



RoHS Compliant

Illuminated Pushbutton

Specifications

Electrical Ratings	125mA @ 50VDC 125mA @ 125VAC
Electrical Life	500,000 cycles
Mechanical Life	1,000,000 cycles
Contact Resistance	≤ 50mΩ initial
Dielectric Strength	1,000Vrms min

Actuation Force	300 ± 100gF
Actuation Travel	1.5 ± .25mm
Insulation Resistance	≥ 1000MΩ min
Sealing	IP67 : Protection against harmful dust deposits and temporary immersion: Sealed against a typical soldering and cleaning process contamination.
Operating Temperature	-30°C (-40°C without LED) to 85°C
Storage Temperature	-30°C (-40°C without LED) to 85°C

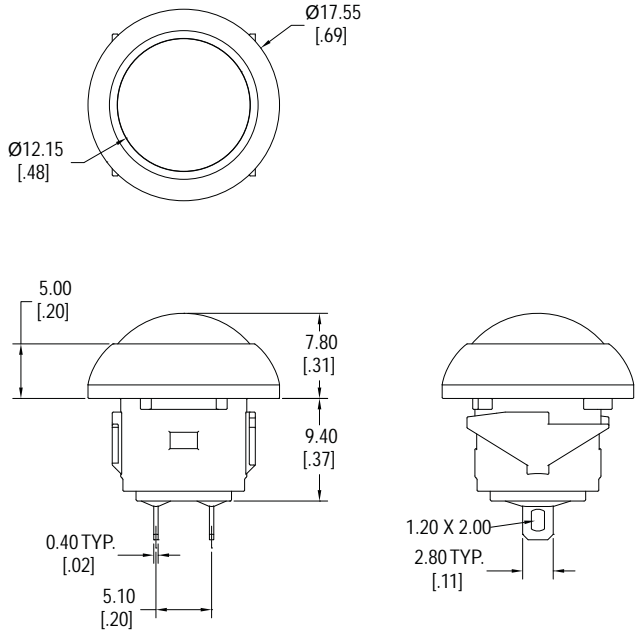
Materials

Actuator	6/6 Nylon
Housing	6/6 Nylon
Base	Diallyl Phthalate (DAP)
Contacts	Copper Alloy, Gold over Silver plated
Terminals	Copper Alloy, Gold over Silver plated

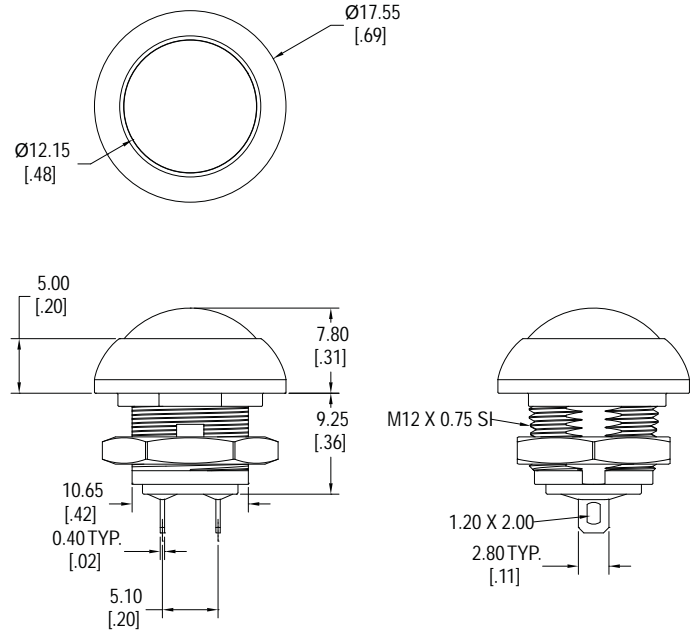
Ordering Information

	ES	A	N	M	L	2	G	B	GB
1. Series	ES								
2. Contact Configuration		A = SPST N.O. B = SPST N.C. **Not available with Led							
3. Switch Function			N = Momentary						
4. Housing / Actuator Finish				M = Matte					
5. Actuator Style					D = Round, no LED F = Round with flat, no LED L = Round with flat, LED				
6. Actuator Color		1 = White 2 = Black 3 = Red 4 = Yellow	5 = Green 6 = Orange 7 = Blue 8 = Dark Gray						
7. Bushing						F = Snap-In (0.8 ~ 1.8mm thick panel) G = 12 x 0.75 SI Threaded			
8. Terminals								B = Solder Lug	
9. LED Color		X = no LED R = Red Y = Yellow G = Green	PG = Pure Green B = Blue W = White			RY = Red/Yellow dual LED RG = Red/Green dual LED RB = Red/Blue dual LED YG = Yellow/Green dual LED		YB = Yellow/Blue dual LED GB = Green/Blue dual LED	

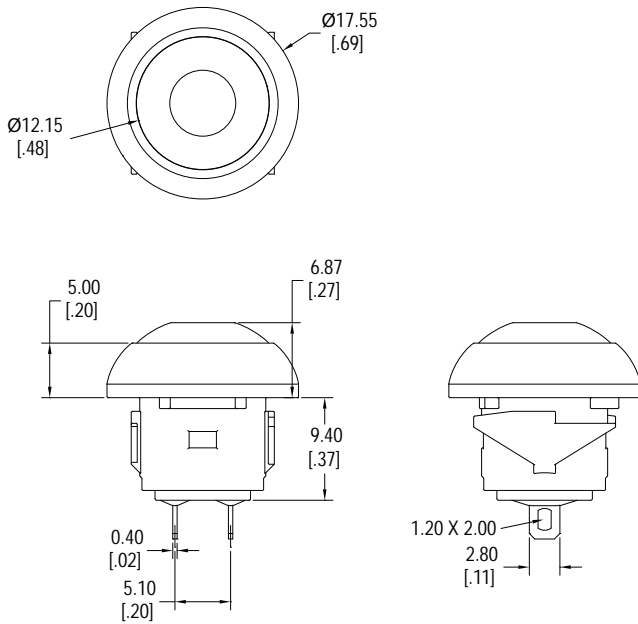
Actuator Styles



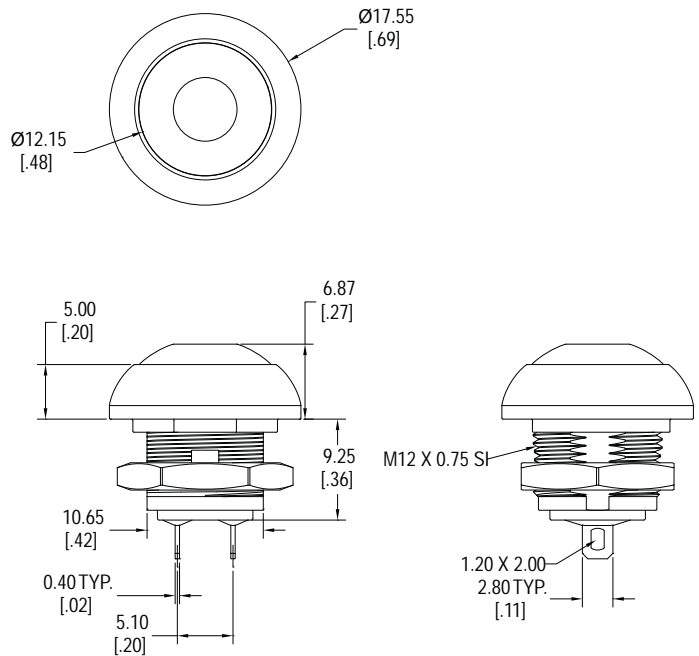
D = Round Actuator with no LED
F = Snap-In Bushing



D = Round Actuator with no LED
G = Threaded Bushing

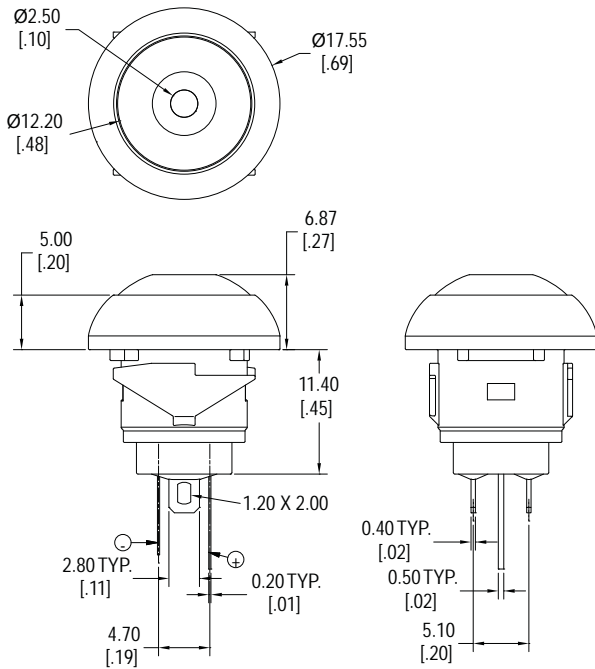


F = Flat, Round Actuator with no LED
F = Snap-In Bushing

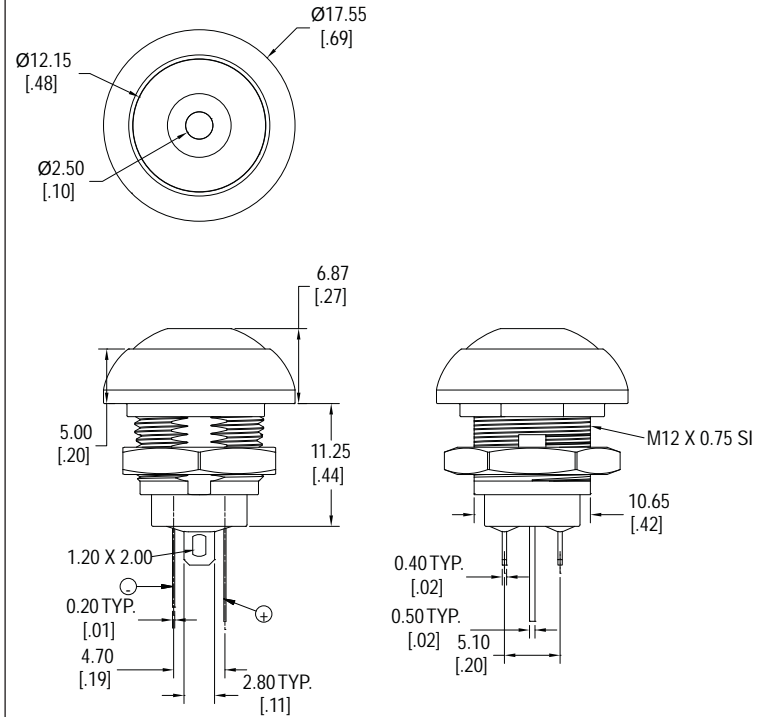


F = Flat, Round Actuator with no LED
G = Threaded Bushing

Actuator Styles

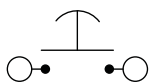


L = Flat, Round Actuator with LED
F = Snap-In Bushing

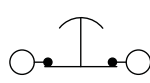


L = Flat, Round Actuator with LED
G = Threaded Bushing

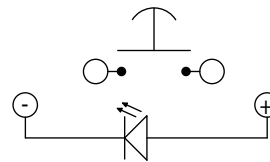
Schematics



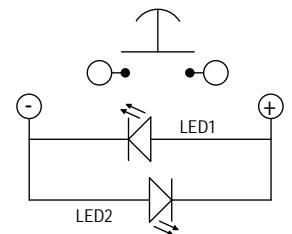
SPST N.O.



SPST N.C.



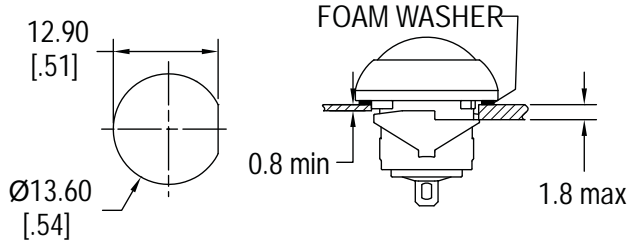
SPST N.O. with LED



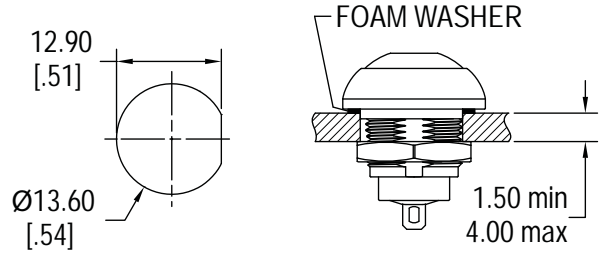
SPST N.O. with Dual LED

Illuminated Pushbutton

Panel Cut Out



F = Snap-In Bushing



G = Threaded Bushing

LED Characteristics

LED Ratings		Color							Units
		R	Y	G	B	O	W		
Reverse Voltage	V_R	5	5	5	5	5	5	V	
Forward Current (avg)	I_F	30	30	30	30	30	30	mA	
Forward Current (peak)	I_{FS}	100	100	100	100	100	100	mA	
Reverse Current $V_R = 5V$	I_R	100	100	100	100	100	1	μA	
Power Dissipation	P_T	80	100	100	120	120	120	mW	
Operating & Storage Temperature	T_A	-30 ~ +85						C°	
Forward Voltage (typ) $I_F = 20mA$	V_F	2.1	2.1	2.0	3.2	3.2	3.2	V	
Forward Voltage (max) $I_F = 20mA$	V_F	2.6	2.6	2.6	3.6	3.6	3.6	V	
Wavelength at Peak Emmission $I_F = 20mA$	λ_P	645	590	570	470	525	n/a	nm	
Spectral Line Half-Width $I_F = 20mA$	$\Delta\lambda$	22	15	30	30	30	n/a	nm	
Luminous Intensity, $I_F = 20mA$	LI	100	200	100	150	300	250	mcd	
Viewing Angle	Θ	35	35	35	35	35	35	deg	