CIT RELAY & SWITCH™
Division of Circuit Interruption Technology, Inc.

AD

Illuminated Pushbutton

Specifications

Electrical Ratings	100mA @ 12VDC
Electrical Life	1,000,000 cycles typical
Mechanical Life	5,000,000 cycles typical
Actuation Force	250 ± 50gF
Actuator Travel	4.5 ± .5mm; 3.5 ± .5mm

Contact Resistance	≤ 100mΩ initial
Dielectric Strength	500Vrms min between contact
Insulation Resistance	≥ 100MΩ min @ 250VDC
Operating Temperature	-20ºC to 70ºC
Storage Temperature	-20ºC to 70ºC

Materials

Actuator Cap	Polycarbonate (PC)
Actuator Diffuser	Polycarbonate (PC)
Actuator	Acetal Polyoxymethylene (POM), UL94V-0
Housing	Polymide (PA), UL94V-0
Terminal Base	Polymide (PA), UL94V-0
Contacts	Brass rivet, gold over nickel
Terminals	Brass, silver plated

Ordering Information

1. Series	AD	01	NT	B	RR	R	10	BJ

AD

2. Switch Function
   01 = 4.5mm total travel (standard)
   02 = 3.5mm total travel

3. Switch Function
   NT = SPST Off-(On) (momentary, tactile)
   NN = SPST Off-(On) (momentary, non-tactile)

4. Actuator Options
   A = 10.0mm square sculptured
   B = 12.0mm square sculptured
   C = 15.0mm square sculptured
   D = 17.4mm square scupltured
   V = Sculptured (standard)
   F = Flat
   H = Home key

5. LED Color
   RR = Red
   GG = Green
   YY = Yellow
   BB = Blue
   WW = White
   RY = Red/Yellow
   RG = Red/Green
   RB = Red/Blue
   YG = Yellow/Green
   BY = Yellow/Blue
   GB = Green/Blue
   RGB = RGB LED
   2RBG = 2 RBG LEDs

6. Contact Material
   R = Gold

7. Diffuser Color Options
   1 = White (standard)
   3 = Red
   4 = Yellow
   5 = Green
   7 = Blue

7a. Cap Color Options
   0 = Clear transparent (standard)
   3 = Red semi-transparent
   3T = Red transparent
   4 = Yellow semi-transparent
   4T = Yellow transparent
   5 = Green semi-transparent
   5T = Green transparent
   7 = Blue semi-transparent
   7T = Blue transparent

8. Laser Etching Colors
   Blank = No etching color
   MS = Misty Silver
   B = Black

8a. Laser Etching Styles
   Blank = no etching style
   A, B, C, D, E, F, G, H, I, J, K, L

*A colored film is applied to the actuator and is laser etched to allow the LED to shine through the pattern. Contact factory for custom styles or finishes

9. Pad Printing
   Blank = No pad printing

**Contact factory for custom printing options

Dimensions shown in mm. Dimensions are shown for reference purposes only.

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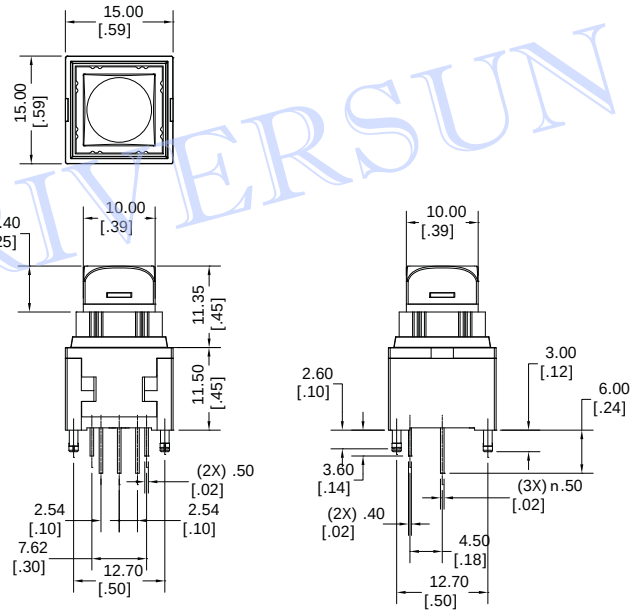
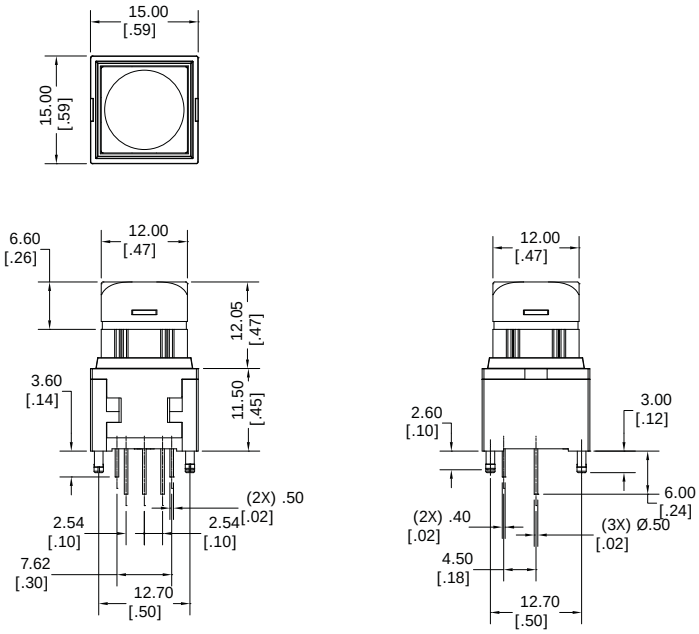
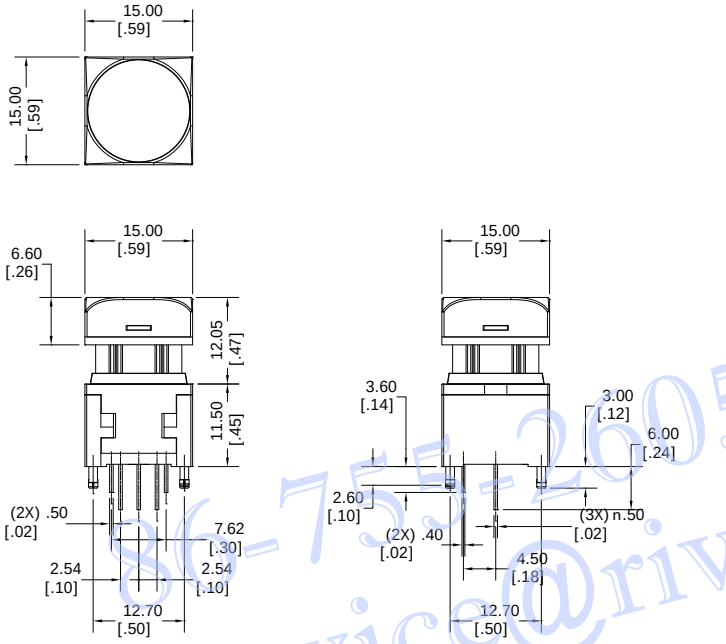
Dimensions



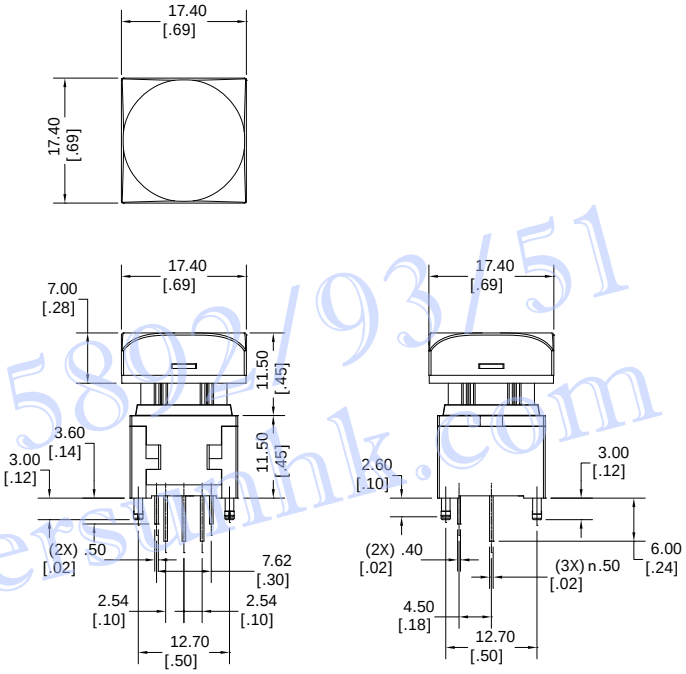
A = 10.0mm Square Sculptured



B = 12.0mm Square Sculptured



C = 15.0mm Square Sculptured



D = 17.4mm Square Sculptured

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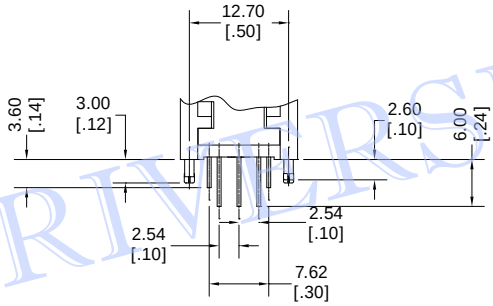
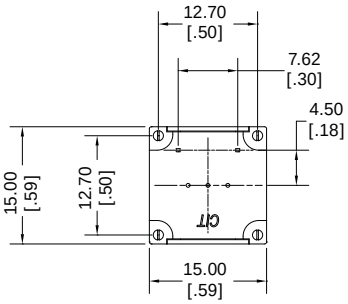
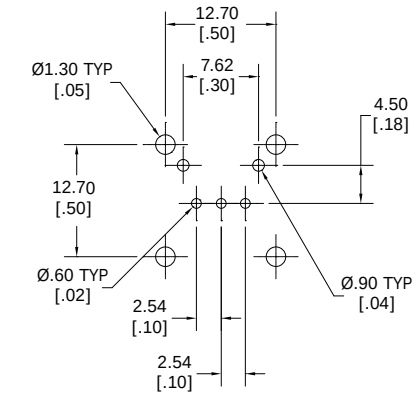
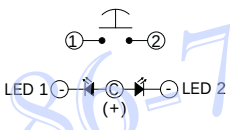
PCB Layout & Schematic

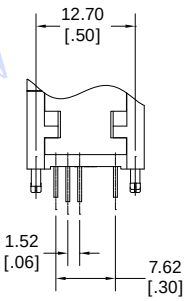


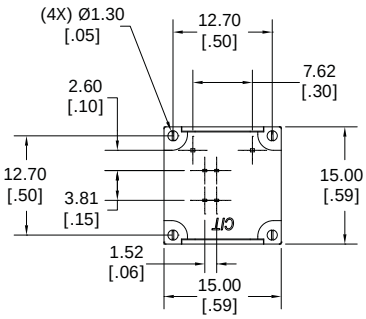


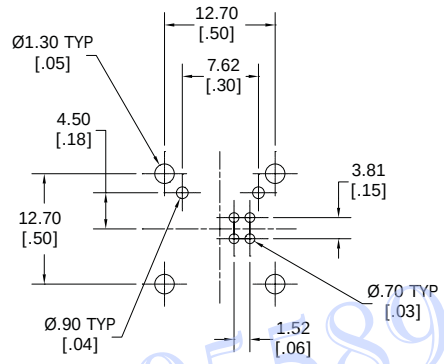


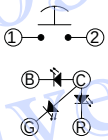


Single or Dual color LED

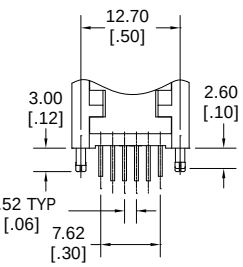


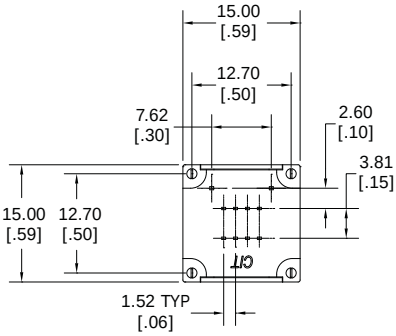


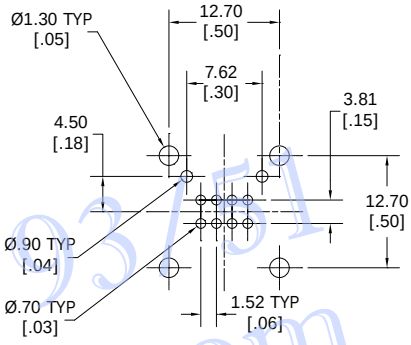


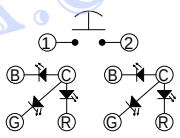


RBG LED









2 RGB LEDs

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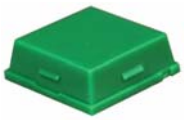
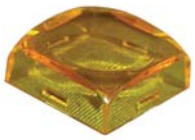
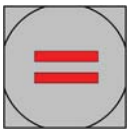
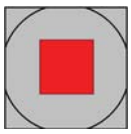
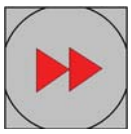
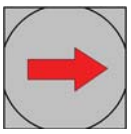
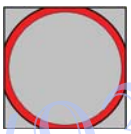
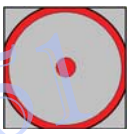
Actuators & Diffuser Styles

				
1 = White Diffuser	*3 = Red Diffuser*	*4 = Yellow Diffuser*	*5 = Green Diffuser*	*7 = Blue Diffuser*
				
	3 = Red Cap Semi-Transparent	*4 = Yellow Cap Semi-Transparent*	*5 = Green Cap Semi-Transparent*	*7 = Blue Cap Semi-Transparent*
				
0 = Clear Cap	*3T = Red Cap Transparent*	*4T = Yellow Cap Transparent*	*5T = Green Cap Transparent*	*7T = Blue Cap Transparent*

Laser Etching Styles

					
A	*B*	*C*	*D*	*E*	*F*
					
G	*H*	*I*	*J*	*K*	*L*

LED Characteristics

LED Ratings		Color								
		R	Y	B	W	PG	R	G	B	Units
Reverse Voltage	V_R	5	5	5	5	5	5			V
Forward Current (avg)	I_F	25	30	25	25	25	50	30	30	mA
Forward Current (peak)	I_{FS}	60	80	100	100	100	195	150	150	mA
Reverse Current V_R = 5V	I_R	10	100	50	50	50	10			µA
Power Dissipation	P_T	30	75	110	110	100	350			mW
Operating & Storage Temperature	T_A	-40 ~ +85					-40 ~ +85			ºC
Forward Voltage (typ) I_F = 20mA	V_F	1.7	2.0	2.6	2.7	3.1	1.8	2.8	2.7	V
Forward Voltage (max) I_F = 20mA	V_F	2.2	2.4	3.7	3.2	3.8	2.3	3.4	3.3	V
Wavelength at Peak Emmission, I_F = 20mA	λ_P	650	590	475	n/a	525	630	525	470	nm
Spectral Line Half-Width, I_F = 20mA	$\Delta\lambda$	20	16	20	n/a	15	25	35	25	nm
Luminous Intensity, I_F = 20mA	LI	140	70	28.5	112	250	177	598	93.6	mcd
Viewing Angle	Θ	100	130	120	110	130	120			deg

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