SEALED ILLUMINATED DOME PUSHBUTTONS

MOMENTARY ACTION COMMERCIAL GRADE LED ILLUMINATED & WATERTIGHT SEALED

The OTTO LP9 Lighted Dome series is a quality precision switch designed for use in panels, control grips, instruments, heavy equipment and other demanding applications where attractive, rugged, lighted pushbutton switches are required.

The LP9 series offers a positive tactile feedback, signaling the operator when the switch is operated with the added benefit of reliable LED illumination. The LP9 series offers four button versions; flush and raised profile with either a glossy or matte finish. It also comes with a threaded case for hex nut mounting while providing a short behind panel depth.

The LP9 series is constructed to meet IP68S watertight seal. Expect 25,000 operations at full rated load.

These momentary snap-action double break switches are available in standard and low operate forces. The LED is available in six colors, plus RGB, and has the ability to accommodate 2 or 12VDC.



Flush Dome
(Also available with
Raised Dome)



Raised Dome
Full Illumination Style
(Also available with
Flush Dome)

Features:

- **Watertight to IP68S**
- **RGB LED option (2VDC only)**
- **LED lighting available in 6 colors with the ability to accommodate 2 or 12VDC**
- **Flush & raised button style**
- **Matte or glossy button finish**
- **Full button illumination style available with glossy button finish**
- **Positive tactile feedback contact transfer**
- **Withstands shock & vibration**
- **Short behind panel depth**
- **RoHS compliant**

Standard Characteristics/Ratings:

ELECTRICAL RATINGS: Ratings at 28 VDC or 115 VAC

Load	N.O./N.C.	2 Circuit	Cycles	Operating Force
Resistive:	5A	4A	25,000	Standard
Inductive:	3A	2A	25,000	Standard
Resistive:	500mA	—	500,000	Standard
Resistive:	200mA	—	500,000	Low
DWV	1000Vrms through switch contacts only			
Logic Level	10mA @ 5VDC		1,000,000	

Electrical Life:	See Rating Chart
MECHANICAL:	
Mechanical Life:	1,000,000 cycles
Seal:	IP68S
Operating Temp Range:	-40°C to +85°C
Operating Force:	1.7 +/- 0.5 lb. (standard force) 0.75 +/- 0.25 lb. (low force)
Total Travel:	0.080 inches max
Overtravel:	0.010 inches min
MATERIALS:	
Case:	Thermoplastic
Button:	Thermoplastic
Terminals:	Brass with gold
Mounting Hardware:	Hex nut, lockwasher and panel gasket for round/threaded style case Panel gasket for snap-in style case only

LP9 PART NUMBER CODE

LP9 – X X X X X X X X

Button Style*
1. Flush Dome Standard Finish - Lightpipe
2. Raised Dome Standard Finish - Lightpipe
3. Flush Dome Matte Finish Lightpipe
4. Raised Dome Matte Finish Lightpipe
5. Flush Dome Standard Finish - Fully Illuminated
6. Raised Dome Standard Finish - Fully Illuminated

Case Style*
1. Standard Round Bezel Threaded
2. Standard Round Bezel Snap-In

Terminal Style
1. Solder
2. PC Pin
3. RGB PC Pin

Circuit Form
1. N.O.
2. N.C. ③
3. 2 Circuit

Operating Force
1. Standard Force Snap-Action
2. Low Force Snap-Action

Light Source
A. 2V Red LED**
B. 2V Green LED**
C. 2V Amber LED**
D. 2V Blue LED**
E. 2V White LED**
F. 12V Red LED
G. 12V Green LED
H. 12V Amber LED
J. 12V Blue LED
K. 12V White LED
L. 2V RGB LED**

Case Color
1. Red
2. Black
3. Orange ①
4. Yellow ①
5. Green ①
6. Blue ①
7. Violet ①
8. Gray ①
9. White

Button Color
1. Red
2. Black
3. Orange
4. Yellow
5. Green
6. Blue
7. Violet
8. Gray
9. White
A. Translucent White ②

* Button and case will be of the same texture.
For all mixed gloss/matte combination options, contact factory.

** 2V LED's are intended for use with an external resistor. See LED voltage chart in appendix for details on the approximate value of the resistor.

① For minimum requirement, contact factory.

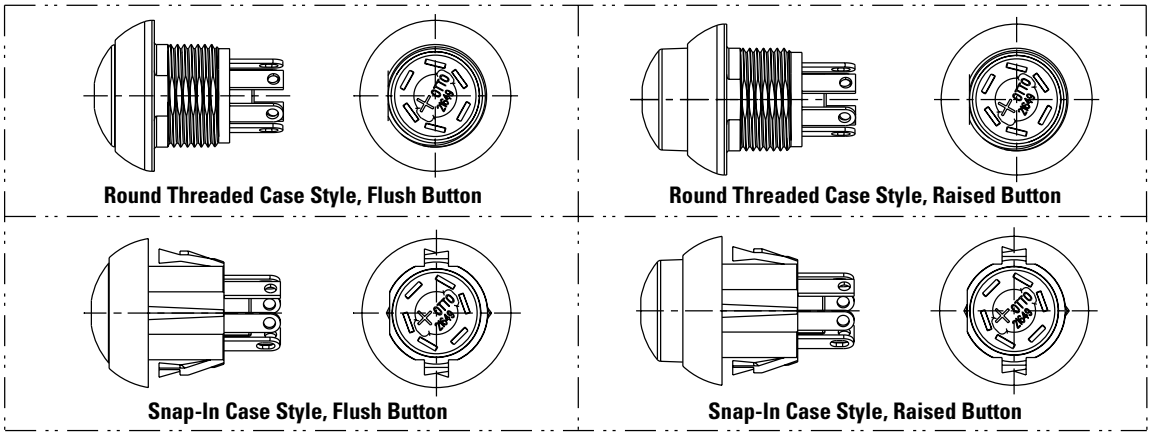
② Full illumination button styles available with translucent Button Color selection A only

③ Not available with RGB LED option.

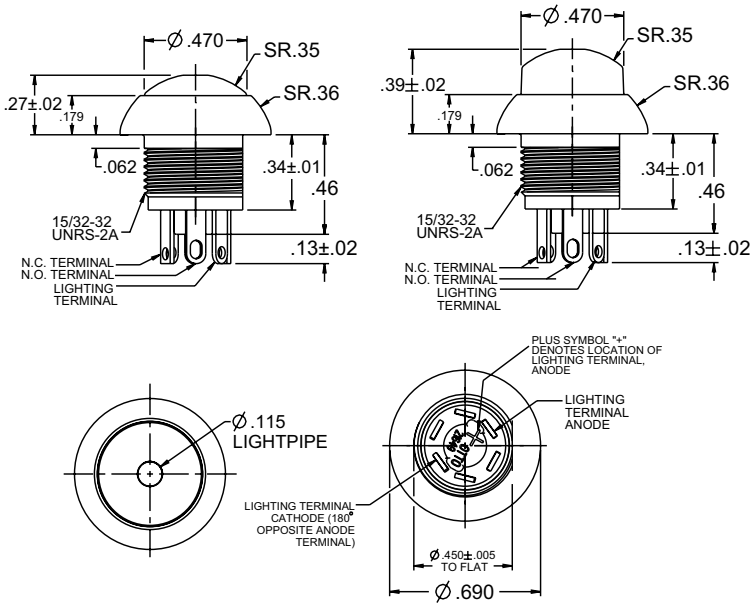
Specifications Subject To Change Without Notice

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MOMENTARY ACTION COMMERCIAL GRADE LED ILLUMINATED & WATERTIGHT SEALED

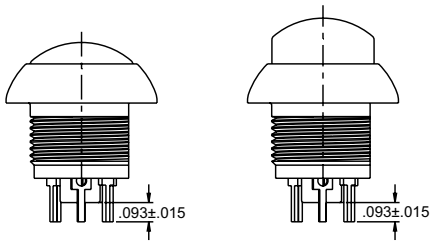


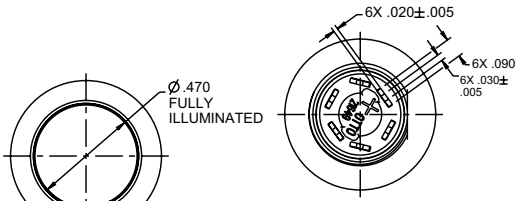
Standard Terminals

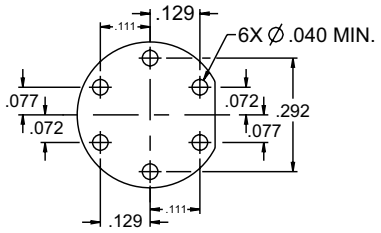


PC Pin Terminals

(Full Illumination Option Shown)







COMPONENT SIDE P.C. MOUNTING PATTERN,
CASE FLAT ON RIGHT AS DEPICTED IN SWITCH VIEW

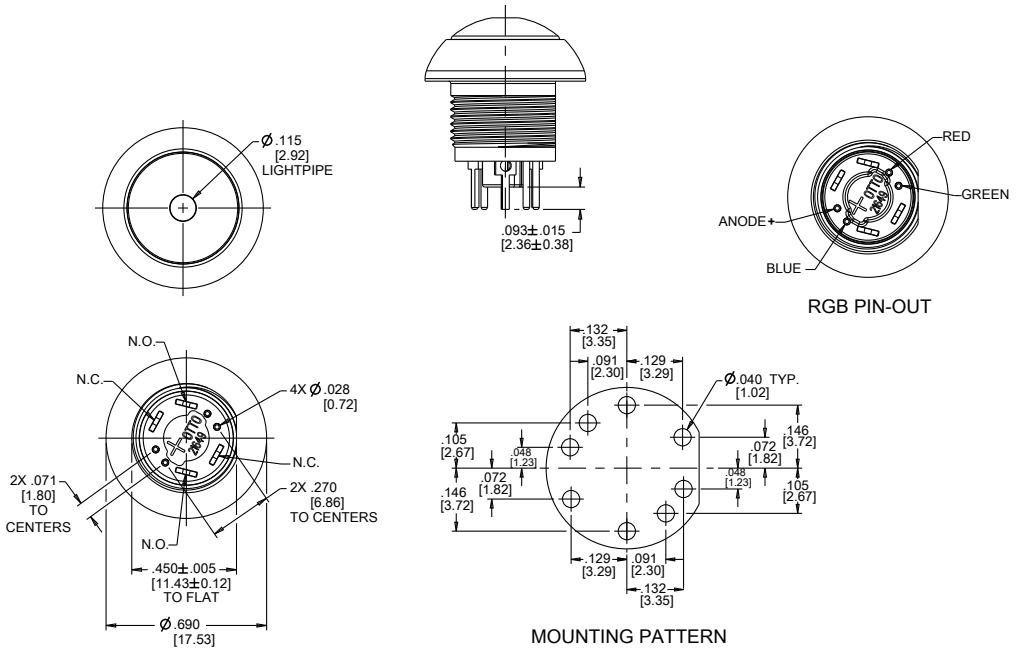
RECOMMENDED PANEL OPENINGS FOR SNAP-IN STYLE CASE		
PANEL THICKNESS	RECOMMENDED Ø	DIM. ACROSS D-FLAT
.024	Ø.505	.460
.118	Ø.505	.460

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RGB LED with PC Pin Terminals

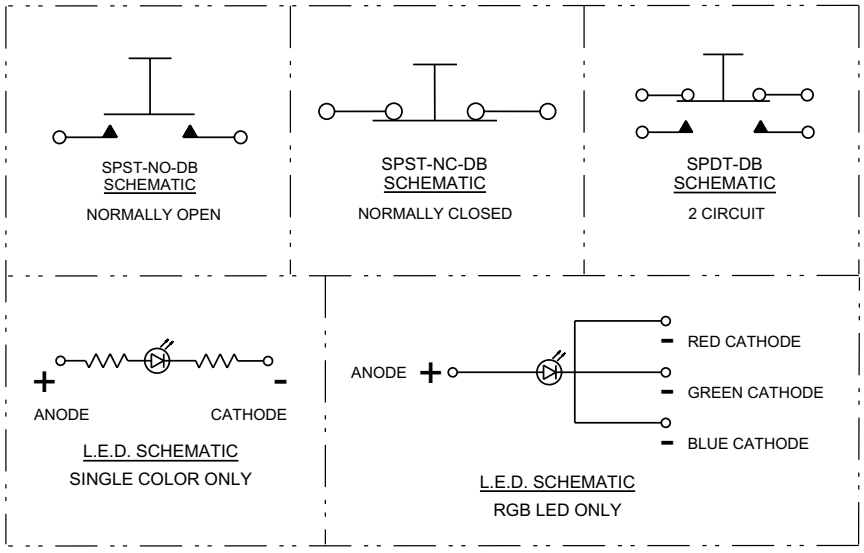
(Lightpipe Option Shown; Flush Button, Round Threaded)



RGB LED ELECTRICAL CHARACTERISTICS (T_J = 25°C)					
RGB LED VOLTAGE/ CURRENT COMPONENT RATINGS					REVERSE VOLTAGE, V_R (V) AT I_R = 10 µA[b]
LIGHT SOURCE VOLTAGE CATEGORY	LED COLOR	FORWARD VOLTAGE V_F (V)[a]			
	- - -	MIN.	TYP.	MAX.	MAX.
2V, RGB	RED	1.7	2.1	2.5	4.0
	GREEN	2.5	2.9	3.4	4.0
	BLUE	2.5	2.9	3.4	4.0

FORWARD VOLTAGE TOLERANCE IS ±0.1V. TEST CURRENT: RED= 15 mA, GREEN= 10 mA, BLUE= 10 mA.

SCHEMATICS



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