



Shan Pu

Pushbutton Switches Series **SP86N / SP86NH / SP86L**



General Specifications

Switch circuit	:SPDT
Switch contact rating	:12mA @ 24V DC max
LED rating	:Limited forward current(IF) at 20mA max
Contact Resistance	:50m Ohm Max(initial)
Insulation Resistance	:100M Ohm Min
Operating Force	:170gf±50gf (SP86N / SP86L) 400gf±100gf (SP86NH)
Total Travel	:2.5mm±0.5mm
Mechanical Life	:1,000,000 Cycles Min. (SP86N / SP86NH) 500,000 Cycles Min. (SP86L)
Solder Specifications	:260°C for 3 seconds
Operating Temperature	: -10 °C ~ +60 °C
Function	:Momentary (SP86N / SP86NH) :Alternate (SP86L)

Material

Cap	:Acrylonitrile Butadiene Styrene (ABS)
Case	:Polyamide (PA)
Fixed Support	:Stainless steel wire
Terminal	:Phosphor bronze (PBS) with gold plating
Moving Contact	:Phosphor bronze (PBS) with gold plating
Spring	:Piano wire
LED	:3mm Diameter LED Lamp

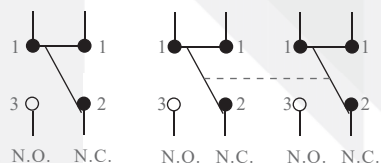
▼ Circuit & PCB Layout

/ SP86N/SP86L

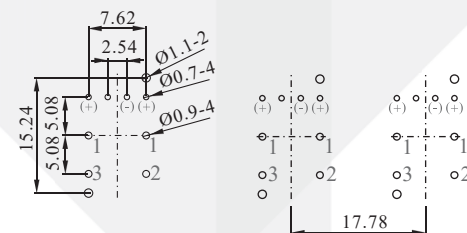
/ SP86NH

/ SP86N/SP86L

/ SP86NH



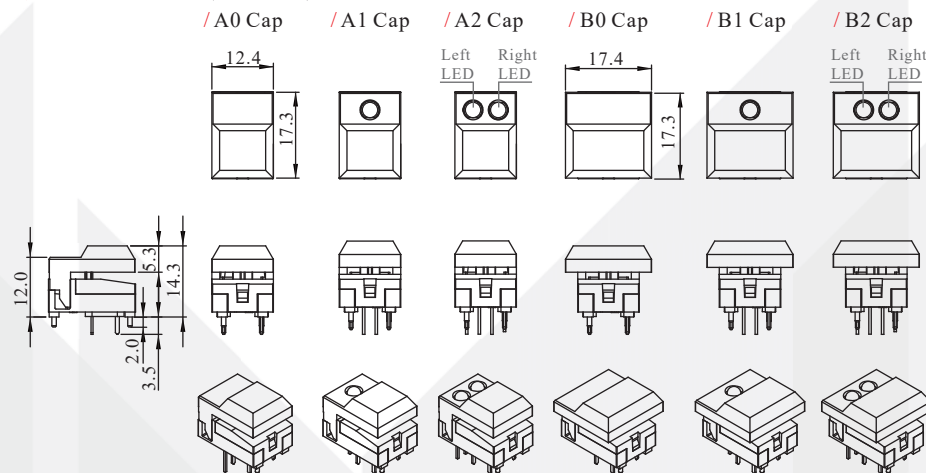
Contact Configuration



PCB Layout

Recommend add resistor to limited each LED forward current at 20mA

▼ Dimension (SP86N)



▼ How to order (SP86N)

SP86N — [] — [] — [] — []

CAP Styles	
Small CAP	
A0	Without LED
A1	One-LED
A2	Two-LED
Large CAP	
B0	Without LED
B1	One-LED
B2	Two-LED

CAP Colors	
5	Black
9	Grey

LED Colors	
00	Without LED
One LED	
01	Red
02	Yellow
03	Green
07	Blue
2 LEDs	
Left	Right
1	Red
2	Yellow
3	Green
7	Blue

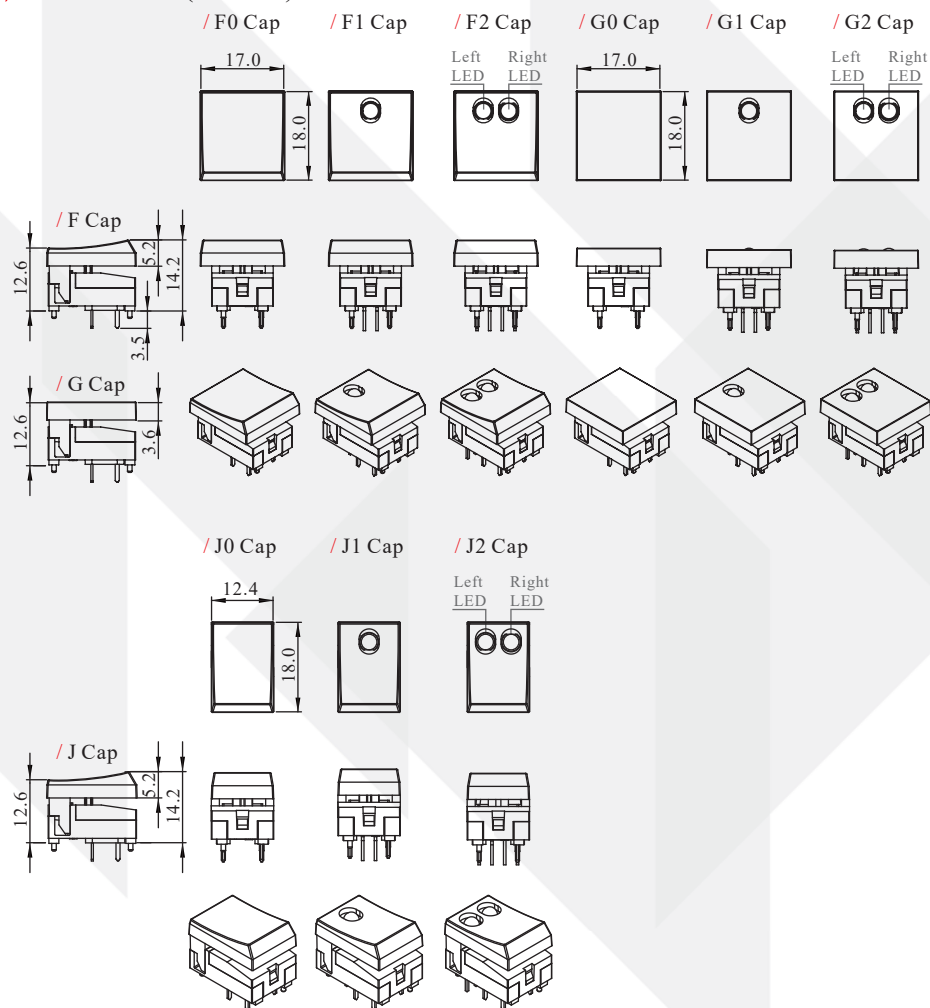
EXAMPLE :
SP86N-B0-1-01
SP86N-A2-5-13



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Dimension (SP86N)



How to Order

SP86N —

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CAP Styles	
F CAP	
F0	Without LED
F1	One-LED
F2	Two-LED
G CAP	
G0	Without LED
G1	One-LED
G2	Two-LED
J CAP	
J0	Without LED
J1	One-LED
J2	Two-LED

CAP Colors	
5	Black
9	Grey

LED Colors			
00		Without LED	
One LED			
01	Red		
02	Yellow		
03	Green		
07	Blue		
2 LEDs			
Left		Right	
1	Red	1	Red
2	Yellow	2	Yellow
3	Green	3	Green
7	Blue	7	Blue

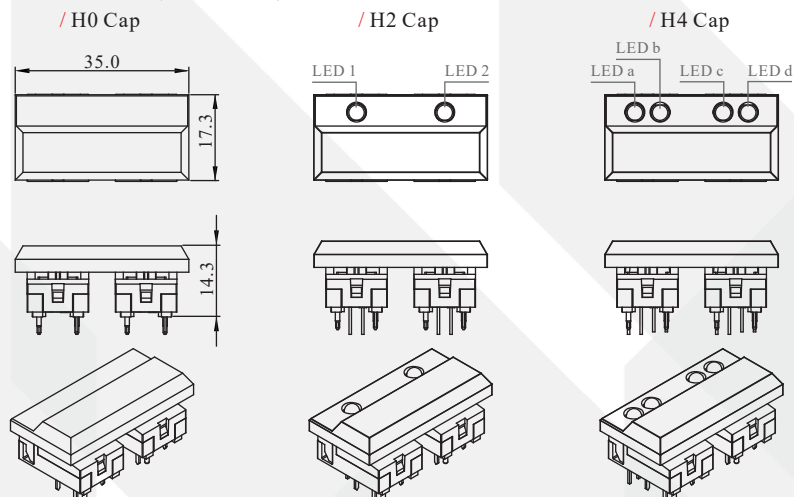
EXAMPLE :
SP86N-F0-5-01
SP86N-G2-9-13



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Pushbutton Switches Series **SP86N / SP86NH / SP86L**

Dimension (SP86NH)



How to order (SP86NH)

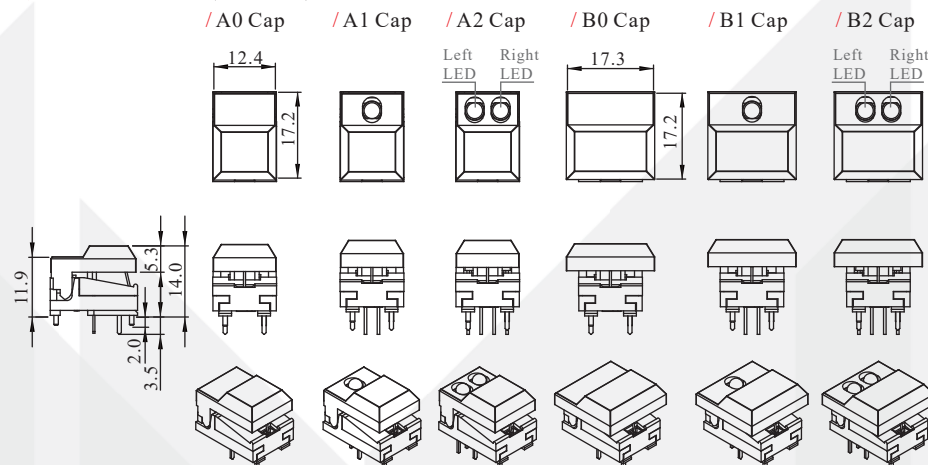
SP86N — **H** — — — — — —

Double wide CAP		CAP Colors		LED Colors Option					
H0	Without LED	5	Black	2 LEDs					
H2	Two-LED	9	Grey	Led 1		Led 2			
H4	Four-LED			1	2	1	2	Red	
				2	3	3	7	Yellow	
				3	7	7		Green	
				7				Blue	
				4 LEDs					
				Led a	Led b	Led c	Led d		
				1	1	1	1	Red	
				2	2	2	2	Yellow	
				3	3	3	3	Green	
				7	7	7	7	Blue	

EXAMPLE :
SP86NH2511

*Repeat the code for the following LED(s)

Dimension (SP86L)



How to order (SP86L)

SP86L — — — — — —

CAP Styles		CAP Colors		LED Colors			
A0	Without LED	5	Black	00	Without LED		
A1	One-LED	9	Grey	One LED			
A2	Two-LED			01	Red		
				02	Yellow		
				03	Green		
				07	Blue		
				2 LEDs			
				Left		Right	
				1	Red	1	Red
				2	Yellow	2	Yellow
				3	Green	3	Green
				7	Blue	7	Blue

EXAMPLE :
SP86L-B2-9-12