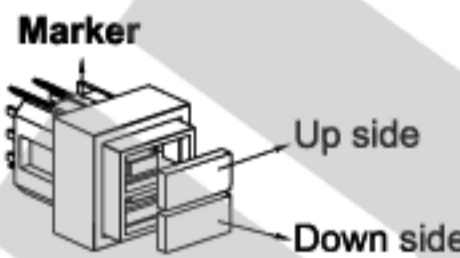
## CIRCUIT DIAGRAM



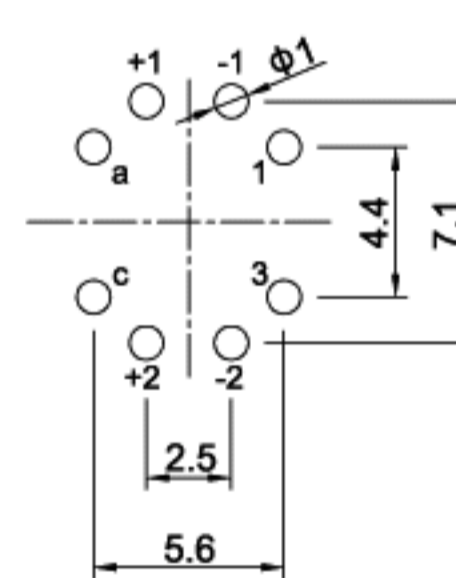
## NEW SPST (Tact)



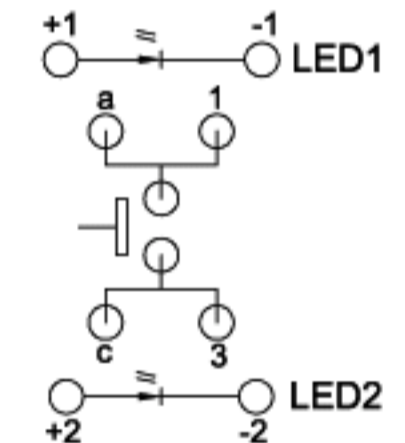
SPA-T-CA-2V12-12



## P.C.B. LAYOUT



## CIRCUIT DIAGRAM



## HOW TO ORDER

SPA - **FUNCTION** - **HOUSING TYPE** - 2V +

T : TACTILE  
M : MOMENTARY  
A : ALTERNATE

SA : SPHERICAL  
CA : CUBOIDAL

LENS COLOR		
CODE	UP	DOWN
12	RED	YELLOW
13	RED	GREEN
14	RED	WHITE
17	RED	BLUE
23	YELLOW	GREEN
24	YELLOW	WHITE
27	YELLOW	BLUE
34	GREEN	WHITE
37	GREEN	BLUE
44	WHITE	WHITE
47	WHITE	BLUE

LED COLOR		
CODE	UP	DOWN
12	RED	YELLOW
13	RED	GREEN
1P3	RED	PURE GREEN
14	RED	WHITE
17	RED	BLUE
23	YELLOW	GREEN
2P3	YELLOW	PURE GREEN
24	YELLOW	WHITE
27	YELLOW	BLUE
3P3	GREEN	PURE GREEN
34	GREEN	WHITE
37	GREEN	BLUE
P34	PURE GREEN	WHITE
P37	PURE GREEN	BLUE
47	WHITE	BLUE