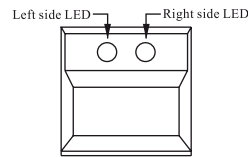


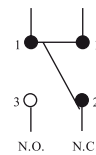
Pushbutton Switches

Momentary Pushbutton Switches with LED

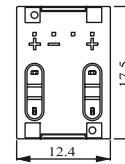
PB9 Series



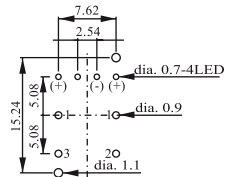
LED Positions



SPDT Contact Configuration



Bottom View

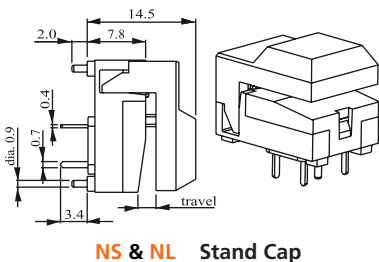


P.C.B. Mounting Holes

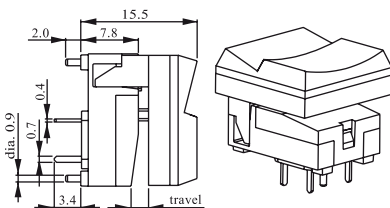
CAP TYPES

CAP STYLE

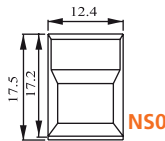
PAPERBOARD



NS & NL Stand Cap



TS & TL Transparent Cap



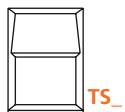
NS0



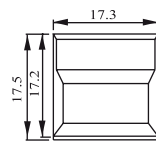
NS1



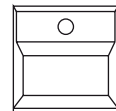
NS2



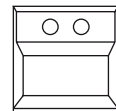
TS_



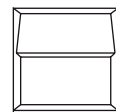
NLO



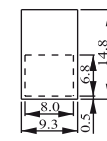
NL1



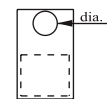
NL2



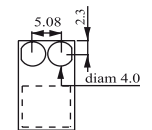
TL_



Non LED



One-LED



Two-LED

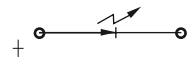
Note: write area (Paperboard only for cap type TS & TL)

LED CHARACTERISTICS

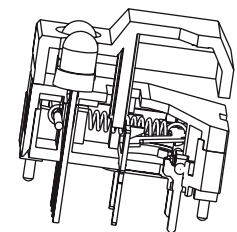
Parameters	Symbol (Unit)	Red	Yellow	Green	Blue
Forward Voltage	$V_f(V)$	2.0	2.1	2.2	3.5
Forward Current	$I_f(mA)$	20	20	20	20
Permissible Loss	$P_d(mW)$	80	80	80	120
Luminous Intensity	$I_v(mcd)$	60	50	60	600
Peak Wave Length	$\lambda P(nm)$	635	585	568	470
Reverse Voltage	$V_R(V)$	5			
Reverse Current $V_R=5V$	(μA)	100			
Soldering Temperature	($^{\circ}C$)	260 for 5 seconds			

The electrical specifications shown are determined at a basic temperature of 25°C. If the source voltage exceeds the rated of LED, a ballast resistor has to be connected in series with the LED.

Attention: LED are electrostatic sensitive devices



CUTAWAY



How to order:



- 1 CAP TYPE & STYLE:**
NS0 Small Cap without LED
NS1 Small Cap with One-LED
NS2 Small Cap with Two-LED
NL0 Large Cap without LED
NL1 Large Cap with One-LED
NL2 Large Cap with Two-LED
TS0 Transparent Small Cap without LED
TS1 Transparent Small Cap with One-LED
TS2 Transparent Small Cap with Two-LED
TL0 Transparent Large Cap without LED
TL1 Transparent Large Cap with One-LED
TL2 Transparent Large Cap with Two-LED

- 2 CAP COLORS (Only for NS & NL Cap):**
C Red
E Yellow
F Green
B White
A Black
D Orange
G Blue
H Grey

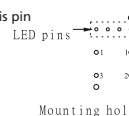
- 3 LED COLORS:**
00 Without LED
0C One-LED: Red
0E Yellow
0F Green
0G Blue

- Two-LED (Left / Right):**
CC Red / Red
CE Red / Yellow
CF Red / Green
CG Red / Blue
EC Yellow / Red
EE Yellow / Yellow
EF Yellow / Green
EG Yellow / Blue
FC Green / Red
FE Green / Yellow
FF Green / Green
FG Green / Blue
GC Blue / Red

- GE** Blue / Yellow
GF Blue / Green
GG Blue / Blue

- 4 LED TERMINAL & ELECTRODE DIRECTION:**
0 + o o - Bend (One-LED)
no code + o - o Standard (One-LED)
2 o - o (One-LED)
no code + - + - Standard (Two-LED)
4 - - - - (Two-LED)
5 - - + - (Two-LED)
6 + - + - (Two-LED)

- Standard: No Code
+: anode
-: cathode
o: none this pin



Mounting holes

General Specifications:

ELECTRICAL & MECHANICAL SPECIFICATIONS:

- » Circuit: SPDT
- » Current Rating: 12 mA
- » Voltage Rating: 24 VDC
- » Contact Resistance: 50 mΩ max. (initial)
- » Insulation Resistance: 100MΩ min.
- » Operating Force: 170±50 gf
- » Total Travel: 2.5±0.5 mm
- » Operating Life: 1,000,000 cycles min.
- » Soldering: 260 °C for 3 seconds
- » Operating Temperature: -10 °C ~ +60 °C
- » Function: Momentary

MATERIALS

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