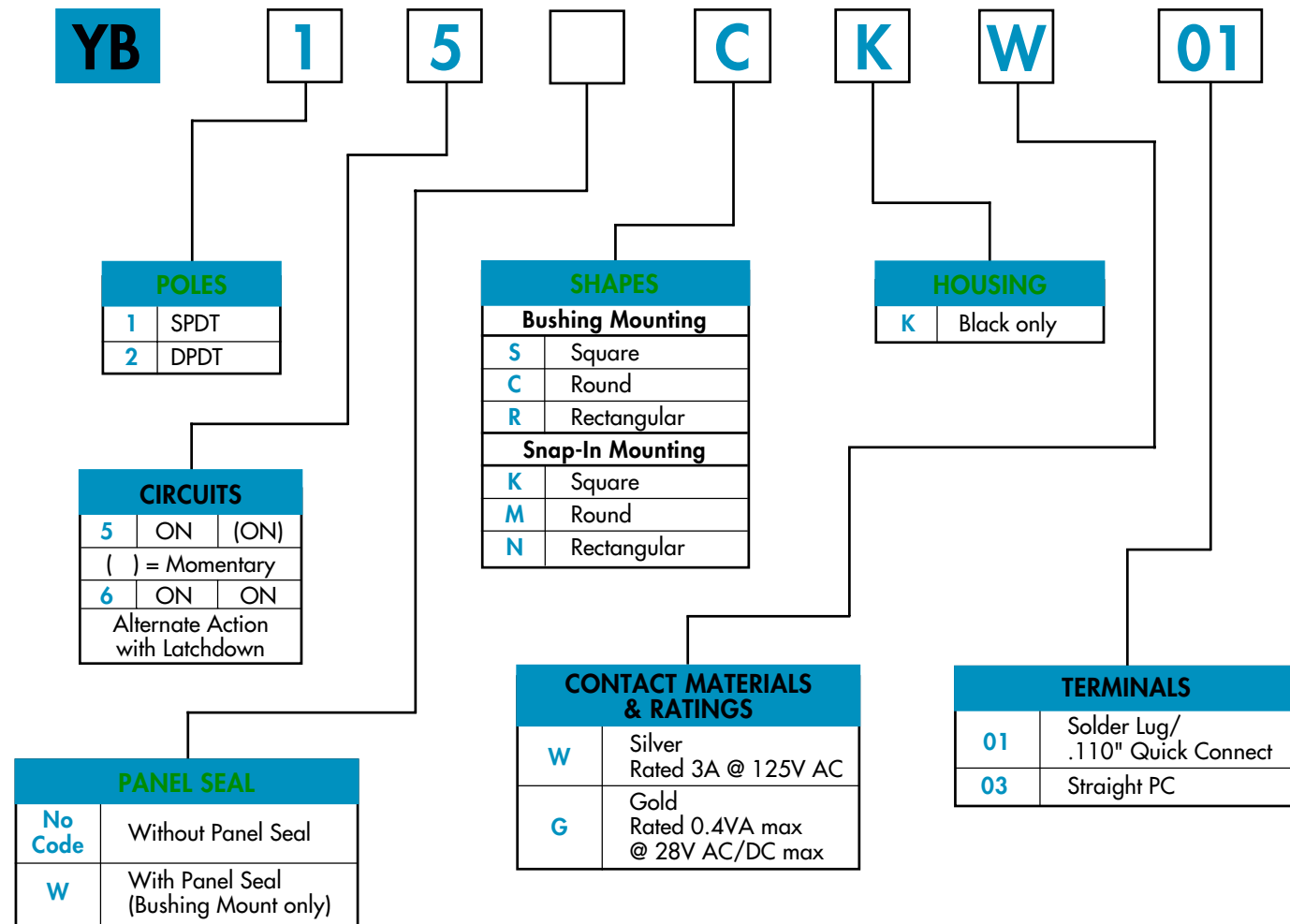


TYPICAL SWITCH ORDERING EXAMPLE

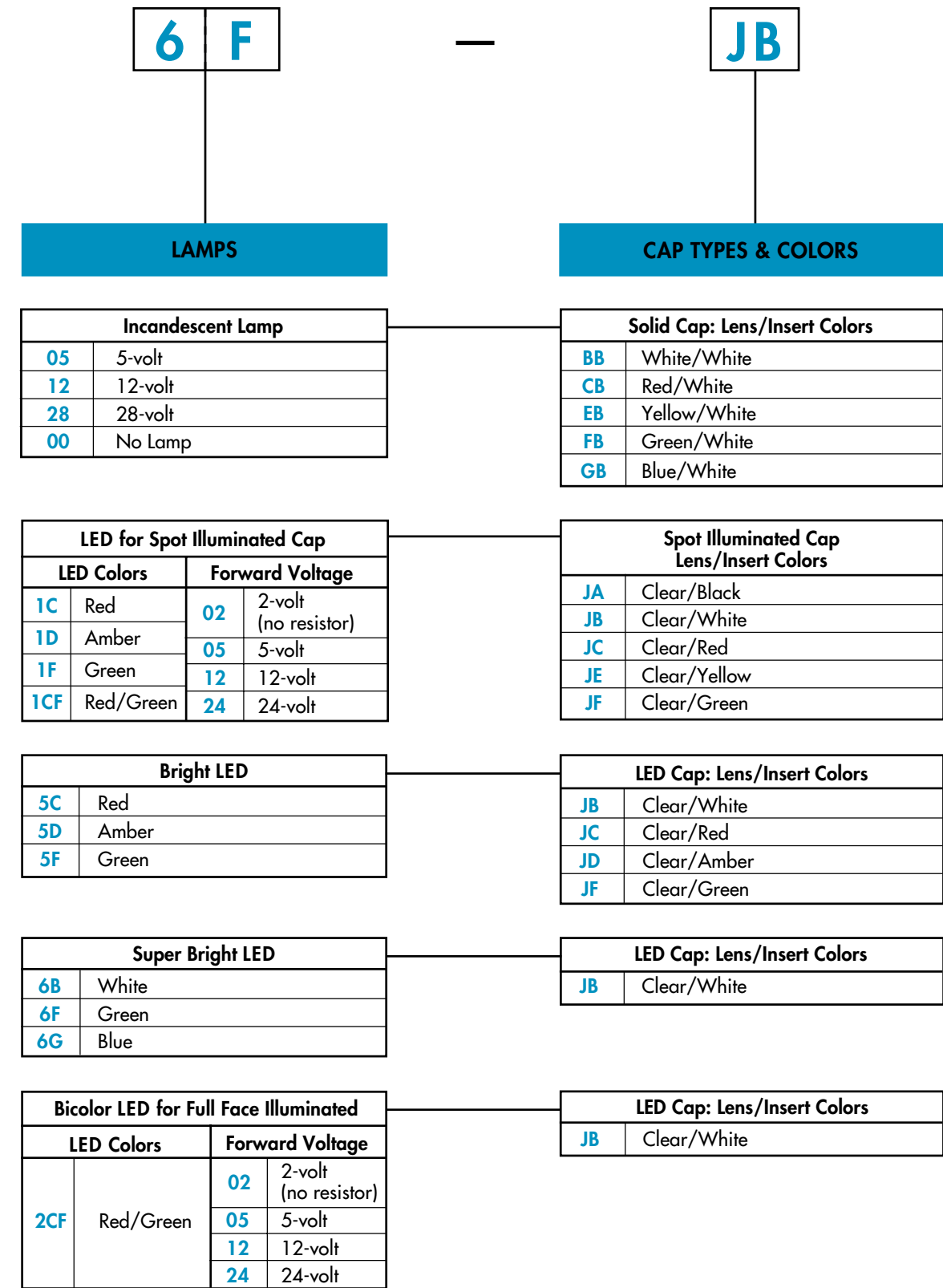


**IMPORTANT:**

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

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

YB15CKW01-6F-JB



### GENERAL SPECIFICATIONS

#### Electrical Capacity (Resistive Load)

**Power Level:** 3A @ 125V AC or 3A @ 250V AC or 3 A @ 30V DC  
**Logic Level:** 0.4VA maximum @ 28V AC/DC maximum  
 Note: See Supplement Index (page Z1) 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 action  
 200,000 operations minimum for alternate action  
**Electrical Life:** 100,000 operations minimum  
**Nominal Operating Force:** Single pole: 150 grams for nonsealed; 170 grams for sealed  
 Double pole: 280 grams for nonsealed; 300 grams for sealed  
**Contact Timing:** Nonshorting (break-before-make)  
**Travel:** 1.5mm (.059") pretravel; 1.5mm (.059") overtravel; 3mm (.118") total travel

#### Materials & Finishes

**Housing/Bezel:** Glass fiber reinforced polyamide  
**Snap-in Frame:** Stainless steel  
**Base:** Diallyl phthalate resin  
**Movable Contactor:** Phosphor bronze with silver plating or gold plating over nickel  
**Movable Contacts:** Silver alloy with silver plating or brass with gold plating over nickel  
**Stationary Contacts:** Silver alloy or copper with gold plating over nickel  
**Power Terminals:** Phosphor bronze with tin-lead plating  
**Lamp Terminals:** Phosphor bronze with tin-lead 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  
**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 acceleration (tested in 6 right angled directions, with 5 shocks in each direction)  
**Sealing:** IP65 of IEC529 standard for panel seal models


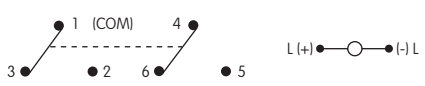
#### Installation

**Mounting Torque:** 8.16 kg/cm (7.08 lb/in) downward force on actuator  
**Soldering Time & Temperature:** 3 seconds @ 350°C  
**Process Seal:** Not available

#### Standards & Certifications

**Flammability Standards:** UL94V-0 housing & base  
**UL Recognized:** All solder lug models recognized at 3A @ 125/250V AC or  
 0.4VA @ 28V AC/DC; UL File No. E44145  
**CSA Certified:** All solder lug models recognized at 3A @ 125/250V AC or  
 0.4VA maximum @ 28V AC/DC maximum; CSA File No. LR23535

### POLES & CIRCUITS

		Plunger Position ( ) = Momentary		Connected Terminals		Throw & Power/Lamp Schematics
Pole	Model	Normal	Down	Normal	Down	
SP	YB15 YB16*	ON ON	(ON) ON	1-3	1-2	Notes: Switch is marked with NO, NC, COM, L+, and L-. Lamp circuit is isolated and requires external power source. SPDT 
DP	YB25 YB26*	ON ON	(ON) ON	1-3 4-6	1-2 4-5	DPDT 

\* When in latched position for the alternate circuit, cap position is 0.5mm (.020") above the built-in bezel.

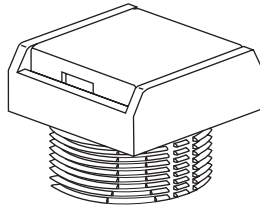
### PANEL SEAL

**No Code**

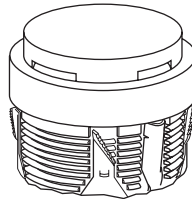
Without Panel Seal

Bushing Mounting

Supplied with mounting nut.



Snap-in Mounting

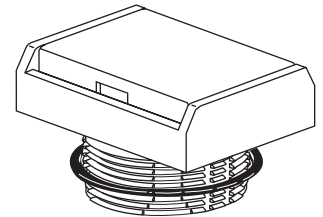


**W**

With Panel Seal

Bushing Mounting only

Supplied with mounting nut and o-ring.



### SHAPES & MOUNTING TYPES

Bushing Mounting

Snap-In Mounting

**S** Square

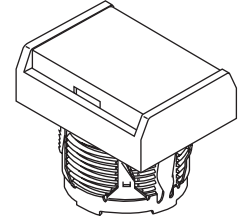
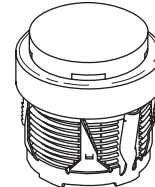
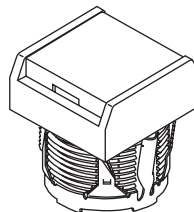
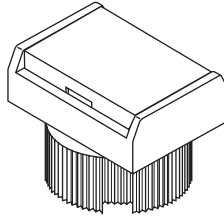
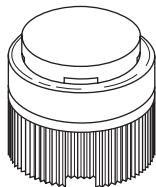
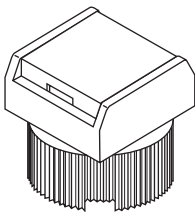
**C** Round

**R** Rectangular

**K** Square

**M** Round

**N** Rectangular



Bezel-barrier is an integral part of the switch body.

### HOUSING

**K** Black

Housing available in black only. The 1-piece body and bezel-barrier have a matte finish.

### CONTACT MATERIALS & RATINGS

**W** Silver Contacts

Power Level

3A @ 125/250V AC

**G** Gold Contacts

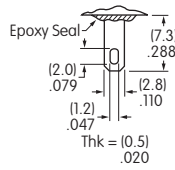
Logic Level

0.4VA @ 28V AC/DC

See Supplement Index (page Z1) for complete explanation of operating range.

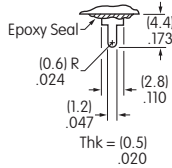
### TERMINALS

#### 01 Solder Lug/ .110" Quick Connect

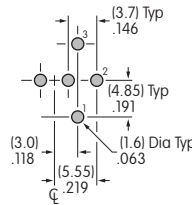


**Wiring**  
The .047" x .079" oblong hole accommodates one solid 18-gauge wire or two solid or stranded 20-gauge wires.

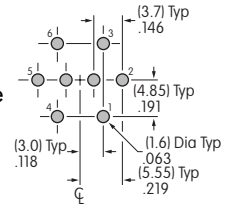
#### 03 Straight PC



Single Pole



Double Pole



### INCANDESCENT LAMP & SOLID CAP


#### Electrical Specifications

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

For dimension drawing of lamp see the Accessories & Hardware Index (page Y1).

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 (page Z1).

<b>AT611</b>  T-1 Bi-pin		<b>05</b>	<b>12</b>	<b>28</b> *	* Lamp life is significantly reduced in applications with DC current, high shock, vibration, flashing, or continuous illumination.	
	Voltage	V	5V AC	12V AC		28V AC
	Current	I	115mA	60mA		22mA
	MSCP		.150	.150		.150
	Endurance	Hours	7,000 average			
Ambient Temp Range		-25°C ~ +50°C				

**00 No Lamp** Code 00 indicates that no lamp is used with the solid cap.

#### Solid Cap for Incandescent Lamp & Nonilluminated

Lens/Insert  
Colors Available:

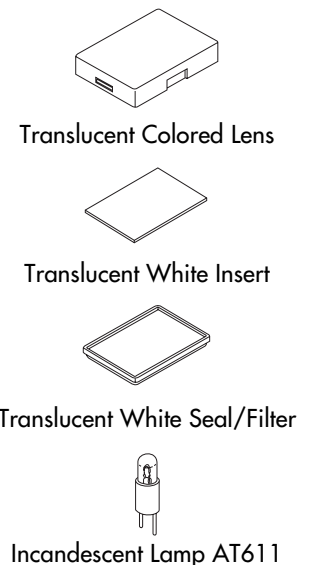
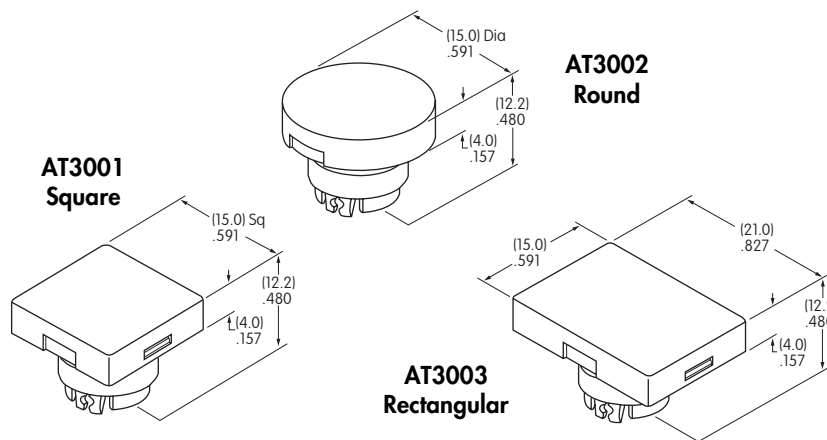
**BB** White/White

**CB** Red/White

**EB** Yellow/White

**FB** Green/White

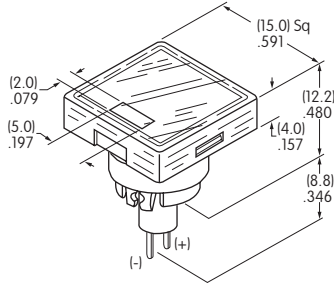
**GB** Blue/White



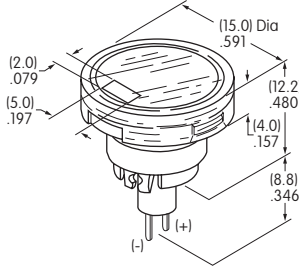
Materials: Polycarbonate (Lens & Insert)  
Thermoplastic Elastomer (Seal/Filter)

### SPOT ILLUMINATED CAP WITH BUILT-IN LED

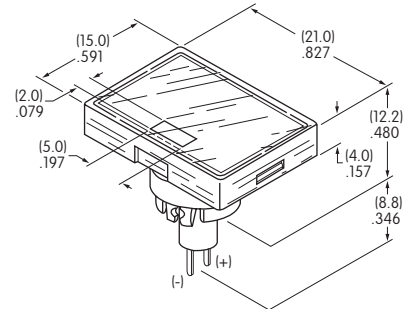
This spot-illuminated cap is factory assembled.



**AT3010**  
Square



**AT3011**  
Round



**AT3012**  
Rectangular

Colors Available:	<b>02</b>	<b>05</b>	<b>12</b>	<b>24</b>
<b>1C</b> Red <b>1D</b> Amber <b>1F</b> Green <b>1CF</b> Red/Green	w/o Resistor	w/Resistor	w/Resistor	w/Resistor
Forward Peak Current	$I_{FM}$ 20mA	15mA	15mA	12mA
Continuous Forward Current	$I_F$ 15mA	12.5mA	12.5mA	10mA
Forward Voltage	$V_F$ 2.1V	5V	12V	24V
Reverse Peak Voltage (not applicable to bicolor)	$V_{RM}$ 5V	5V	5V	5V
Current Reduction Rate Above 25°C	$\Delta I_F$ 0.27mA/°C	-----	-----	-----
Ambient Temperature Range	-25°C ~ +50°C			
Without Resistor 2-volt		With Resistor 5, 12, 24-volt		
Single Color	Bicolor	Single Color	Bicolor	
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. 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 (page Z1).				

#### Lens/Insert

#### Colors Available:

**JA** Clear/Black

**JB** Clear/White

**JC** Clear/Red

**JE** Clear/Yellow

**JF** Clear/Green



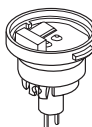
Clear Lens



Colored Insert



Seal



Built-in LED  
(integral part  
of the cap)

Example part number  
when cap is ordered separate from switch:  
**AT3010F02JA**  
for a  
Square Spot Illuminated Cap  
with Green 2-volt LED without resistor  
Clear Lens and Black Insert

Materials: Polycarbonate (Lens & Insert) and Thermoplastic Elastomer (Seal)


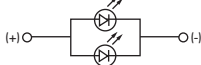
### BRIGHT LED & LED CAPS

Electrical specifications are determined at a basic temperature of 25°C.

LED circuit is independent of switch operation.

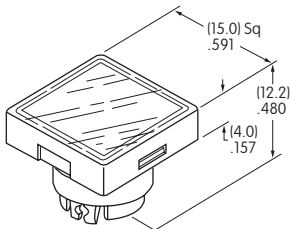
If the source voltage is greater than rated voltage, a ballast resistor is required. The ballast resistor calculation is shown in the Supplement (see page Z1) & lamp drawings are in Accessories & Hardware (see page Y1).

#### Electrical Specifications for Bright LED

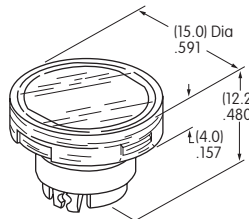
<b>Bright AT628</b>    T-1 Bi-pin		<b>Colors:</b>	<b>5C</b> Red	<b>5D</b> Amber	<b>5F</b> Green
	Forward Peak Current	$I_{FM}$	40mA	40mA	40mA
	Continuous Forward Current	$I_F$	26mA	26mA	26mA
	Forward Voltage	$V_F$	1.9V	2.0V	2.2V
	Reverse Peak Voltage	$V_{RM}$	4V	4V	4V
	Current Reduction Rate Above 25°C	$\Delta I_F$	0.50mA/°C		
	Ambient Temperature Range		-25°C ~ +50°C		

#### Cap for Bright LED

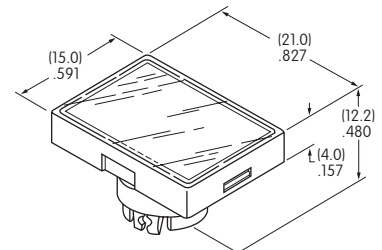
**AT3004**  
Square



**AT3005**  
Round



**AT3006**  
Rectangular



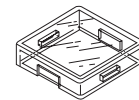
**Lens/Insert**  
**Color Codes:**

**JB** Clear/White

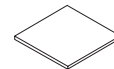
**JC** Clear/Red

**JD** Clear/Amber

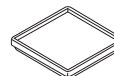
**JF** Clear/Green



Transparent Clear Lens



Translucent Colored Insert



Translucent White Seal/Diffuser



Bright LED  
AT628

Materials: Polycarbonate (Lens & Insert)  
Thermoplastic Elastomer (Seal/Diffuser)



### SUPER BRIGHT LED & LED CAPS

Electrical specifications are determined at a basic temperature of 25°C.

LED circuit is independent of switch operation.

If the source voltage is greater than rated voltage, a ballast resistor is required. The ballast resistor calculation is shown in the Supplement (see page Z1) & lamp drawings are in Accessories & Hardware (see page Y1).

#### Electrical Specifications for Super Bright LED

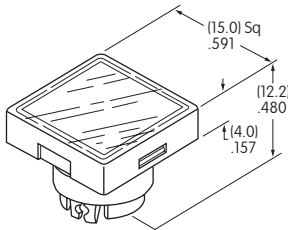
<b>Super Bright</b> <b>AT625G Blue</b> <b>AT631B White</b> <b>AT632F Green</b>			<b>Colors:</b>	<b>6B</b>	<b>6F</b>	<b>6G</b>		
				White	Green	Blue		
				Forward Peak Current	$I_{FM}$	30mA	30mA	30mA
				Continuous Forward Current	$I_F$	20mA	20mA	20mA
				Forward Voltage	$V_F$	3.6V	3.5V	3.6V
				Reverse Peak Voltage	$V_{RM}$	5V	5V	5V
				Current Reduction Rate Above 25°C	$\Delta I_F$	0.50mA/°C		
Ambient Temperature Range		-25°C ~ +50°C						



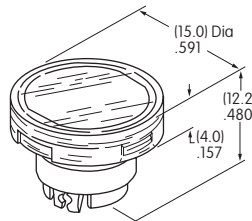
T-1 Bi-pin

#### Cap for Super Bright LED

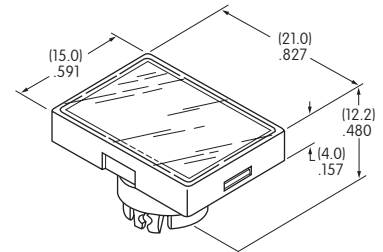
**AT3014**  
Square



**AT3015**  
Round



**AT3016**  
Rectangular



**Lens/Insert**  
**Colors Available:**

**JB** Clear/White

Materials: Polycarbonate (Lens & Insert)  
Thermoplastic Elastomer (Seal/Diffuser)




Super Bright LEDs  
AT625 AT631  
AT632

### BICOLOR LED & LED CAPS

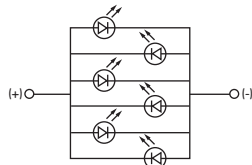
Electrical specifications are determined at a basic temperature of 25°C.  
LED circuit is independent of switch operation.

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 (page Z1).

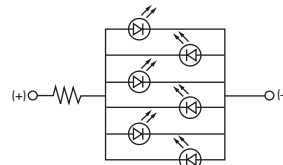
#### Electrical Specifications for Bicolor LED

<b>Bicolor AT621</b> <b>2CF</b> Red/Green  T-1 1/2 Bi-pin	Bicolor LED is translucent white in OFF state.	<b>02</b>	<b>05</b>	<b>12</b>	<b>24</b>	
	Forward Peak Current	$I_{FM}$	60mA	60mA	20mA	12mA
	Continuous Forward Current	$I_F$	45mA	45mA	15mA	10mA
	Forward Voltage	$V_F$	2.1V	5V	12V	24V
	Current Reduction Rate Above 25°C	$\Delta I_F$	0.80mA/°C	-----	-----	-----
	Ambient Temperature Range		-25°C ~ +50°C			

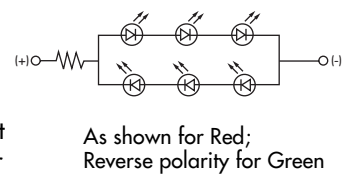
AT621  
Bicolor LED  
with  
6 Elements  
2-volt  
w/o Resistor



AT621  
Bicolor LED  
with  
6 Elements  
5-volt  
with Resistor

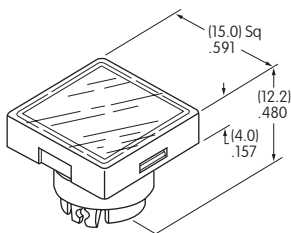


AT621  
Bicolor LED  
with  
6 Elements  
12 & 24-volt  
with Resistor

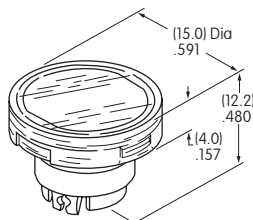


#### LED Caps

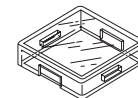
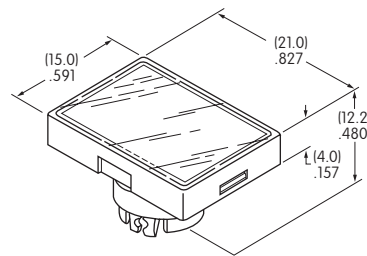
**Square AT3004**



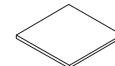
**Round AT3005**



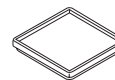
**Rectangular AT3006**



Transparent Clear Lens



Transparent Colored Insert



Translucent White Seal Diffuser

Lens/Insert  
Colors Available:

**JB** Clear/White

Materials: Polycarbonate (Lens & Insert)  
Thermoplastic Elastomer (Seal/Diffuser)



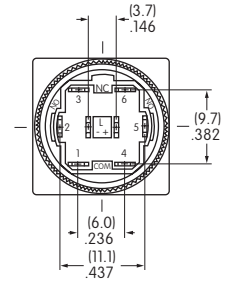
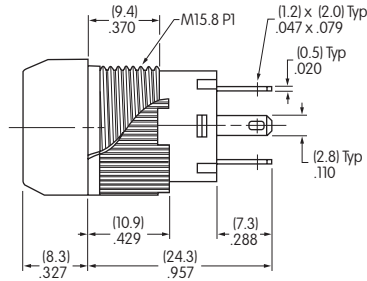
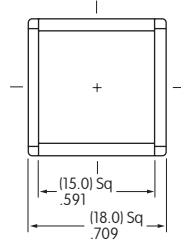
Bicolor AT621



### TYPICAL SWITCH DIMENSIONS

#### Square • Bushing Mounting

#### Single & Double Pole

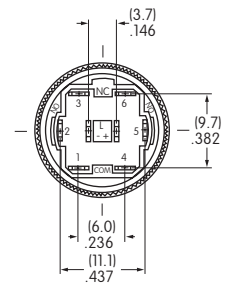
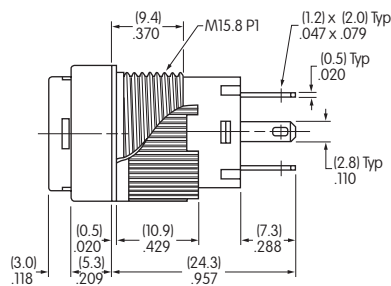
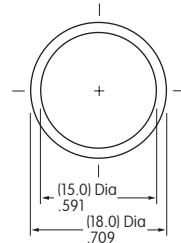


YB15SKW01-12-CB

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

#### Round • Panel Seal

#### Single & Double Pole

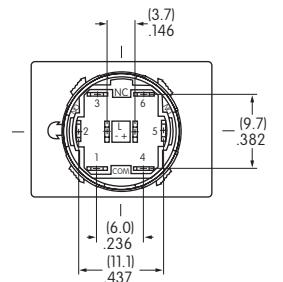
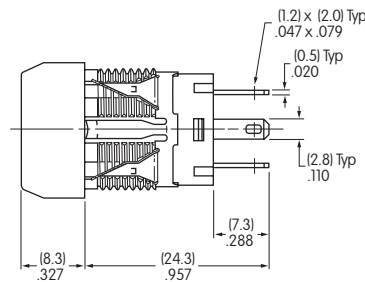
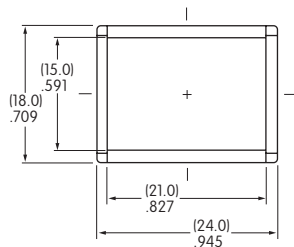


YB25WCKW01-12-EB

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

#### Rectangular • Snap-in Mounting

#### Single & Double Pole



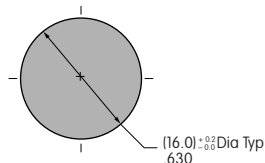
YB15NKW01-C04-JC

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

### PANEL THICKNESS & CUTOUTS

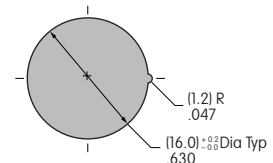
#### Bushing & Panel Seal Mount

Panel Thickness  
0.5mm ~ 5.0mm  
(.020" ~ .197")



#### Snap-in Mount

Panel Thickness  
1.0mm ~ 3.5mm  
(.039" ~ .138")



### OPTIONAL ACCESSORIES

Panel thickness range with **Splash Cover or Protective Guard**: 0.5 ~ 3.8mm (.020 ~ .150") for Bushing Mounting  
0.5 ~ 2.3mm (.020 ~ .091") for Snap-in Mounting

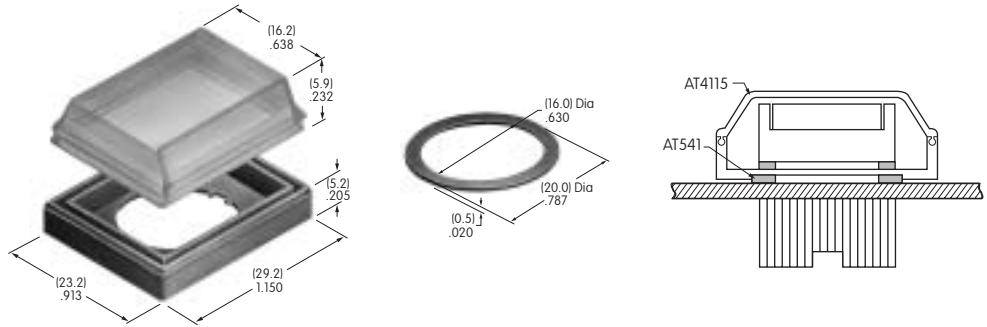
Splash Covers and Protective Guards reduce the depth of switch behind panel by .047mm.

#### Dust/Splash Cover

**AT4115**  
Dust Cover  
for Snap-in or Bushing Mount

**AT4115 with AT541 O-ring**  
Splash Cover  
for Bushing Mount

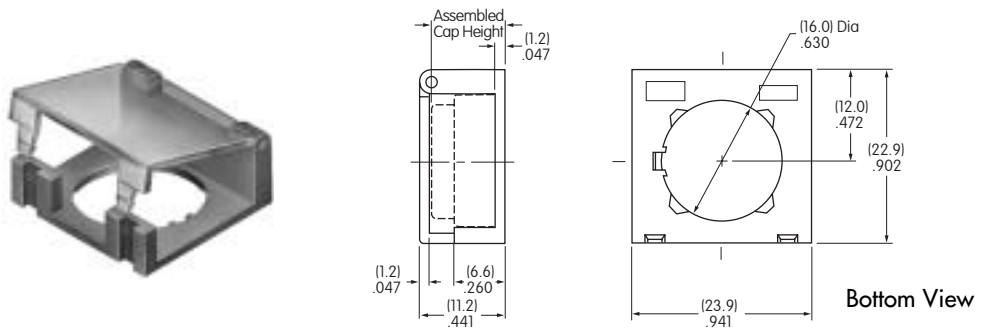
**Materials:**  
Lid: Polyvinyl Chloride  
Base: Polyamide  
O-ring: Nitrile butadiene rubber



#### Protective Guard

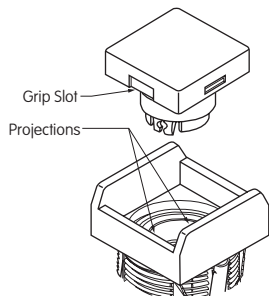
**AT4072**  
Protective Guard

**Materials:**  
Lid: Polycarbonate  
Base: Glass Fiber Reinforced Polycarbonate

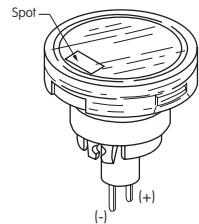
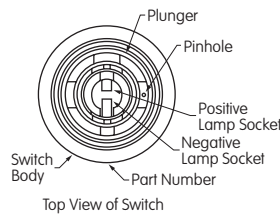


### ASSEMBLY INSTRUCTIONS

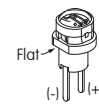
#### Cap Assembly



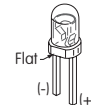
#### LED Polarity & Orientation in Lamp Socket



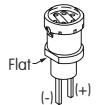
Spot Illuminated Cap with Built-in LED



LED AT628



LEDs AT625 AT631 AT632



LED AT621

**AT106 Socket Wrench**  
for Bushing Mounting



Overtightening the mounting nut may damage the switch housing.

**AT109 Cap Extractor**



**AT111 Lamping Tool**



### LEGENDS

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

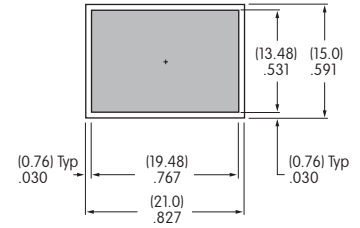
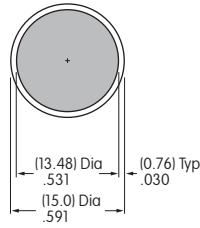
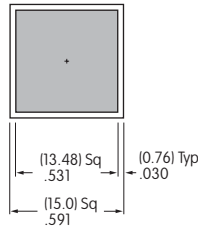
#### Suggested Printable Area for Lens



**Recommended Print Method:**

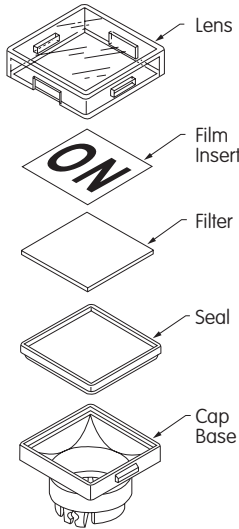
Screen Print or Pad Print

Epoxy based ink is recommended.



Shaded areas are printable areas.

#### Suggested Printable Area for Film Insert



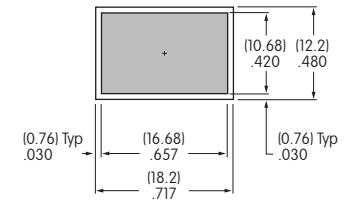
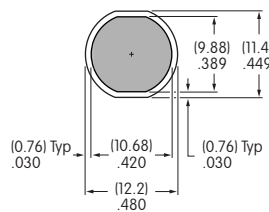
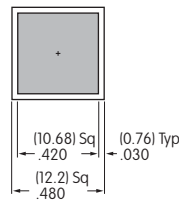
**Film Material and Thickness:**

Clear Polyester, 4 mil max.

**Recommended Print Method:**

Screen Print

Epoxy based ink is recommended.

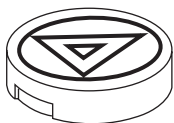


Shaded areas are printable areas.

#### 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 YB 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.