

# Distinctive Characteristics

Carefully designed light diffusion and filtering system produces bright, full surface illumination with front panel relamping.

Spot illumination available in single and bicolor LEDs.

Choice of super bright LEDs in white, green, and blue in addition to standard or bright red, amber, and green LEDs.

Stainless steel clips provide secure mounting with a wide range of panel thicknesses.

Latchdown feature gives indication of circuit status. Audible and tactile feedback with smooth and responsive operation.

Snap-action contact mechanism gives long electrical life and sensitivity of actuation.

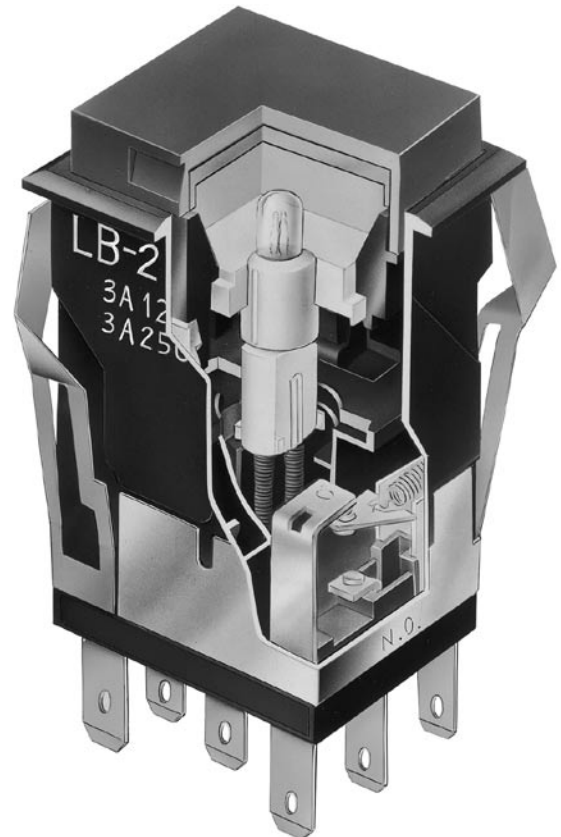
Combination solder lug and .110" quick connect terminals are epoxy sealed to prevent entry of flux, dust, and other contaminants.

Panel sealed model meets IP65 of IEC60529 specifications (similar to NEMA 4 & 13).

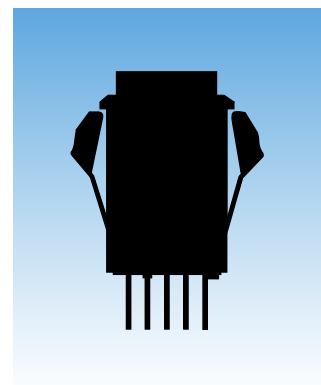
Compact switch design minimizes behind panel depth.

Nonilluminated models available and shown in the Pushbutton section.

Matching indicators available and shown at the end of Section M.



Actual Size



# 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  
 (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)  
 Note: Find additional explanation of operating range in Supplement section.

## 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 for 1 minute minimum;  
 1,500V AC minimum between contacts & case for 1 minute minimum  
**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:** 4.41N  
**Contact Timing:** Nonshorting (break-before-make)  
**Travel:** Momentary: Pretravel .059" (1.5mm); Overtravel .059" (1.5mm); Total Travel .118" (3.0mm)  
 Maintained: Pretravel .087" (2.2mm); Overtravel .031" (0.8mm); Total Travel .118" (3.0mm)

## Materials & Finishes

**Housing:** Glass fiber reinforced polyamide (UL94V-0)  
**Snap-in Frame:** Stainless steel  
**Movable Contact:** Silver alloy or copper with gold plating  
**Stationary Contacts:** Silver alloy or copper with gold plating  
**Base:** Liquid crystal polymer (UL94V-0)  
**Switch Terminals:** Phosphor bronze with silver or gold plating  
**Lamp Terminals:** Brass with silver plating

## Environmental Data

**Operating Temp Range:** -25°C through +50°C (-13°F through +122°F)  
 Note: When used with a polyvinyl chloride splash cover, the lowest limit is 0°C (32°F)  
**Humidity:** 90 ~ 95% 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 (490m/s<sup>2</sup>) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)  
**Sealing:** Not available for snap-in; see next section for panel seal.

## Installation

**Cap Installation Force:** 3.92N maximum downward force on cap  
**Quick Connect Force:** 52.95N maximum downward force on connector  
**Soldering Time & Temperature:** Manual Soldering: See Profile A in Supplement section.

## Standards & Certifications



**Flammability Standards:** UL94V-0 housing & base  
**UL & C-UL Recognized:**



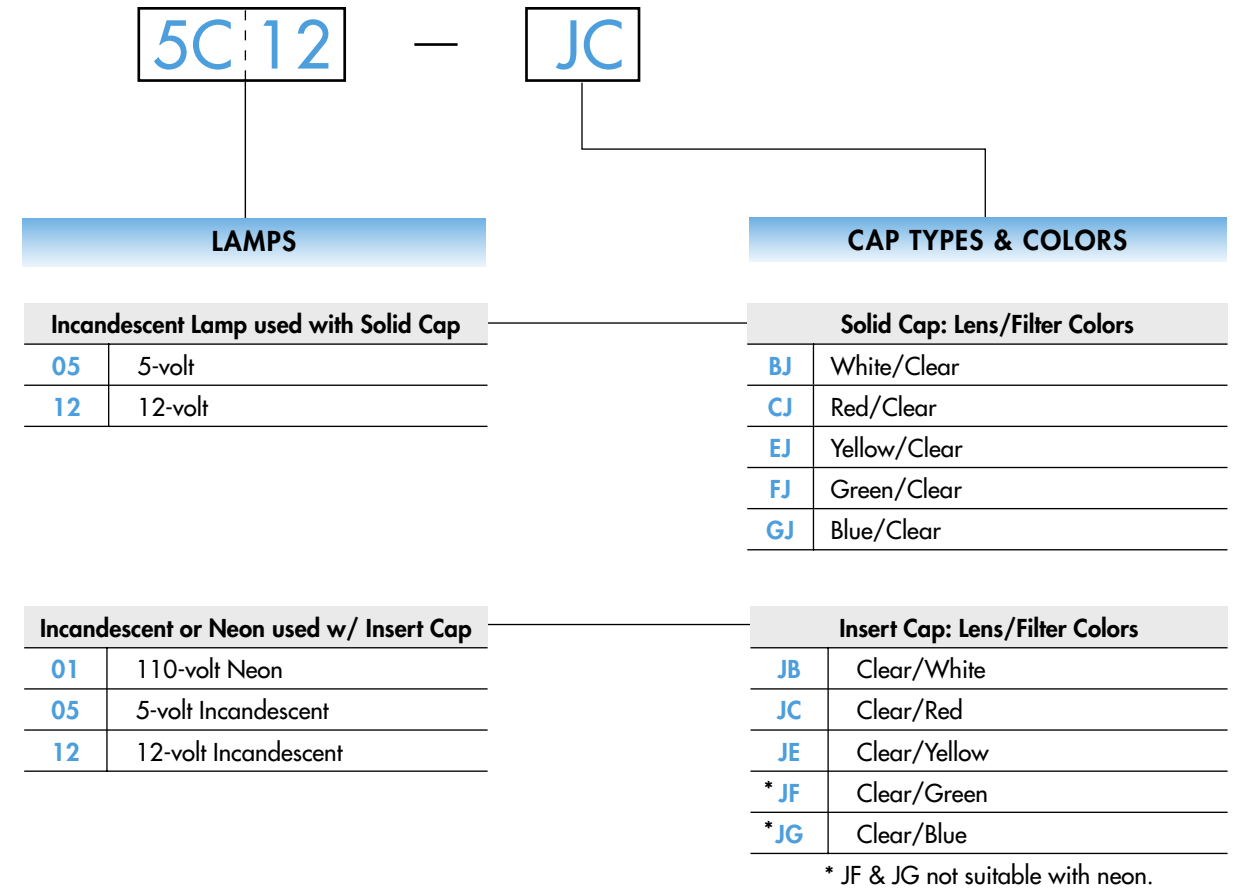
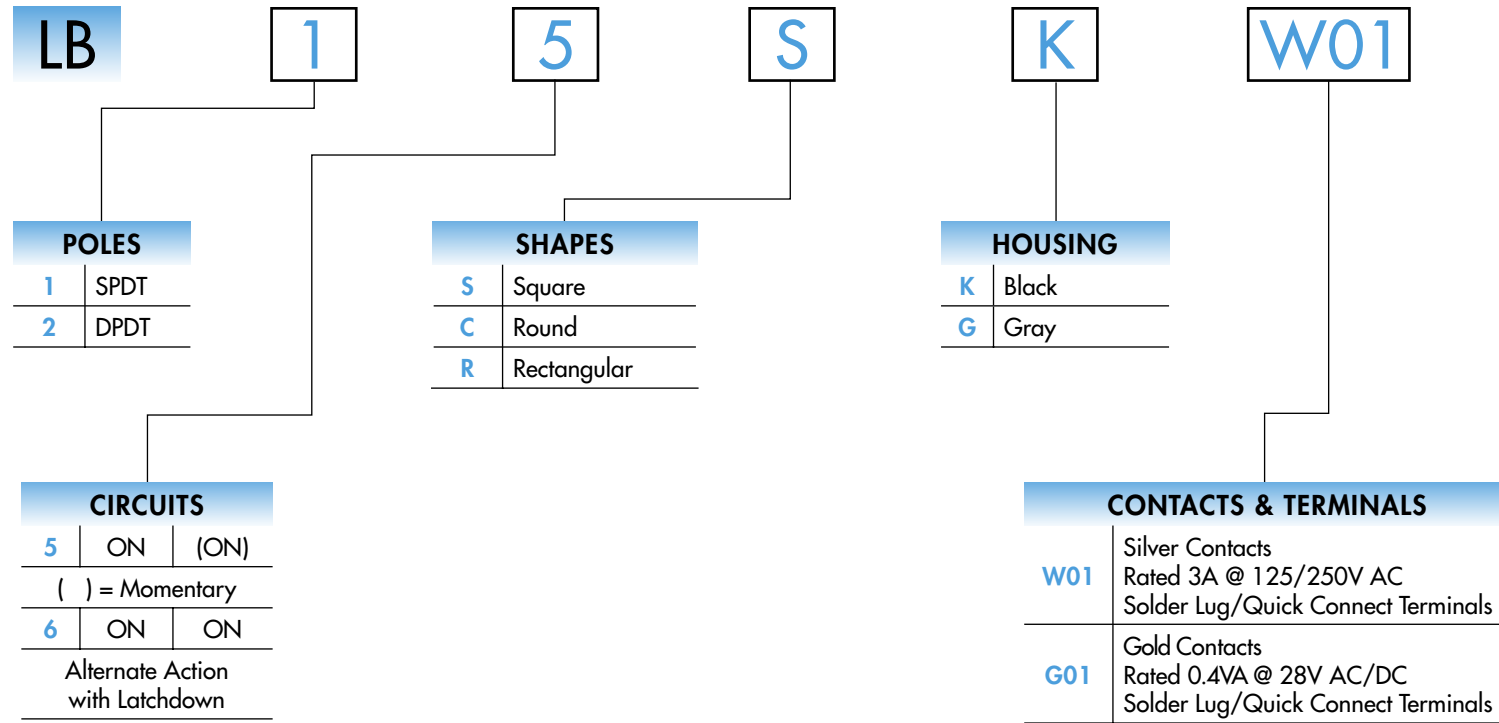
All models recognized at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum;  
 UL File No. WOYR2.E44145; add "/U" to end of part number to order UL mark on switch.  
 C-UL File No. WOYR8.E44145; add "/C-UL" to end of part number to order C-UL mark on switch.



**CSA Certified:**

All models certified at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum;  
 CSA File Nos. 023535-0-000; add "/C" to end of part number to order CSA mark on switch.

TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LB15SKW01-5C12-JC



Bright LED used with LED Cap			
Colors		Resistor	
5C	Red	No Code	No Resistor
5D	Amber	05	5-volt
5F	Green	12	12-volt
		24	24-volt

LED Cap: Lens/Diffuser Colors	
JB	Clear/White
JC	Clear/Red
JD	Clear/Amber
JF	Clear/Green

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

LED Cap: Lens/Diffuser Colors	
JB	Clear/White

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

Spot Illuminated Cap Colors		
A	Black	Available in square and round only.
B	White	
C	Red	
F	Green	

IMPORTANT:



Switches are supplied without UL, C-UL & CSA markings unless specified. Specific models & ratings noted on General Specifications page.

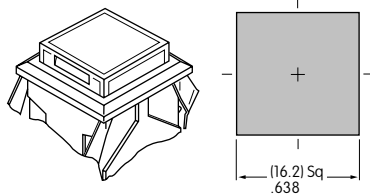
### POLES & CIRCUITS

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

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

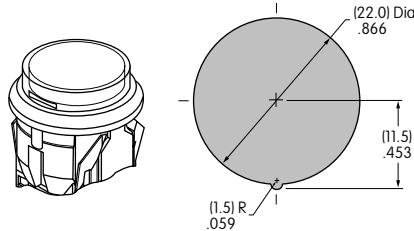
### SHAPES & PANEL CUTOUTS

**S** .622" (15.8mm)  
Square

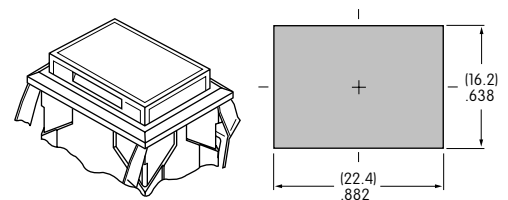


Cutout for 1 switch:  
.638" x .638" (16.2mm x 16.2mm)  
Cutout for 1 switch with barriers:  
.638" x .815" (16.2mm x 20.7mm)

**C** .854" (21.7mm)  
Round



**R** .622" x .866" (15.8mm x 22.0mm)  
Rectangular



Cutout for 1 switch:  
.638" x .882" (16.2mm x 22.4mm)  
Cutout for 1 switch with barriers:  
.638" x 1.059" (16.2mm x 26.9mm)

Panel Thickness for Switches & Barriers: .039" ~ .157" (1.0 ~ 4.0mm)  
Panel Thickness for Protective Guards & Splash Covers: .039" ~ .138" (1.0 ~ 3.5mm)

### HOUSING

Housing Colors Available:

**K** Black

**G** Gray

### CONTACT MATERIALS, RATINGS & TERMINALS

**W01** Silver Contacts

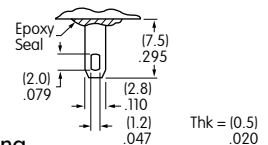
**Power Level**  
3A @ 125V AC & 250V AC

**G01** Gold Contacts

**Logic Level**  
0.4VA max. @ 28V AC/DC max.

**Solder Lug/Quick Connect**

Optional PCB adaptors  
AT711 & AT712 available;  
illustrated in "Optional  
Accessories" immediately following  
"Typical Switch Dimensions."



Complete explanation of operating range in Supplement section.

### INCANDESCENT & NEON LAMP CODES & SPECIFICATIONS

AT607 & AT607N



T-1 Bi-pin

		<b>05</b>	<b>12</b>	<b>01</b> *
AT607 Incandescent 5-volt or 12-volt; AT607N Neon 110-volt				
Voltage	V	5V AC	12V AC	110V AC
Current	I	115mA	60mA	1.5mA
Endurance	Avg. Hours	7,000		10,000
Ambient Temp. Range		-25°C ~ +50°C		

The electrical specifications shown are determined at a basic temperature of 25°C. Lamp circuit is isolated and requires external power source.

\* Recommended Resistors for Neon:  
33K ohms for 110V AC;  
100K ohms for 220V AC

### LED COLORS & SPECIFICATIONS






The electrical specifications shown are determined at a basic temperature of 25°C. LED circuit is isolated and requires external power source. Polarity marks are on the switch.

If the source voltage exceeds the rated voltage, a ballast resistor is required.








The resistor value can be calculated by using the formula in the Supplement section.

Additional lamp detail is shown in the Accessories & Hardware section.

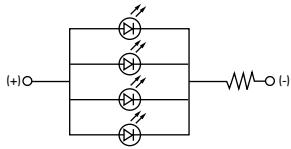
#### Bright LED without Resistor

<b>AT635</b>  LEDs are colored in OFF state.     T-1 1/2 Bi-pin	Red 	Amber 	Green 	<b>No Code</b> No Resistor		
	Color Codes			Red	Amber	Green
	Forward Peak Current			30mA	30mA	30mA
	Continuous Forward Current			20mA	20mA	20mA
	Forward Voltage			1.9V	2.0V	2.1V
	Reverse Peak Voltage			5V	5V	5V
	Current Reduction Rate Above 25°C			0.42mA/°C		
	Ambient Temperature Range			-25° ~ +50°C		

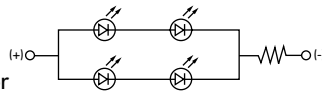
#### Bright LED with Resistor

<b>AT627 with Resistor</b>    T-1 Bi-pin	Red 	Amber 	Green 	Resistor Codes   			
	Color Codes:						
	Forward Peak Current				—	—	—
	Continuous Forward Current				52mA	26mA	13mA
	Forward Voltage				5V	12V	24V
	Reverse Peak Voltage				4V	8V	16V
	Current Reduction Rate Above 25°C				0.50mA/°C		
	Ambient Temperature Range				-25° ~ +50°C		

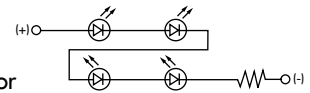
AT627  
5-volt  
4-element  
with Resistor









AT627  
12-volt  
4-element  
with Resistor



AT627  
24-volt  
4-element  
with Resistor



#### Super Bright Single Element LED

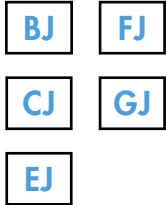
<b>AT625G Blue</b> <b>AT631B White</b> <b>AT632F Green</b>     T-1 Bi-pin						
	Color	White	Green	Blue		
	Forward Peak Current	30mA	30mA	30mA		
	Continuous Forward Current	20mA	20mA	20mA		
	Forward Voltage	3.6V	3.5V	3.6V		
	Reverse Peak Voltage	5V	5V	5V		
	Current Reduction Rate Above 25°C	0.50mA/°C				
	Ambient Temperature Range	-25° ~ +50°C				

### CAP TYPES & COLOR COMBINATIONS

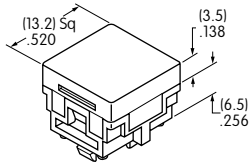
Color Codes: B White C Red D Amber E Yellow F Green G Blue J Clear

#### Solid Cap for Incandescent Lamp

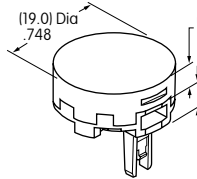
Lens/Filter  
Colors Available:



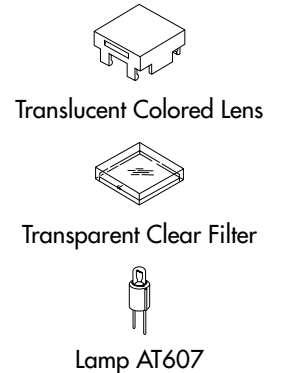
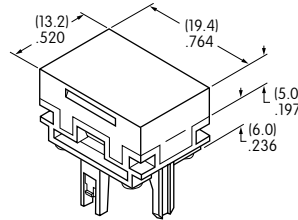
**AT476**  
Square



**AT4012**  
Round



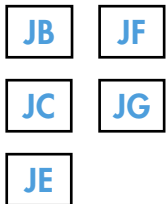
**AT4026**  
Rectangular



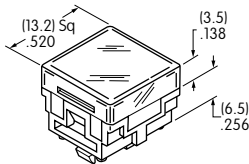
Material: Polycarbonate Finish: Glossy

#### Insert Cap for Incandescent or Neon Lamp

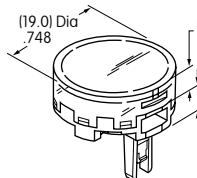
Lens/Filter  
Colors Available:



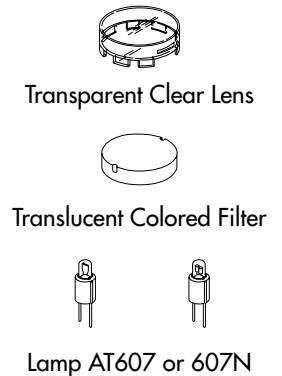
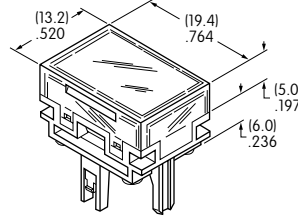
**AT477**  
Square



**AT4013**  
Round



**AT4027**  
Rectangular



JF and JG not suitable with neon lamp.

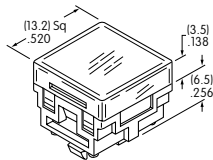
Material: Polycarbonate Finish: Glossy

#### Cap for Bright LED without Resistor

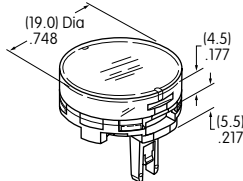
Lens/Diffuser  
Colors Available:



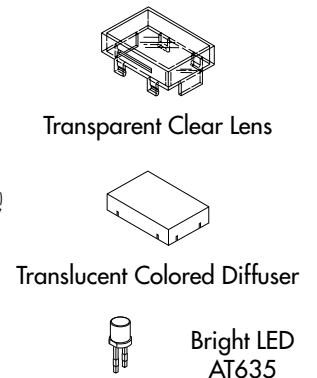
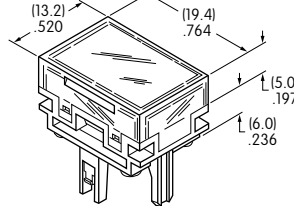
**AT4176**  
Square



**AT4178**  
Round



**AT4177**  
Rectangular



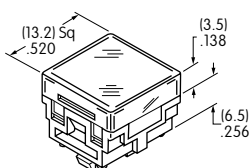
Material: Polycarbonate Finish: Glossy

#### Cap for Bright LED with Resistor

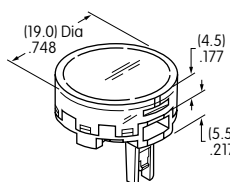
Lens/Diffuser  
Colors Available:



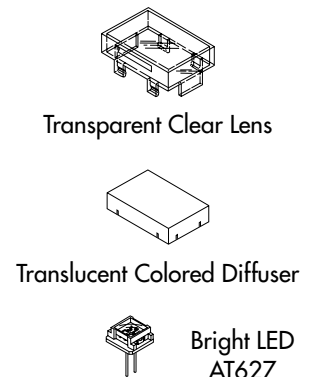
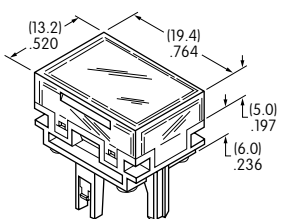
**AT4162**  
Square



**AT4164**  
Round



**AT4163**  
Rectangular



Material: Polycarbonate Finish: Glossy

### CAP TYPES & COLOR COMBINATIONS

Color Codes: A Black B White C Red D Amber F Green J Clear

#### Cap for Super Bright LEDs

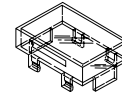
**JB**

Clear Lens  
White Diffuser

**AT4129**  
Square

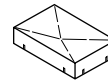
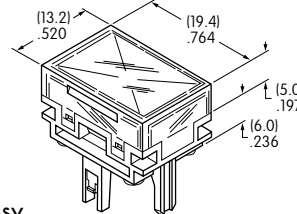
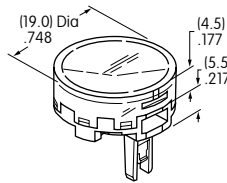
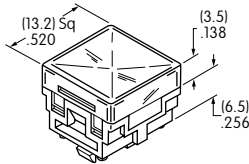
**AT4128**  
Round

**AT4130**  
Rectangular



Transparent  
Clear Lens

Material:  
Polycarbonate  
Finish: Glossy



Translucent  
White Diffuser

Material: Polycarbonate Finish: Glossy



LEDs AT625  
AT631 AT632

#### Spot Illuminated Cap with LED

The electrical specifications shown are determined at a basic temperature of 25°C.

LED circuit is isolated and requires external power source.

Single color LEDs are colored in OFF state; bicolor LEDs are translucent white in OFF state. Polarity marks are on the switch.

If the source voltage exceeds the rated voltage, a ballast resistor is required.

The resistor value can be calculated by using the formula in the Supplement section.

Additional lamp detail is shown in the Accessories & Hardware section.

#### 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>CF</b> Red/Green
LED factory assembled in Spot Illuminated Caps						
<b>Not Available Separately</b>	Forward Peak Current	$I_{FM}$	10mA	30mA	30mA	30/25mA
	Continuous Forward Current	$I_F$	8mA	24mA	24mA	20mA
	Forward Voltage	$V_F$	1.9V	2.0V	2.1V	2.0/2.2V
	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	0.43/0.38mA/°C
Ambient Temperature Range	-25° ~ +50°C					

Cap Colors  
Available:

**A**

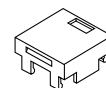
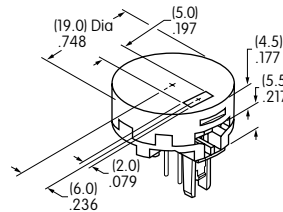
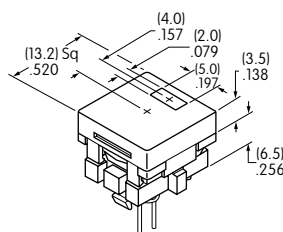
**B**

**C**

**F**

**AT480**  
Square

**AT4016**  
Round



Cap with Window



Factory Assembled LED;  
Not Available Separately

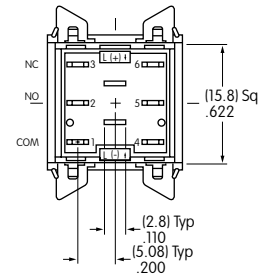
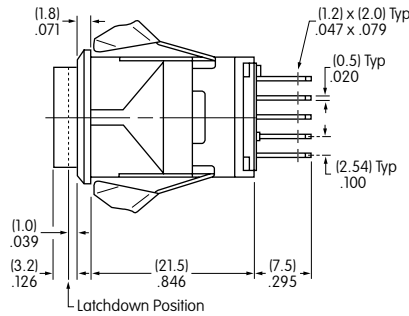
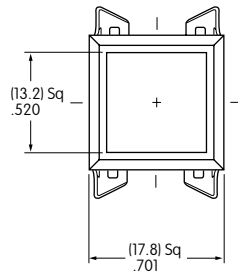
Material: Polycarbonate Finish: Glossy

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

### TYPICAL SWITCH DIMENSIONS

#### Square

#### Single & Double Pole

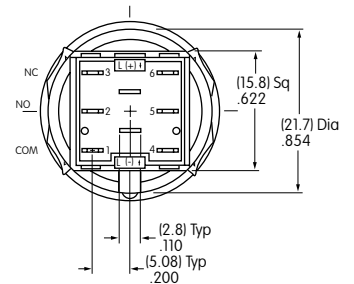
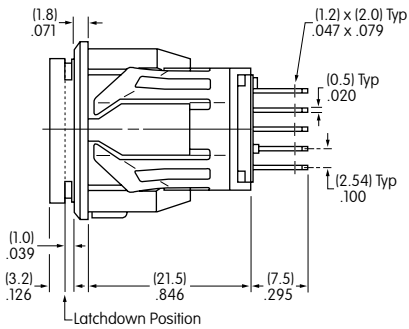
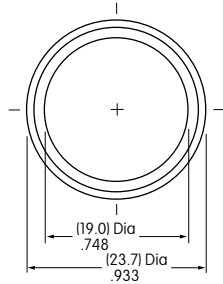


LB15KW01-12-CJ

Single pole models do not have terminals 4, 5, & 6.

#### Round

#### Single & Double Pole

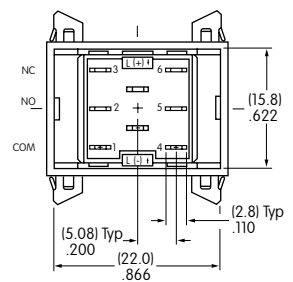
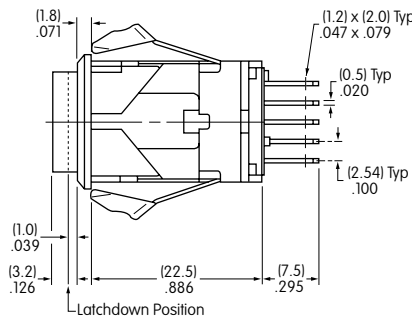
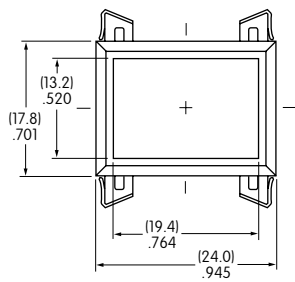


LB16CKW01-12-CJ

Single pole models do not have terminals 4, 5, & 6.

#### Rectangular

#### Single & Double Pole



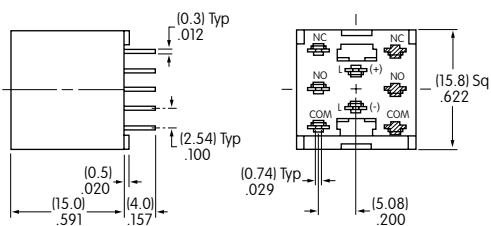
LB26RGW01-12-CJ

Single pole models do not have terminals 4, 5, & 6.

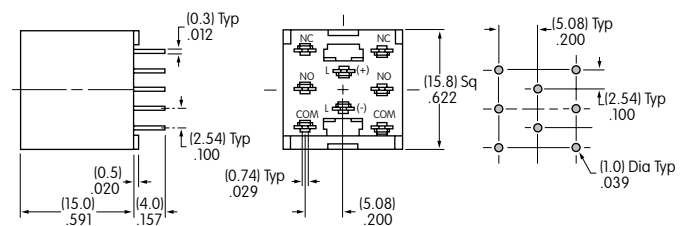
### OPTIONAL ACCESSORIES

#### PCB Adaptors

#### AT711 Single Pole • Straight PC Terminals



#### AT712 Double Pole • Straight PC Terminals



Note: Order adaptors separately.