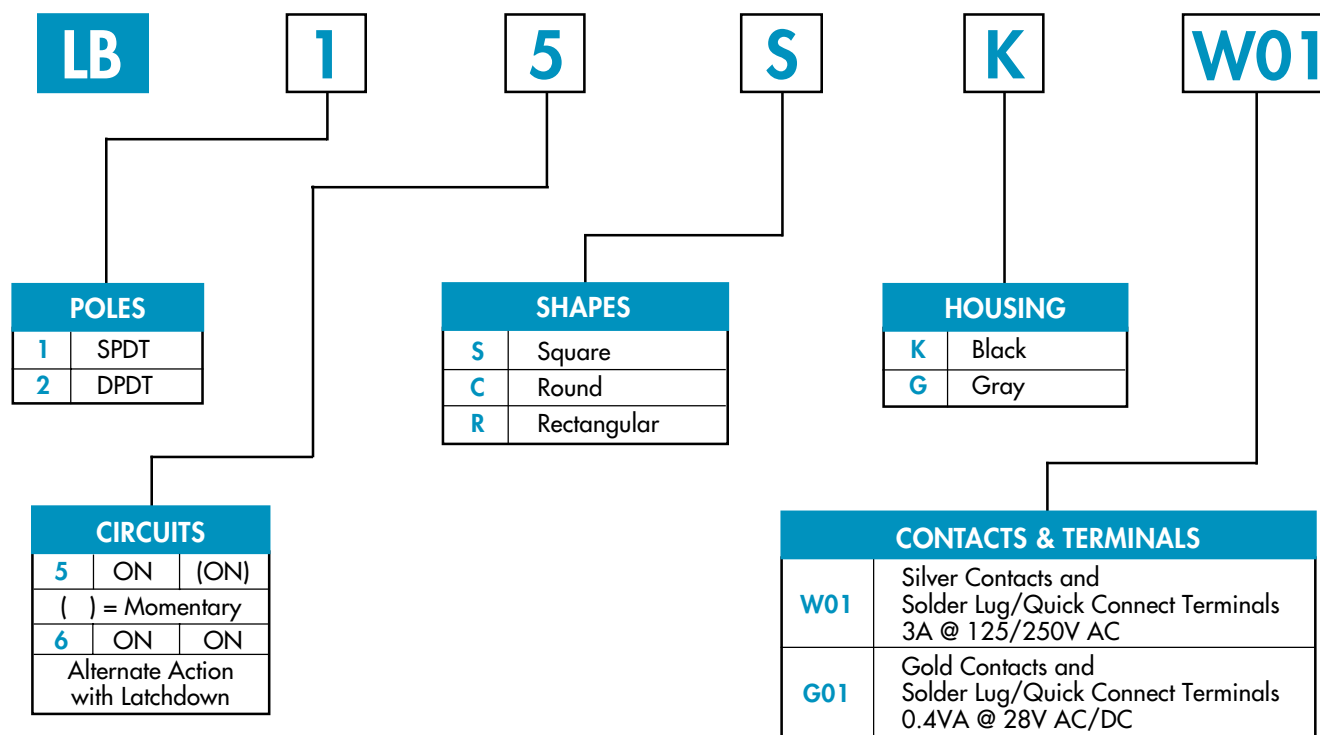


**TYPICAL SWITCH ORDERING EXAMPLE**



**POLES**

1	SPDT
2	DPDT

**SHAPES**

S	Square
C	Round
R	Rectangular

**HOUSING**

K	Black
G	Gray

**CIRCUITS**

5	ON	(ON)
( ) = Momentary		
6	ON	ON
Alternate Action with Latchdown		

**CONTACTS & TERMINALS**

W01	Silver Contacts and Solder Lug/Quick Connect Terminals 3A @ 125/250V AC
G01	Gold Contacts and Solder Lug/Quick Connect Terminals 0.4VA @ 28V AC/DC

**LAMPS**

Incandescent Lamp used with Solid Cap	
00	No Lamp
05	5-volt
12	12-volt
28	28-volt

Incandescent or Neon used w/Insert Cap	
00	No Lamp
01	110-volt Neon
05	5-volt Incandescent
12	12-volt Incandescent
28	28-volt Incandescent

Standard LED used w/LED Cap	
C	Red
D	Amber
F	Green

Bright LED used w/LED Cap	
Colors	Resistor
5C	Red
5D	Amber
5F	Green

Super Bright LED used w/LED Cap	
6B	White
6F	Green
6G	Blue

LED used with Spot Illuminated Cap	
1C	Red Single Color
1D	Amber Single Color
1F	Green Single Color
CF	Red/Green Bicolor

Nonilluminated	
00	No Lamp

**CAP TYPES & COLORS**

**Solid Cap: Lens/Filter Colors**

BJ	White/Clear
CJ	Red/Clear
EJ	Yellow/Clear
FJ	Green/Clear
GJ	Blue/Clear

**Insert Cap: Lens/Filter Colors**

JB	Clear/White
JC	Clear/Red
JE	Clear/Yellow
*JF	Clear/Green
*JG	Clear/Blue

\* JF & JG not suitable with neon.

**LED Cap: Lens/Diffuser Colors**

JB	Clear/White
JC	Clear/Red
JD	Clear/Amber
JF	Clear/Green

**LED Cap: Lens/Diffuser Colors**

JB	Clear/White
JC	Clear/Red
JD	Clear/Amber
JF	Clear/Green

**LED Cap: Lens/Diffuser Colors**

JB	Clear/White
----	-------------

**Spot Illuminated Cap Colors**

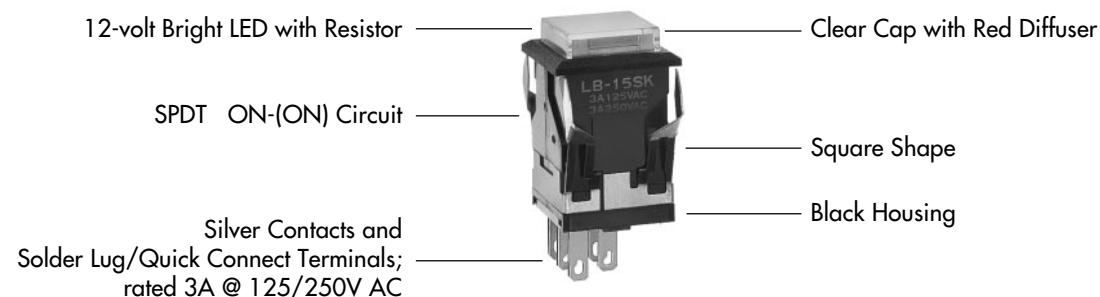
A	Black
B	White
C	Red
F	Green

Available in square and round only.

**Nonilluminated Cap Colors**

A	Black	E	Yellow	G	Blue
B	White	F	Green	H	Gray
C	Red				

**DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**  
**LB15SKW01-5C12-JC**



**IMPORTANT:**  
Switches are supplied without UL & CSA marking unless specified. Specific models & ratings noted on General Specifications page.

## GENERAL SPECIFICATIONS

### Electrical Capacity (Resistive Load)

**Power Level (silver):** 3A @ 125V AC or 3A @ 250V AC or 3A @ 30V DC

**Logic Level (gold):** 0.4VA maximum @ 28V AC/DC maximum

Note: See [Supplement Index](#) to find explanation of operating range.

### Other Ratings

**Contact Resistance:** 50 milliohms maximum for silver; 100 milliohms maximum for gold

**Insulation Resistance:** 200 megohms minimum @ 500V DC

**Dielectric Strength:** 1,000V AC minimum between contacts; 1,500V AC minimum between contacts & case

**Mechanical Life:** 1,000,000 operations minimum for momentary circuit

200,000 operations minimum for maintained circuit

**Electrical Life:** 100,000 operations minimum

**Nominal Operating Force:** 450 grams

**Contact Timing:** Nonshorting (break-before-make)

**Travel for Momentary Circuit:** 1.9mm (.075") pretravel; 1.1mm (.043") overtravel; 3.0mm (.118") total travel

**Travel for Maintained Circuit:** 2.2mm (.087") pretravel; 0.8mm (.031") overtravel; 3.0mm (.118") total travel

### Materials & Finishes

**Housing:** Glass fiber reinforced polyamide

**Snap-in Frame:** Stainless steel

**Movable Contact:** Silver alloy or copper with gold plating over nickel plating

**Stationary Contacts:** Silver alloy or copper with gold plating over nickel plating

**Base:** Diallyl phthalate

**Common Terminals:** Phosphor bronze with silver or gold plating

**End Terminals:** Phosphor bronze with silver or gold plating

**Lamp Terminals:** Phosphor bronze with silver plating

### Environmental Data

**Operating Temp Range:** -25°C through +50°C (-13°F through +122°F) for illuminated

-25°C through +70°C (-13°F through +158°F) for nonilluminated

Note: When used with a polyvinyl chloride splash cover, the lowest limit is 0°C (32°F)

**Humidity:** 93% humidity for 96 hours @ 40°C (104°F)

**Vibration:** 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range

& returning in 1 minute; 3 right angled directions for 2 hours

**Shock:** 50g acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

**Sealing:** Not available for snap-in; see panel seal section.

### Installation

**Cap Installation Force:** 0.4 kg (.88 lb) maximum downward force on actuator

**Quick Connect Force:** 5.4 kg (11.9 lbs) maximum downward force on connector

**Soldering Time & Temperature:** 3 seconds @ 350°C or 5 seconds @ 270°C

**Process Seal:** Not available

### Standards & Certifications

**Flammability Standards:** UL94V-0 base

**UL Recognized:** All models recognized at 3A @ 125V or 250V AC or

0.4VA maximum @ 28V AC/DC maximum; UL File No. E44145

**CSA Certified:** All models certified at 3A @ 125V or 250V AC or

0.4VA maximum @ 28V AC/DC maximum; CSA File Nos. LR23535

## POLES & CIRCUITS

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Power/Lamp Schematics
		Normal	Down	Normal	Down	
SP	LB15 *LB16	ON ON	(ON) ON	1-3	1-2	Notes: (1) Switch is marked with NC, NO, COM, L+, L-. (2) Lamp circuit is isolated & requires external power source. SPDT
DP	LB25 *LB26	ON ON	(ON) ON	1-3 4-6	1-2 4-5	DPDT

\* When in latchdown position for the alternate circuit, cap position is 1.0mm (.039") above the built-in bezel.

## SHAPES & PANEL CUTOUTS

**S** .622" Square

Cutout for 1 switch: .638" x .638"  
Cutout for 1 switch with barriers: .638" x .815"

**C** .854" Dia. Round

Cutout for 1 switch: .638" x .882"  
Cutout for 1 switch with barriers: .638" x 1.059"

**R** .622" x .866" Rectangular

Cutout for 1 switch: .638" x .882"  
Cutout for 1 switch with barriers: .638" x 1.059"

Panel Thickness for Switches & Barriers: 1 ~ 4mm (.039" ~ .157")  
Panel Thickness for Protective Guards & Splash Covers: 1 ~ 3.5mm (.039" ~ .138")

## HOUSING

Housing Colors Available:



## CONTACT MATERIALS, RATINGS, & TERMINALS

<b>W01</b> Silver Contacts	<b>Power Level</b> 3A @ 125V AC & 250V AC	<b>Solder Lug/Quick Connect</b> The .047" x .079" oblong hole accommodates one solid 18-gauge wire or two solid or stranded 20-gauge wires.
<b>G01</b> Gold Contacts	<b>Logic Level</b> 0.4VA max. @ 28V AC/DC max.	

See Supplement for complete explanation of operating range.

## INCANDESCENT & NEON LAMP CODES & SPECIFICATIONS

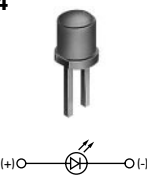
<b>AT607 &amp; AT607N</b> <p>T-1 Bi-pin</p>	AT607 Incandescent 5-, 12-, 28-volt; AT607N Neon 110-volt	<b>05</b>	<b>12</b>	<b>28</b> *	<b>01</b> **	* Lamp life is significantly reduced in applications with DC current, high shock, vibration, or continuous illumination. ** Recommended Resistors: 33K ohms for 110V AC; 100K ohms for 220V AC.	
	Voltage	V	5V AC	12V AC	28V AC		110V AC
	Current	I	115mA	60mA	24mA		1.5mA
	Endurance	Avg. Hrs.	7,000				10,000

Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.


## LED CODES & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation. Single color LEDs are colored in OFF state. Bicolor LED is translucent white in OFF state. For dimension drawings of lamps see [Accessories & Hardware Index](#). If the source voltage is greater than rated voltage, a ballast resistor is required. The ballast resistor calculation and more lamp detail are shown in the Supplement; see [Supplement Index](#).

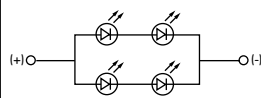
### Standard Single Element LED

<b>AT614</b>  T-1 Bi-pin	Color	<b>C</b> Red	<b>D</b> Amber	<b>F</b> Green	
	Forward Peak Current	$I_{FM}$	50mA	50mA	50mA
	Continuous Forward Current	$I_F$	40mA	40mA	40mA
	Forward Voltage	$V_F$	1.75V	2.35V	2.35V
	Reverse Peak Voltage	$V_{RM}$	4V	4V	4V
	Current Reduction Rate Above 25°C	$\Delta I_F$	0.67mA/°C		

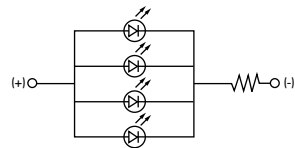
### Bright Quad Element LED

<b>AT626 No Resistor</b> <b>AT627 with Resistor</b>  T-1 Bi-pin	Color Codes	<b>5C</b> Red	<b>5D</b> Amber	<b>5F</b> Green				
			No Resistor (AT626)			With Resistor (AT627)		
			Red <b>No Code</b>	Amber <b>No Code</b>	Green <b>No Code</b>	<b>05</b>	<b>12</b>	<b>24</b>
	Forward Peak Current	$I_{FM}$	40mA	40mA	40mA	—	—	—
	Continuous Forward Current	$I_F$	26mA	26mA	26mA	52mA	26mA	13mA
	Forward Voltage	$V_F$	3.8V	4.0V	4.4V	5V	12V	24V
Reverse Peak Voltage	$V_{RM}$	8V	8V	8V	4V	8V	16V	
Current Reduction Rate Above 25°C	$\Delta I_F$	0.50mA/°C			0.50mA/°C			

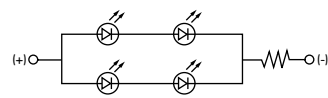
AT626 4-Element without Resistor



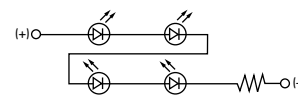
AT627 5 volt, 4-Element with Resistor





AT627 12 volt, 4-Element with Resistor



AT627 24 volt, 4-Element with Resistor



### Super Bright Single Element LED

<b>AT625 Blue</b> <b>AT631 White</b> <b>AT632 Green</b>  T-1 Bi-pin			Color	<b>6B</b> White	<b>6F</b> Green	<b>6G</b> Blue
	Forward Peak Current	$I_{FM}$		30mA	30mA	30mA
	Continuous Forward Current	$I_F$		20mA	20mA	20mA
	Forward Voltage	$V_F$		3.6V	3.5V	3.6
	Reverse Peak Voltage	$V_{RM}$		5V	5V	5V
	Current Reduction Rate Above 25°C	$\Delta I_F$		0.50mA/°C		

**00** No Lamp Code 00 indicates that no lamp is used.

## CAP TYPES & COLOR COMBINATIONS

Color Codes: **A** Black **B** White **C** Red **D** Amber **E** Yellow **F** Green **G** Blue **J** Clear

### Solid Cap for Incandescent Lamp

**Lens/Filter Colors Available:**

**AT476 Square**      **AT4012 Round**      **AT4026 Rectangular**

Material: Polycarbonate    Finish: Glossy

Translucent Colored Lens  
Transparent Clear Filter  
Lamp AT607

Color codes: **BJ**, **FJ**, **CJ**, **GJ**, **EJ**

### Insert Cap for Incandescent or Neon Lamp

**Lens/Filter Colors Available:**

**AT477 Square**      **AT4013 Round**      **AT4027 Rectangular**

Material: Polycarbonate    Finish: Glossy

Transparent Clear Lens  
Translucent Colored Filter  
Lamps AT607 or AT607N

Color codes: **JB**, **JF**, **JC**, **JG**, **JE**

JF & JG not suitable with neon.

### LED Cap for Standard & Bright LEDs

**Diffuser Colors Available:**

**AT478 for Standard AT4162 for Bright Square**      **AT4014 for Standard AT4164 for Bright Round**      **AT4028 for Standard AT4163 for Bright Rectangular**

Material: Polycarbonate    Finish: Glossy

Transparent Clear Lens  
Translucent Colored Diffuser  
Standard LED AT614      Bright LED AT626 AT627

Color codes: **JB**, **JC**, **JD**, **JF**

### LED Cap for Super Bright LED

**Lens/Diffuser Colors Available:**

**AT4129 Square**      **AT4128 Round**      **AT4130 Rectangular**

Material: Polycarbonate    Finish: Glossy

Transparent Clear Lens  
Translucent White Diffuser  
LED AT625 AT631 AT632



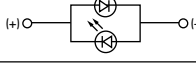
Color code: **JB**

## CAP TYPES & COLOR COMBINATIONS

Color Codes: **A** Black **B** White **C** Red **D** Amber **E** Yellow **F** Green **G** Blue **H** Gray **J** Clear

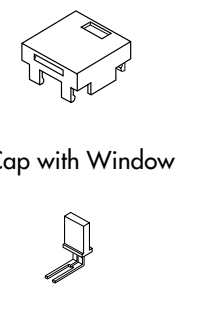
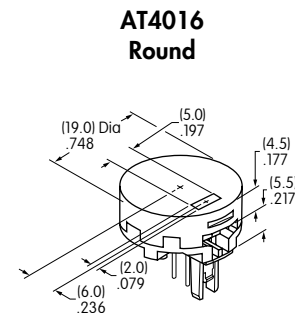
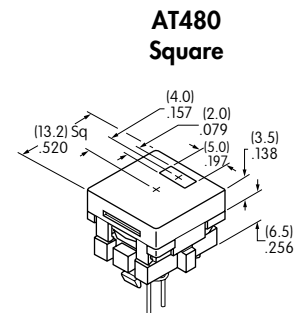
### Spot Illuminated Cap with LED

Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.  
 Single color LEDs are colored in OFF state. Bicolor LED is translucent white in OFF state.  
 For dimension drawings of lamps see [Accessories & Hardware Index](#).  
 If the source voltage is greater than rated voltage, a ballast resistor is required.  
 The ballast resistor calculation and more lamp detail are shown in the Supplement; see [Supplement Index](#).

LED Specifications						
	Single Color LED with 1 Element	Bicolor LED with 2 Elements	Single Color			Bicolor
				<b>1C</b> Red	<b>1D</b> Amber	<b>1F</b> Green
<b>Not Available Separately</b>	Forward Peak Current	$I_{FM}$	10mA	30mA	30mA	30mA
	Continuous Forward Current	$I_F$	8mA	24mA	24mA	25mA
	Forward Voltage	$V_F$	1.9V	2.0V	2.1V	2.1V
	Reverse Peak Voltage	$V_{RM}$	5V	5V	5V	—
	Current Reduction Rate Above 25°C	$\Delta I_F$	0.13mA/°C	0.40mA/°C	0.40mA/°C	0.33mA/°C

Cap Colors Available:

- A**
- B**
- C**
- F**



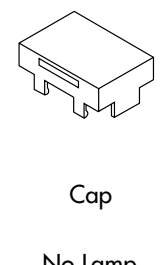
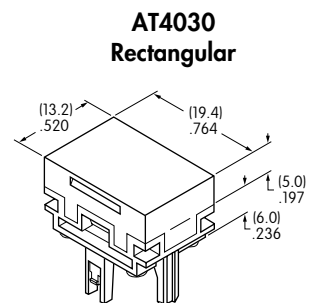
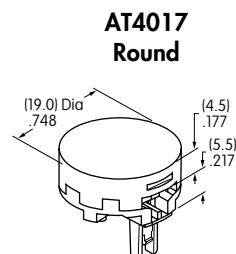
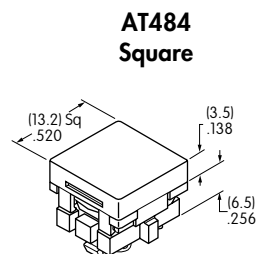
Material: Polycarbonate Finish: Glossy

When ordering spot illuminated cap separately, LED color must be specified.  
 Examples: AT480CA (red LED, black cap); AT4016CFB (red/green bicolored LED, white cap)

### Nonilluminated Cap

Cap Colors Available:

- A** **F**
- B** **G**
- C** **H**
- E**



Material: Polycarbonate Finish: Glossy

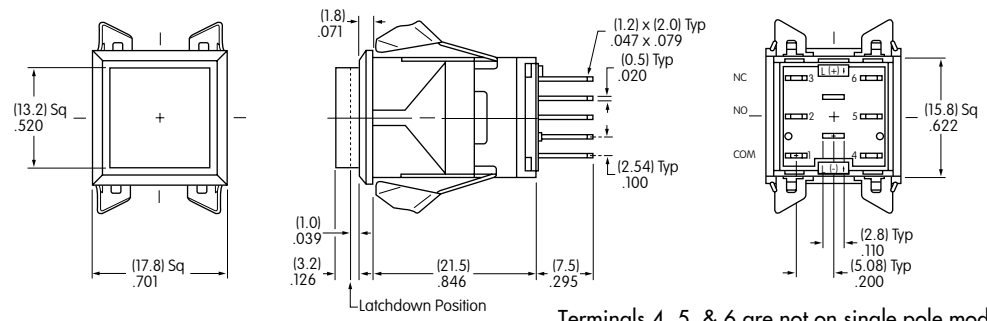
## TYPICAL SWITCH DIMENSIONS

### Square



LB15KW01-12-CJ

### Single & Double Pole



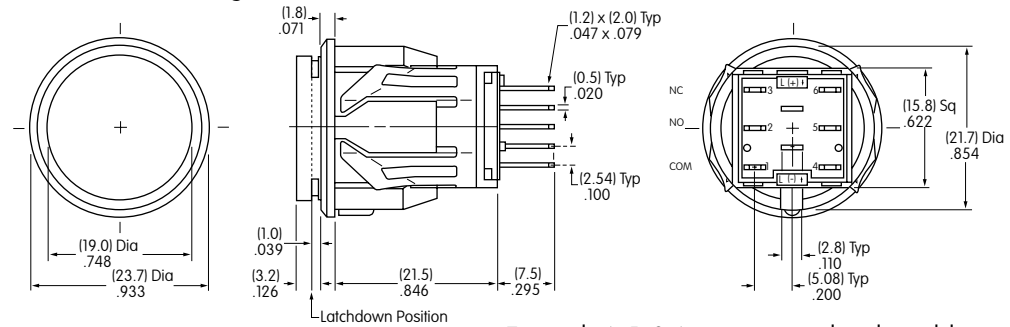
Terminals 4, 5, & 6 are not on single pole models.

### Round



LB16CKW01-12-CJ

### Single & Double Pole



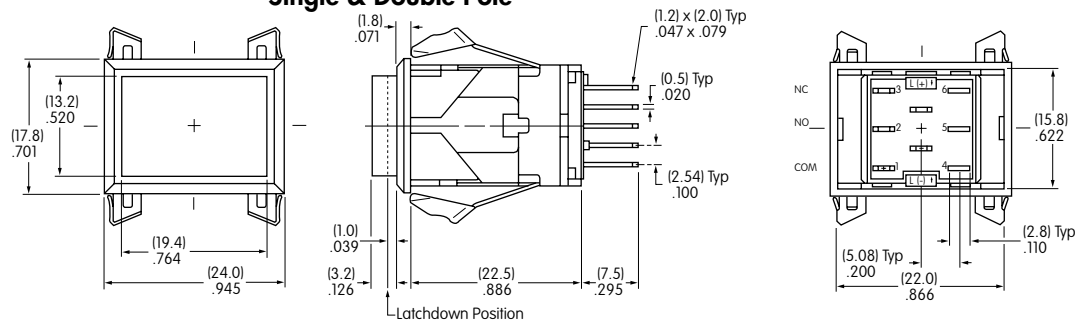
Terminals 4, 5, & 6 are not on single pole models.

### Rectangular



LB26RGW01-12-CJ

### Single & Double Pole

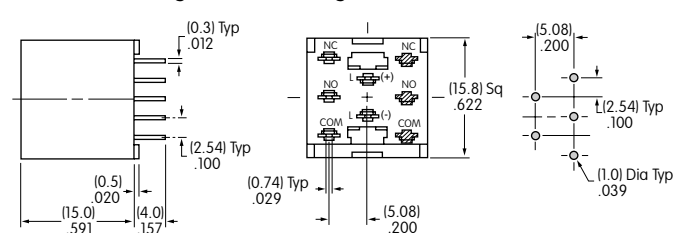


Terminals 4, 5, & 6 are not on single pole models.

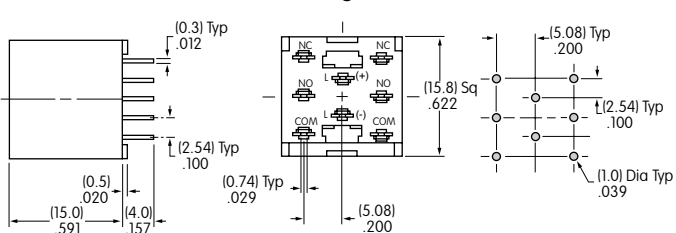
## OPTIONAL ACCESSORIES

### PCB Adaptors

#### AT711 Single Pole • Straight PC Terminals



#### AT712 Double Pole • Straight PC Terminals



Note: Order adaptors separately.

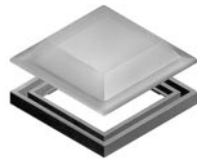
## OPTIONAL ACCESSORIES

### Splash Covers

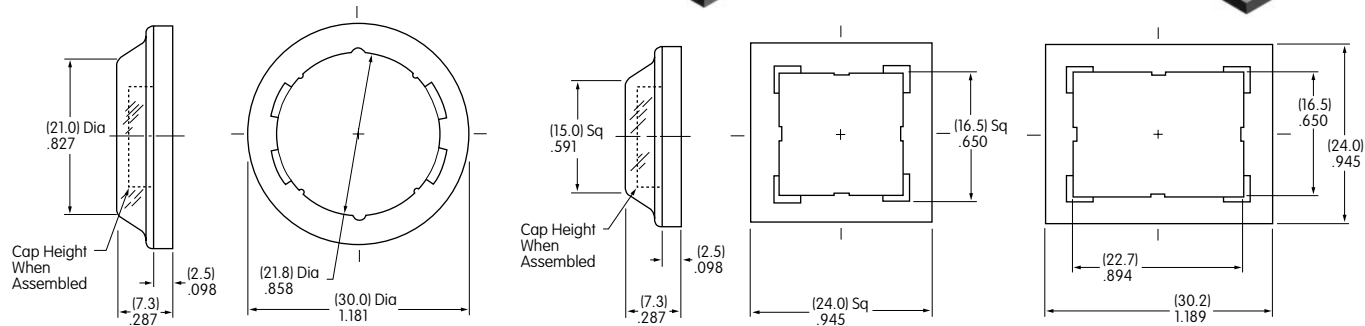
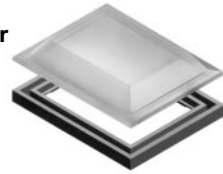
**AT4002 Round**



**AT4001 Square**



**AT4011 Rectangular**



Material: PVC with polyethylene gasket  
PVC loses pliability below 0°C (32°F).

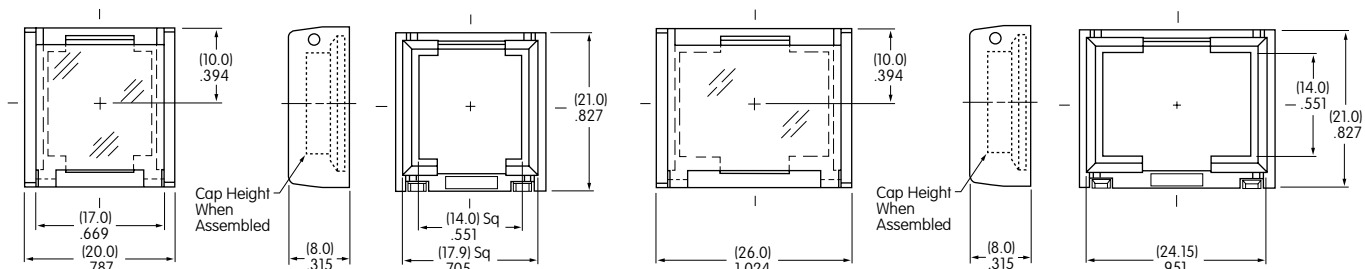
Splash Covers reduce depth of switch behind panel by .020".

### Protective Guards

**AT499 Square**



**AT4057 Rectangular**



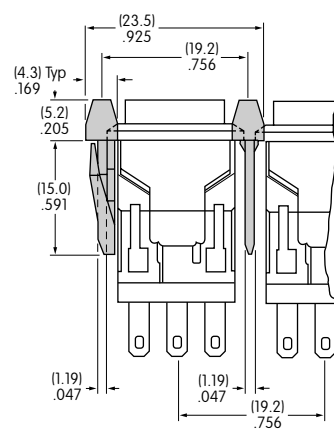
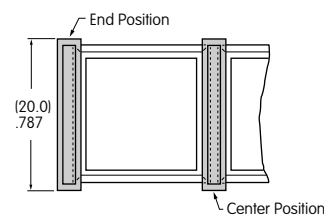
Material: Polyamide

Protective Guards reduce depth of switch behind panel by .020".

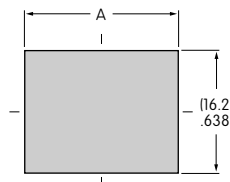
### Barriers

**AT497 End**

**AT498 Center**



#### Cutouts for More Than 1 Switch



**Square**

$$A = .752" \times \text{Number of Switches} + .051"$$

**Rectangular**

$$A = .996" \times \text{Number of Switches} + .051"$$

Material: Polyamide

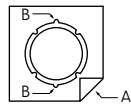
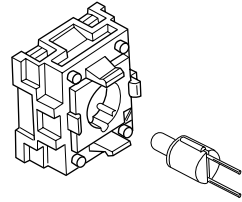


## ASSEMBLY INSTRUCTIONS

### Lamp Installation & LED Orientation

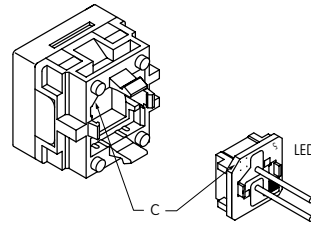
#### Incandescent & Neon Lamps AT607 & AT607N

Align projections on lamp with grooves (B) in holder when inserting lamp. To correctly join the lamp holder and cap base, match the cut corners (A).



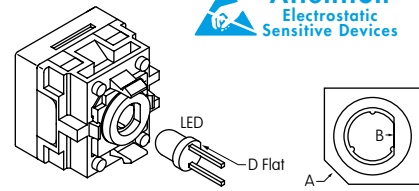
#### Bright LEDs AT626, AT627

Align cut corners (C) when inserting the LED.

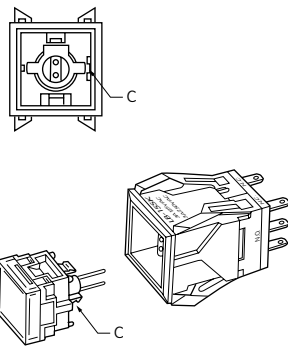


#### Super Bright LEDs AT625, AT631, AT632

Align D-flat on LED with flat (B) in holder when inserting the LED. To correctly join the lamp holder and cap base, match the cut corners (A).

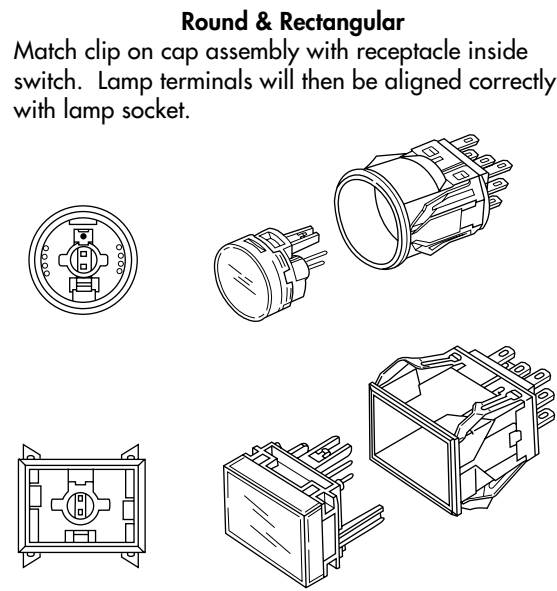


### Switch & Cap Assembly



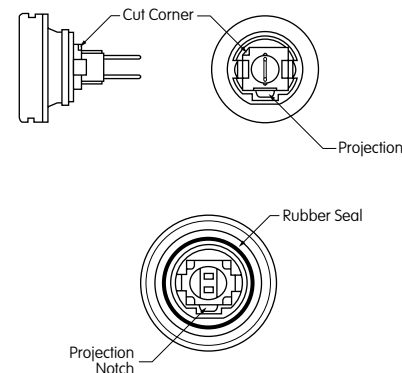
#### Square

Match projection (C) on cap assembly with groove (C) inside switch. Lamp terminals will then be aligned correctly with lamp socket.



#### Round & Rectangular

Match clip on cap assembly with receptacle inside switch. Lamp terminals will then be aligned correctly with lamp socket.



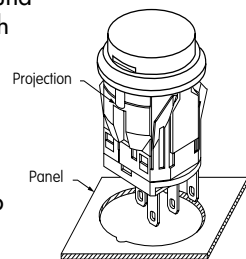
#### Round Panel Seal

Match projection on cap assembly with notch inside switch. Lamp terminals will then be aligned correctly with lamp socket.

### Installation & Maintenance

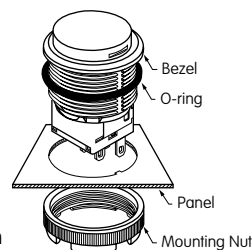
#### Snap-in Mount

Snap-in clip holds all switches firmly in place. To mount round switch, match the antirotation projection on switch with guide cut in panel. Snap into panel cutout.



#### Panel Seal Bushing Mount

Insert switch from the front of the panel with the o-ring between the built-in bezel and the panel. Install mounting nut AT074 (supplied with switch) from the rear of the panel. Overtightening mounting nut may damage the switch housing.



#### Lamp Replacement

Actuator must be in Up position. Pull off cap with cap extractor AT109. Replace lamp and reassemble as shown above.



**AT109**  
Cap Extractor



**AT112**  
Socket Wrench

## LEGENDS

General information and basic specifications are presented here for customers who want to do their own legends.

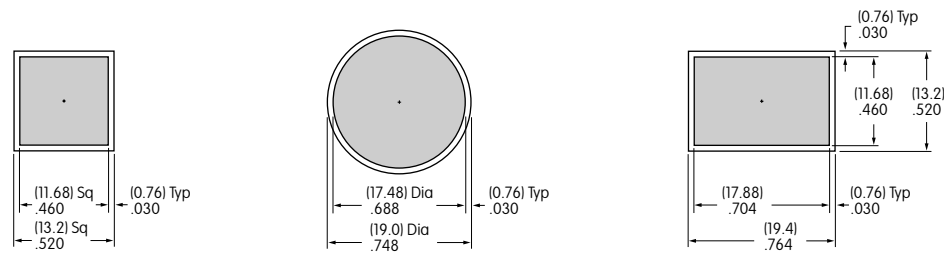
### Suggested Printable Area for Lens



**Recommended Print Method:**

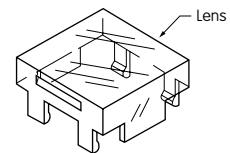
Screen Print or Pad Print

Epoxy based ink is recommended.



Shaded areas are printable areas.

### Suggested Printable Area for Film Insert



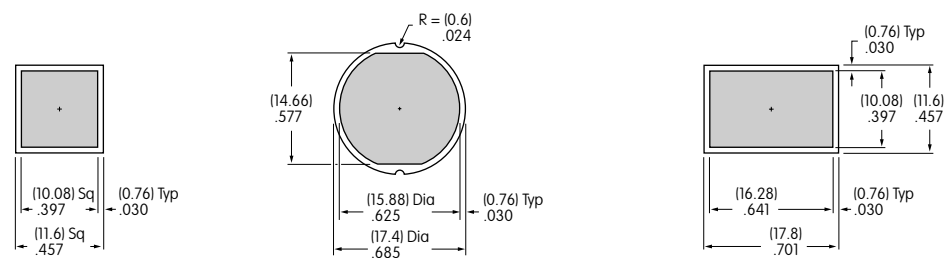
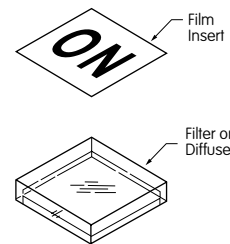
**Film Material and Thickness:**

Clear Polyester, 4 mil max.

**Recommended Print Method:**

Screen Print

Epoxy based ink is recommended.

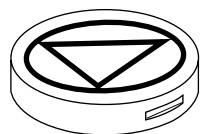


Shaded areas are printable areas.

### Additional Methods

Additional methods for legends are engraving the lens and laser printing on film inserts. Maximum depth for engraving is 0.3 mm (.012") on the cap lens. Enamel paint is recommended to fill the engraved area.

## LEGEND PACKET FOR ORDERING CAPS WITH LEGENDS



1. To order caps with legends, contact the factory and request the LB Legend Packet.
2. Once you determine your desired legend, fill out the ordering work sheet included in the packet.
3. Return the completed work sheet to receive a quotation.

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