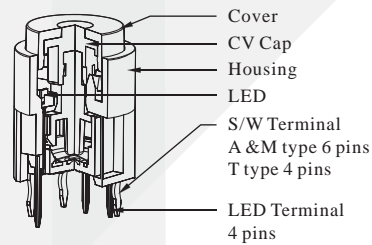


# Push button Switches Series SPA

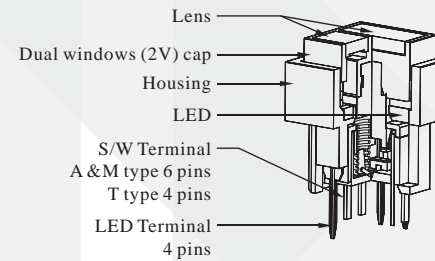


General Specifications	
Item	SPA-A Type & SPA-M Type
Circuit	DPDT
Current Rating	100mA
Voltage Rating	30V DC
Contact Resistance	100m Ohm Max(initial)
Insulation Resistance	100M Ohm Min at DC 500V
Operating Force	200gf±80gf
Total Travel	Max. 2.5mm; Lock 1.5mm
Operating Life	10,000 Cycles Min.
Solder Specifications	260deg. for 3 seconds
Operating Temperature	+10deg~+65deg
Function	Momentary or Alternate
Item	SPA-T Type
Circuit	SPST
Current Rating	50mA.
Voltage Rating	12V DC
Contact Resistance	100mOhm Max(initial)
Insulation Resistance	100MOhm Min
Operating Force	180gf±50gf
Total Travel	0.3mm±0.2mm
Operating Life	800,000 Cycles Min.
Solder Specifications	260deg. for 3 seconds
Operating Temperature	+10deg.~+60deg.
Function	Tactile

Materials	
Parts	SPA-A Type & SPA-M Type
S/W Button	Polyacetal (POM)
S/W Base	Polyamide (PA)
S/W Terminal	Brass with silver plating
LED Terminal	Phosphor bronze (PBS) with gold plating
Contact	Phosphor bronze (PBS) with silver plating
Spring	Piano Wire
Housing	Polyamide (PA)
Lens	Polycarbonate (PC)
Dual windows cap	Polycarbonate (PC)
CV cap	Polycarbonate (PC)
Cover	Acrylonitrile Butadine Styrene (ABS)
Parts	SPA-T Type
S/W Button	Polyacetal (POM)
S/W Base	Polyamide (PA)
S/W Terminal	Brass with gold plating
LED Terminal	Phosphor bronze (PBS) with gold plating
Act. Dome	Stainless steel with silver plating
Housing	Polyamide (PA)
Lens	Polycarbonate (PC)
Dual windows cap	Polycarbonate (PC)
CV cap	Polycarbonate (PC)
Cover	Acrylonitrile Butadine Styrene (ABS)



Center View Round type



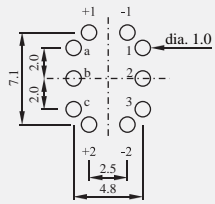
Dual windows Square type

# Pushbutton Switches Series SPA

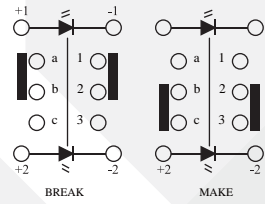
## PCB Mounting & Contact Configuration

## Dimension

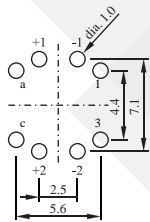
Momentary or Alternate



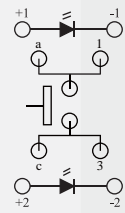
SPA-M & SPA-A  
P.C. Board layout



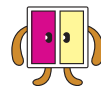
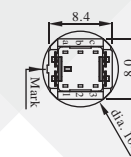
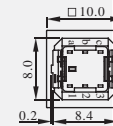
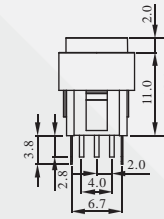
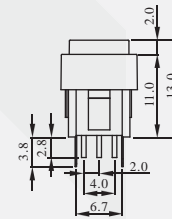
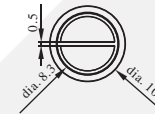
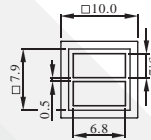
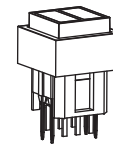
SPA-M & SPA-A  
Contact Configuration



SPA-T  
P.C. Board layout



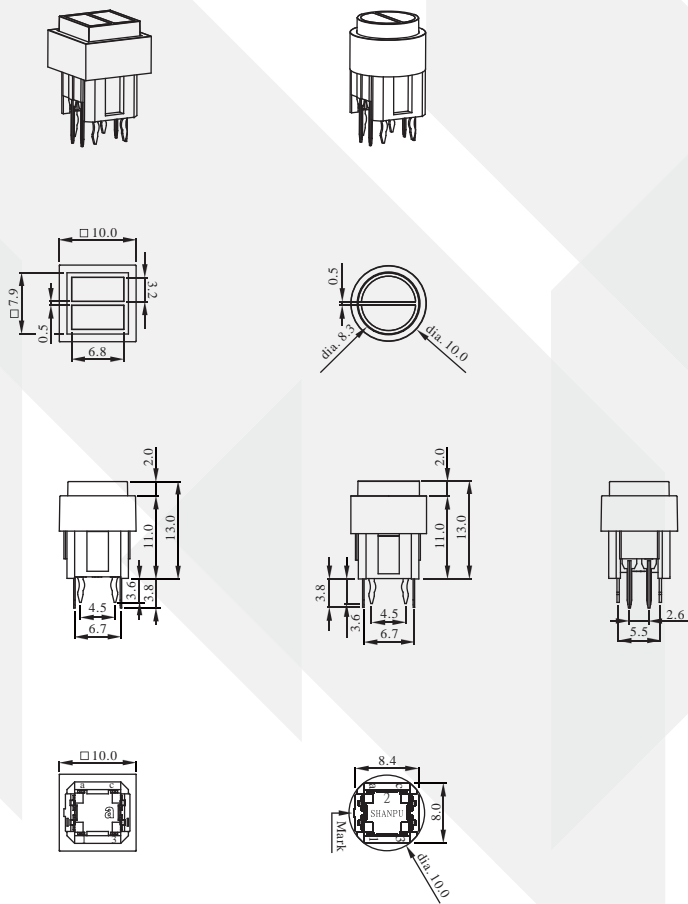
SPA-T  
Contact Configuration



# Pushbutton Switches Series SPA

## Dimension

Tactile



## How to Order

SPA 2V

Switch Function	
T	Tactile
M	Momentary
A	Alternate

Housing Type	
SA	
CA	

Lens Colors		
Code	Up	Down
2V12	Red	Yellow
2V13	Red	Green
2V14	Red	White
2V23	Yellow	Green
2V24	Yellow	White
2V34	Green	White
2V44	White	White
2V17	Red	Blue
2V27	Yellow	Blue
2V37	Green	Blue
2V47	White	Blue

LED Colors		
Code	Up	Down
12	Red	Yellow
13	Red	Green
1P3	Red	PureGreen
14	Red	White
17	Red	Blue
23	Yellow	Green
2P3	Yellow	PureGreen
24	Yellow	White
27	Yellow	Blue
3P3	Green	PureGreen
34	Green	White
37	Green	Blue
P34	PureGreen	White
P37	PureGreen	Blue
47	White	Blue

