

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.

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**



Flush Dome
(Also available with
Raised Dome)



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

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*		Case Style*		Terminal Style		Circuit Form		Operating Force	
1. Flush Dome Standard Finish - Lightpipe		1. Standard Round Bezel Threaded		1. Solder		1. N.O.		1. Standard Force Snap-Action	
2. Raised Dome Standard Finish - Lightpipe		2. Standard Round Bezel Snap-In		2. PC Pin		2. N.C. ③		2. Low Force Snap-Action	
3. Flush Dome Matte Finish Lightpipe				3. RGB PC Pin		3. 2 Circuit			
4. Raised Dome Matte Finish Lightpipe									
5. Flush Dome Standard Finish - Fully Illuminated									
6. Raised Dome Standard Finish - Fully Illuminated									
Your official representative									
 ALDERS® Indicate. Control. Connect.									
ALDERS electronic GmbH Arnoldstraße 19 47906 Kempen - Germany									
+49 2152 8955-0 sales@alders.de / www.alders.de									

* 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.

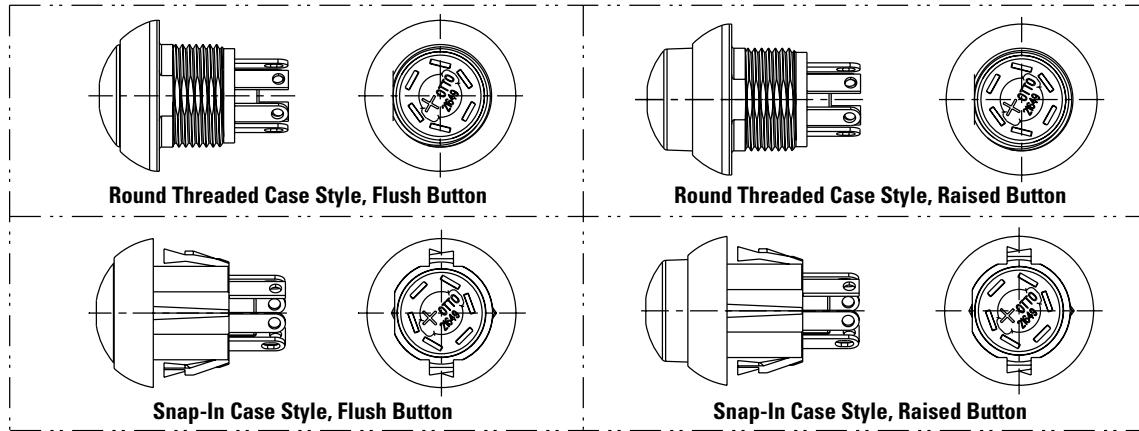
① For minimum requirement, contact factory.

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

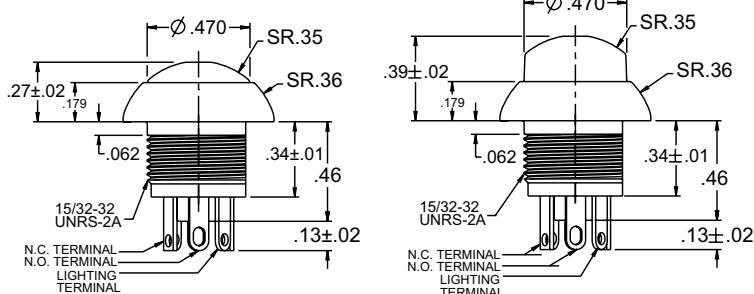
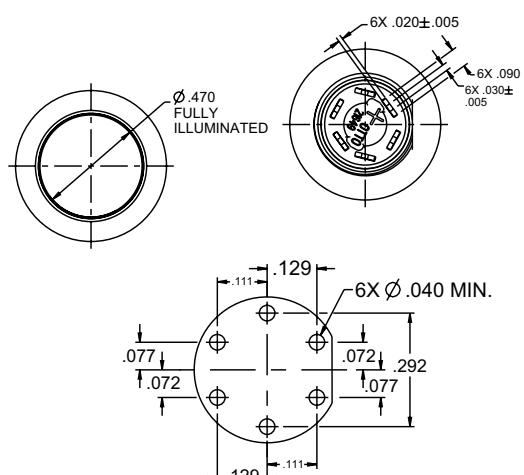
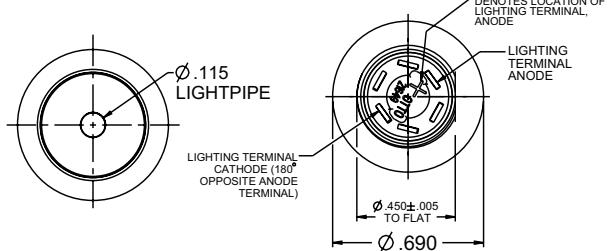
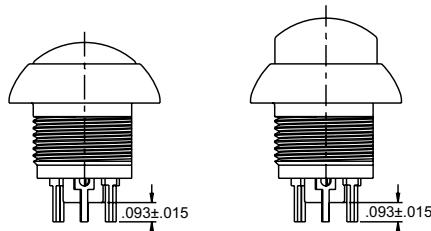
③ Not available with RGB LED option.

SEALED ILLUMINATED DOME PUSHBUTTONS

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Standard Terminals

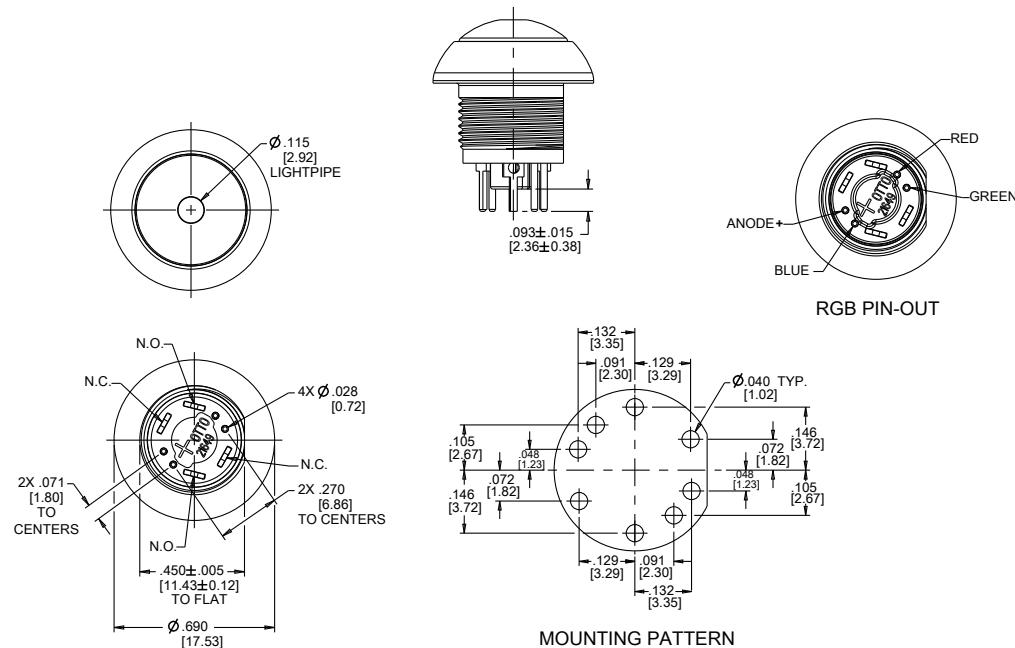
PC Pin Terminals
(Full Illumination Option Shown)

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

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

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RGB LED with PC Pin Terminals
(Lightpipe Option Shown; Flush Button, Round Threaded)



RGB LED ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$)					
RGB LED VOLTAGE/ CURRENT COMPONENT RATINGS			REVERSE VOLTAGE, V_R (V) AT $I_R = 10 \mu\text{A}$ ^b		
LIGHT SOURCE VOLTAGE CATEGORY	LED COLOR	FORWARD VOLTAGE V_F (V) ^a	MIN.	TYP.	MAX.
2V, RGB	RED GREEN BLUE	1.7 2.5 2.5	2.1 2.9 2.9	2.5 3.4 3.4	4.0 4.0 4.0

FORWARD VOLTAGE TOLERANCE IS $\pm 0.1\text{V}$. TEST CURRENT: RED= 15 mA, GREEN= 10 mA, BLUE= 10 mA.

SCHEMATICS

