

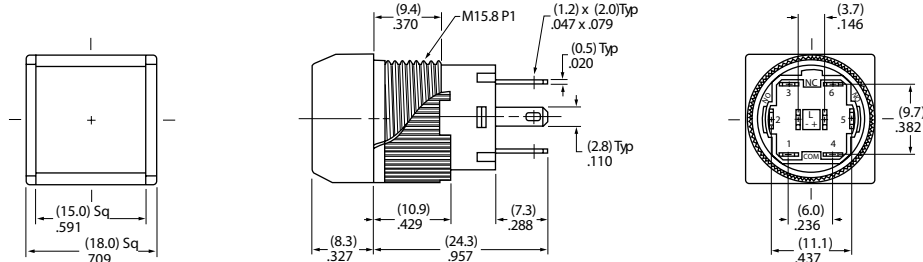
## Short Body Pushbuttons

## YB Series

Square • Bushing Mounting



Single & Double Pole



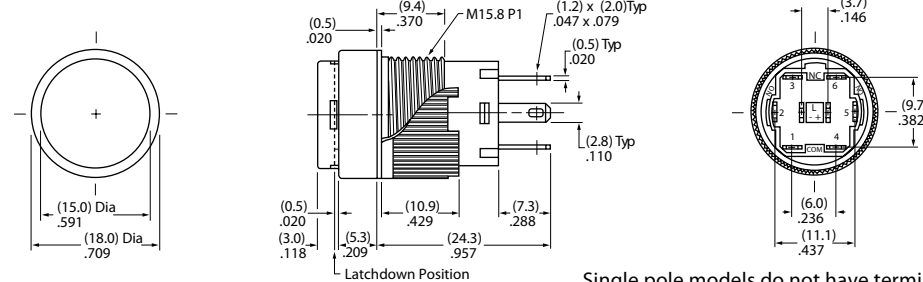
**YB15SKW01-12-CB**

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

Round • Panel Seal



Single & Double Pole



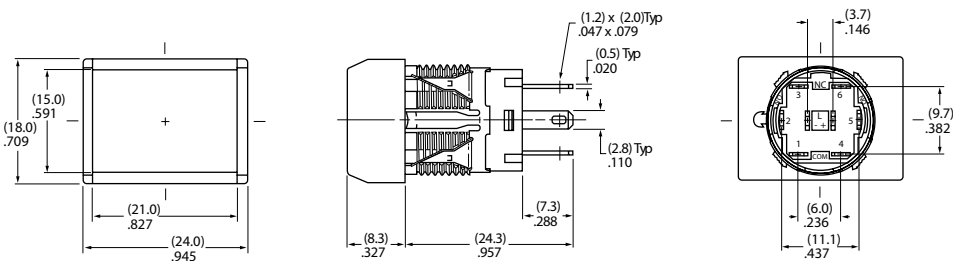
**YB26WCKW01-12-EB**

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

Rectangular • Snap-in Mounting



Single & Double Pole



**YB15NKW01-5C-JC**

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

### How to order:

YB        -  -

- 1 POLES:**
- 1 SPDT
- 2 DPDT
- 2 CIRCUITS:**
- 5 ON-(ON)
- 6 ON-ON (Alternate Action with Latchdown)
- 3 PANEL SEAL:**
- Blank Without Panel Seal
- W With Panel Seal (Bushing Mount only)
- 4 SHAPES:**
- Bushing Mounting
- S Square
- C Round
- R Rectangular
- Snap-in Mounting
- K Square
- M Round
- N Rectangular
- 5 HOUSING:**
- K Black only
- 6 CONTACTS & RATINGS:**
- W Silver
- Rated 3A @ 125V AC
- G Gold
- Rated 0.4VA @ 28V AC/DC
- 7 TERMINALS:**
- 01 Solder Lug/.110" (2.8mm)
- Quick Connect
- 03 Straight PC

- 8 LAMPS:**
- Type1: Incandescent Lamp
- 05 5-volt
- 12 12-volt

Type2: LED for Spot Illuminated Cap

	2-volt (No Resistor)	5-volt	12-volt	24-volt
Red	1C02	1C05	1C12	1C24
Amber	1D02	1D05	1D12	1D24
Green	1F02	1F05	1F12	1F24
Red/Green	1CF02	1CF05	1CF12	1CF24

Type 3: Bright LED

	No Resistor	5-volt	12-volt	24-volt
Red	5C	5C05	5C12	5C24
Amber	5D	5D05	5D12	5D24
Green	5F	5F05	5F12	5F24

Type 4: Super Bright LED

- 6B White
- 6F Green
- 6G Blue

Type 5: Bicolor LED for Full Face Illuminated

	2-volt (No Resistor)	5-volt	12-volt	24-volt
Red/Green	2CF02	2CF05	2CF12	2CF24

**9 CAPS TYPES & COLORS:**

Solid Cap: Lens/Insert Colors (for type 1 lamp)

- BB White/White
- CB Red/White
- EB Yellow/White
- FB Green/White
- GB Blue/White

Spot Illuminated Cap: Lens/Insert Colors (for type 2 lamp)

- JA Clear/Black
- JB Clear/White
- JC Clear/Red
- JE Clear/Yellow
- JF Clear/Green

LED Cap: Lens/Insert Colors (for type 3 lamp)

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

LED Cap: Lens/Insert Colors (for type 4 lamp)

- JB Clear/White

LED Cap: Lens/Insert Colors (for type 5 lamp)

- JB Clear/White

### 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: Single pole: 1.47N for nonsealed; 1.67N for sealed  
Double pole: 2.75N for nonsealed; 2.94N for sealed
- Contact Timing: Nonshorting (break-before-make)
- Travel: Pretravel .059" (1.5mm); Overtravel .059" (1.5mm); Total Travel .118" (3.0mm)

#### Materials & Finishes

- Housing/Bezel: Glass fiber reinforced polyamide (UL94V-0)
- Snap-in Frame: Stainless steel
- Base: Diallyl phthalate resin (UL94V-0)
- Movable Contactor: Phosphor bronze with silver or gold plating
- Movable Contacts: Silver alloy with silver plating or brass with gold plating
- Stationary Contacts: Silver alloy or copper with gold plating
- Switch Terminals: Phosphor bronze with tin plating
- Lamp Terminals: Phosphor bronze with tin 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: IP65 of IEC60529 standard for panel seal models

#### Installation

- Mounting Torque: 0.785Nm (6.95 lb · in) maximum
- Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

#### Standards & Certifications

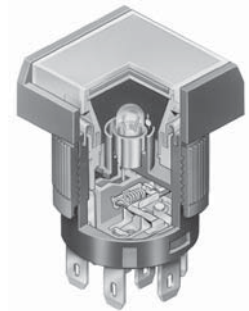
- Flammability Standards: UL94V-0 housing & base
- UL & C-UL Recognized: All models recognized at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum;  
UL File No. WOYR2.E44145; add "/U" to end of part number to order UL mark on switch.  
UL File No. WOYR8.E44145; add "/C-UL" to end of part number to order C-UL mark on switch.
- CSA Certified: All solder 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.

### POLE & CIRCUIT

### CUTAWAY

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Switch/Lamp Schematics
		Normal	Down	Normal	Down	
SP	YB15 *YB16	ON ON	(ON) ON	1-3 1-2		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 .020" (0.5mm) above the built-in bezel.



### PANEL SEAL

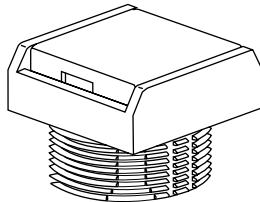
**No Code**

Without Panel Seal

**W**

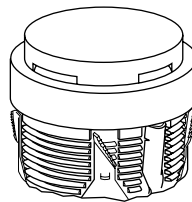
With Panel Seal

Bushing Mounting

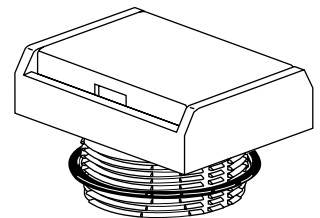


Supplied with mounting nut.

Snap-in Mounting



Bushing Mounting only



Supplied with mounting nut and o-ring AT089.

### SHAPES & MOUNTING TYPES

Bushing Mounting

Snap-in Mounting

**S**

Square

**C**

Round

**R**

Rectangular

**K**

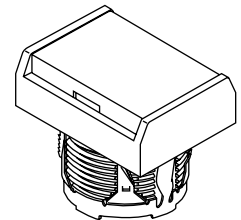
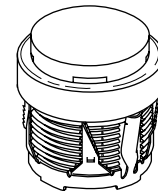
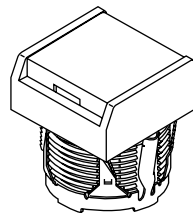
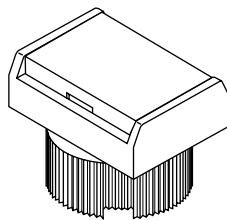
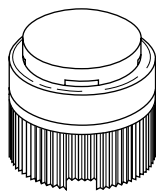
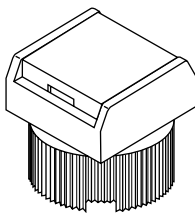
Square

**M**

Round

**N**

Rectangular

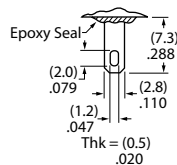


Bezel-barrier is an integral part of the switch body.

### TERMINALS

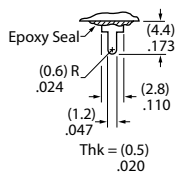
**01**

Solder Lug/  
.110" (2.8mm) Quick Connect

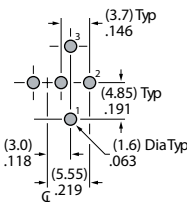


**03**

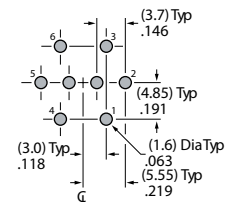
Straight PC



Single Pole



Double Pole



### INCANDESCENT LAMP & SOLID CAP

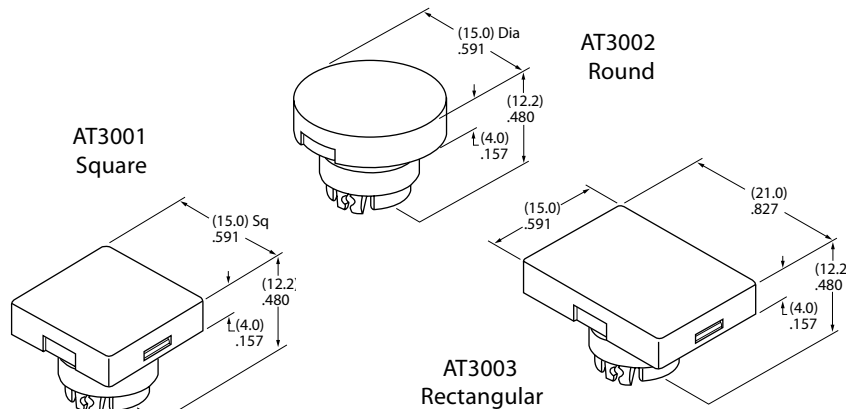
Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.  
For dimension drawing of lamp see the Accessories & Hardware section.

 AT611 T-1 Bi-pin		<b>05</b>	<b>12</b>	
	Voltage	V	5V AC	12V AC
	Current	I	115mA	60mA
	MSCP		.150	.150
	Endurance	Hours	7,000 average	
	Ambient Temperature Range		-25°C ~ +50°C	

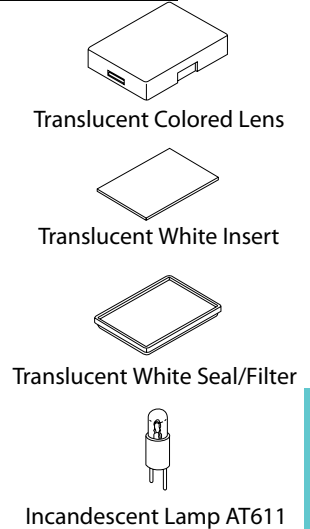
### Solid Cap for Incandescent Lamp

Lens/Insert  
Colors Available:

- BB** White/White
- CB** Red/White
- EB** Yellow/White
- FB** Green/White
- GB** Blue/White



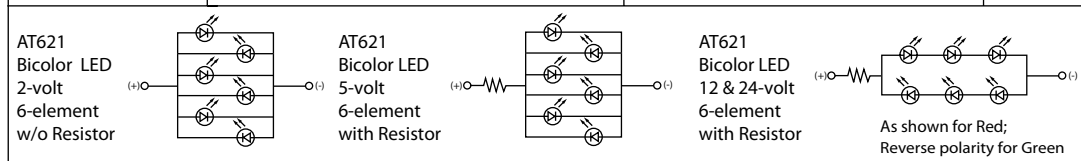
Materials: Polycarbonate (Lens & Insert)  
Thermoplastic Elastomer (Seal/Filter)



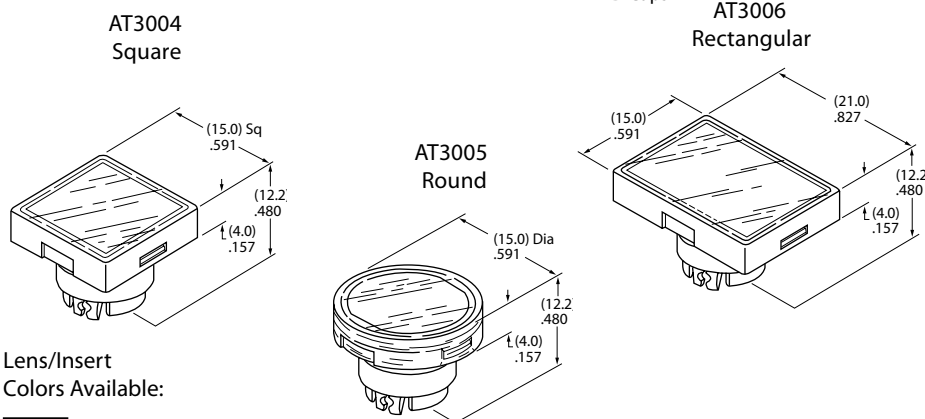
### BICOLOR LED & LED CAPS

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

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



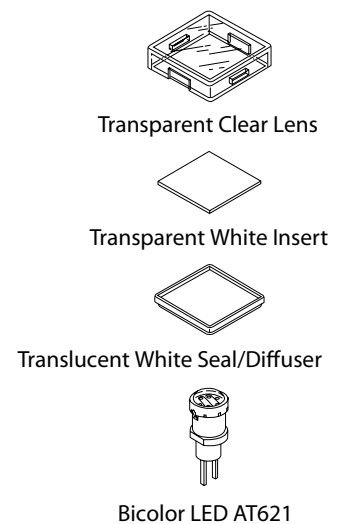
### LED Caps



Lens/Insert  
Colors Available:

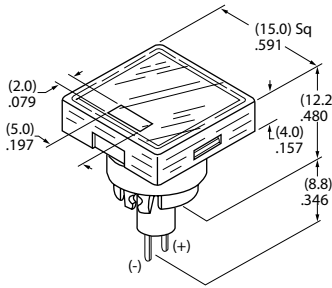
- JB** Clear/White

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

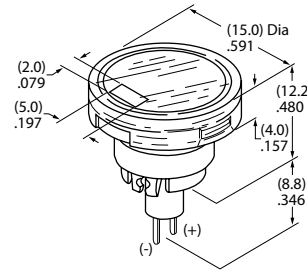


### SPOT ILLUMINATED CAP WITH BUILT-IN LED

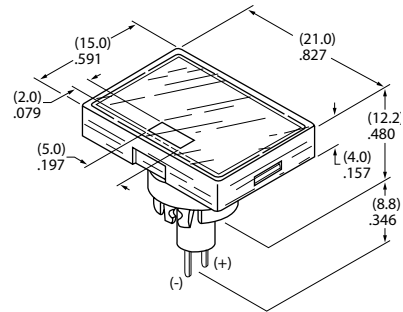
This spot-illuminated cap is factory assembled.



AT3010  
Square



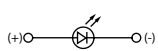
AT3011  
Round



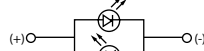
AT3012  
Rectangular

Colors Available:	02	05	12	24	Unit
<span style="border: 1px solid black; padding: 2px;">1C</span> Red <span style="border: 1px solid black; padding: 2px;">1D</span> Amber <span style="border: 1px solid black; padding: 2px;">1F</span> Green <span style="border: 1px solid black; padding: 2px;">1CF</span> Red/Green	w/o Resistor	w/Resistor	w/Resistor	w/Resistor	
Forward Peak Current	$I_{FM}$ 20	15	15	12	mA
Continuous Forward Current	$I_F$ 15	12.5	12.5	10	mA
Forward Voltage	$V_F$ 2.1	5	12	24	V
Reverse Peak Voltage (not applicable to bicolor)	$V_{RM}$ 5	5	5	5	V
Current Reduction Rate Above 25°C	$\Delta I_F$ 0.27	----	----	----	mA/°C
Ambient Temperature Range	-25 ~ +50				°C

Without Resistor 2-volt

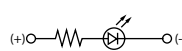


Single Color

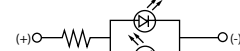


Bicolor

With Resistor 5, 12, 24-volt



Single Color



Bicolor

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 LED is translucent white in OFF state.

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.

Lens/Insert

Colors Available:

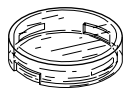
JA Clear/Black

JB Clear/White

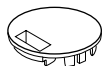
JC Clear/Red

JE Clear/Yellow

JF Clear/Green



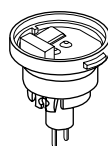
Clear Lens



Colored Insert



Seal




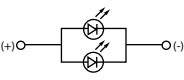
Built-in LED  
(integral part  
of the cap)


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)

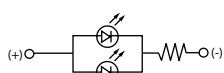
### BRIGHT LED & LED CAP

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

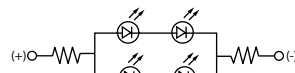
Electrical Specifications for Bright LED without Resistor									
Bright AT628   T-1 Bi-pin	Colors Available:	<b>5C</b> Red	<b>5D</b> Amber	<b>5F</b> Green	<b>No Code</b>	No Resistor		Unit	
		LED Colors			Red	Amber	Green		
	Forward Peak Current	$I_{FM}$			40	40	40		mA
	Continuous Forward Current	$I_F$			26	26	26		mA
	Forward Voltage	$V_F$			1.9	2.0	2.2		V
	Reverse Peak Voltage	$V_{RM}$			4	4	4		V
	Current Reduction Rate Above 25°C	$\Delta I_F$			0.50				mA/°C
	Ambient Temperature Range				-25 ~ +50				°C

Electrical Specifications for Bright LED with Resistor									
Bright AT634  T-1 1/4 Bi-pin	Colors Available:	<b>5C</b> Red	<b>5D</b> Amber	<b>5F</b> Green	<b>05</b>	<b>12</b>	<b>24</b>	Unit	
	Forward Peak Current	$I_{FM}$			—	—	—		mA
	Continuous Forward Current	$I_F$			25	20	10		mA
	Forward Voltage	$V_F$			5	12	24		V
	Reverse Peak Voltage	$V_{RM}$			4	8	16		V
	Current Reduction Rate Above 25°C	$\Delta I_F$			----	----	----		mA/°C
	Ambient Temperature Range				-25 ~ +50				°C

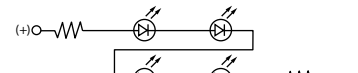
AT634  
5-volt,  
2-element  
with Resistor



AT634  
12-volt,  
4-element  
with Resistor



AT634  
24-volt,  
4-element  
with Resistor



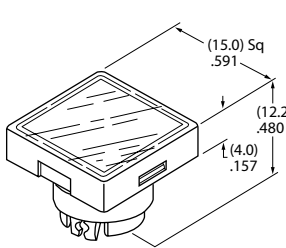
### Cap for Bright LED

Lens/Insert  
Colors Available:

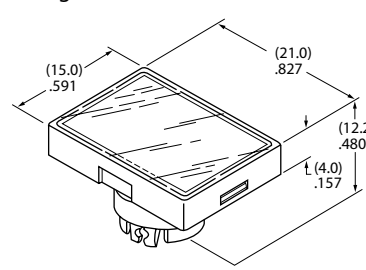
- JB** Clear/White
- JC** Clear/Red
- JD** Clear/Amber
- JF** Clear/Green

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

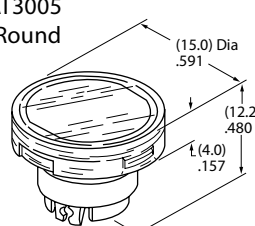
AT3004  
Square



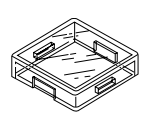
AT3006  
Rectangular



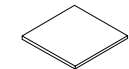
AT3005  
Round



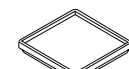

Transparent Clear Lens



Translucent Colored Insert



Translucent White Seal/Diffuser

Bright LEDs  
AT628 AT634

Illuminated Switches

### SUPER BRIGHT LED & LED CAPS

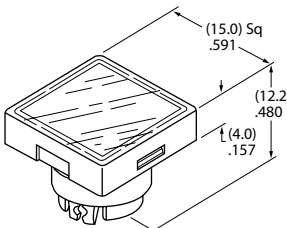
The electrical specifications shown are determined at a basic temperature of 25°C.  
 LED circuit is isolated and requires external power source.  
 If the source voltage exceeds the rated voltage, a ballast resistor is required.  
 The resistor value can be calculated by using the formula in the Supplement section.

#### Electrical Specifications for Super Bright LED

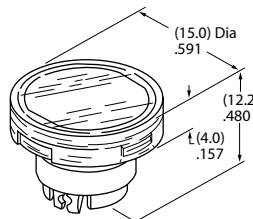
Super Bright AT625G Blue AT631B White AT632F Green			Colors:			Unit
			6B White	6F Green	6G Blue	
 T-1 Bi-pin	Forward Peak Current	$I_{FM}$	30	30	30	mA
	Continuous Forward Current	$I_F$	20	20	20	mA
	Forward Voltage	$V_F$	3.6	3.5	3.6	V
	Reverse Peak Voltage	$V_{RM}$	5	5	5	V
	Current Reduction Rate Above 25°C	$\Delta I_F$	0.50			mA/°C
	Ambient Temperature Range	-25 ~ +50			°C	

#### Cap for Super Bright LED

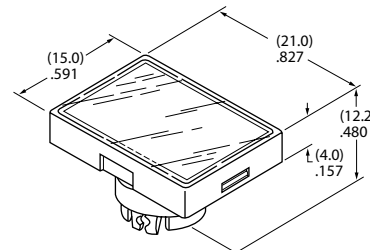
AT3014  
Square



AT3015  
Round

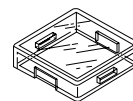


AT3016  
Rectangular



Lens/Insert  
Colors Available:

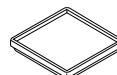
**JB** Clear/White



Transparent Clear Lens



Translucent White Insert



Translucent White Seal/Diffuser



Super Bright LEDs  
AT625 AT631  
AT632

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

### OPTIONAL ACCESSORIES

Dust Covers and Protective Guards reduce depth of switch behind panel by .047" (1.2mm).

Panel Thickness Range with Dust Cover or Protective Guards:

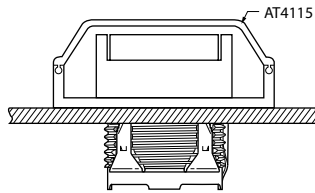
Bushing Mounting  
.020" ~ .150" (0.5mm ~ 3.8mm)

Snap-in Mounting  
.020" ~ .091" (0.5mm ~ 2.3mm)

Panel Seal  
.020" ~ .118" (0.5mm ~ 3.0mm)

AT4115 Dust Cover  
for Snap-in or  
Bushing Mount

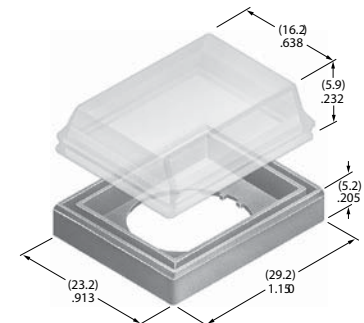
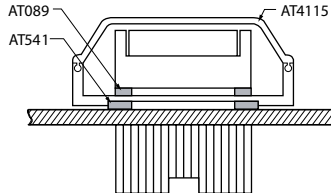
Dust Cover



AT4115 Splash Cover  
and AT541 O-ring  
for Bushing Mount

Dust/Splash Cover

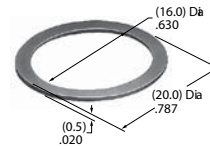
Splash Cover



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

Snap-in Mount

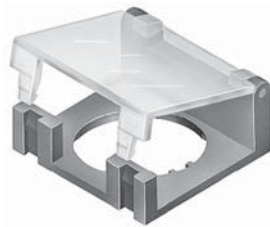
Panel Seal



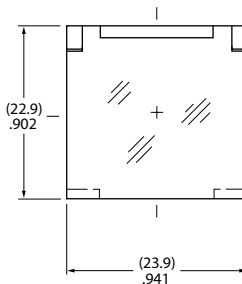
AT541

Note: AT089 o-ring supplied  
with panel seal model.

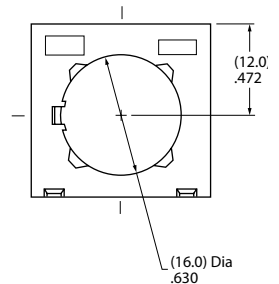
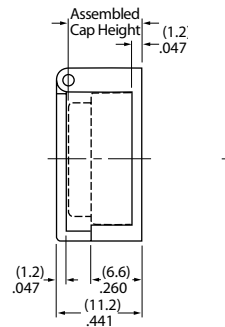
AT4072 Protective Guard  
Opens 90°  
Closes manually



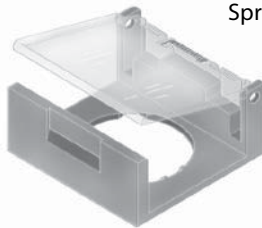
Protective Guard



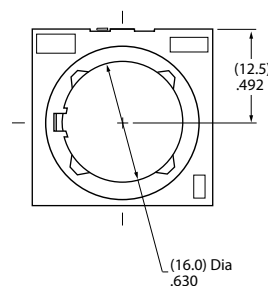
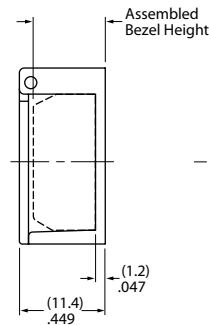
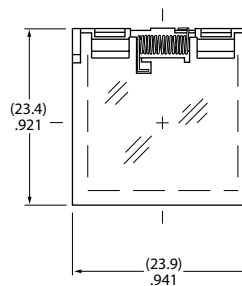
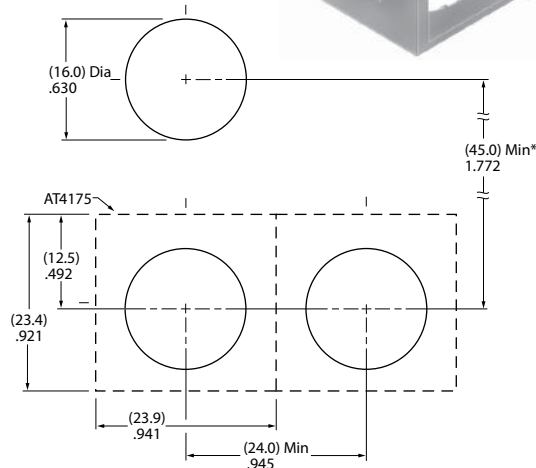
Materials:  
Lid: Polycarbonate  
Base: Glass Fiber  
Reinforced Polycarbonate



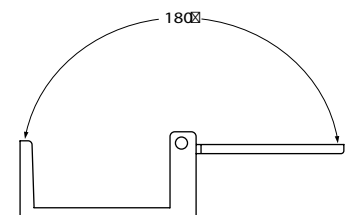
AT4175 Spring Loaded  
Protective Guard  
Opens 180°  
Closes automatically



Spring Loaded Protective Guard



Materials :  
Lid: Polycarbonate  
Base: Glass Fiber Reinforced Polyamide  
Coil Spring: Stainless Steel

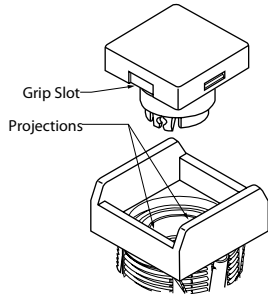


\* Minimum dimension allows opening of cover to 180°

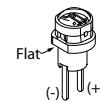
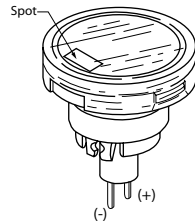
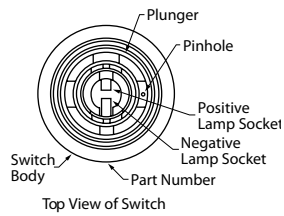


### ASSEMBLY INSTRUCTIONS

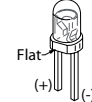
#### Cap Assembly



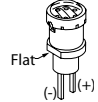
#### LED Polarity & Orientation in Lamp Socket



LED  
AT628  
AT634



LEDs  
AT625G  
AT631B AT632F



LED  
AT621

Spot Illuminated Cap  
with Built-in LED

The following installation tools are available: AT106 Socket Wrench for bushing mounting (Overtightening the mounting nut AT092 may damage the switch housing.); AT109 Cap Extractor; AT111 Lamping Tool.  
Further details and dimensions are shown in the Accessories and Hardware section.

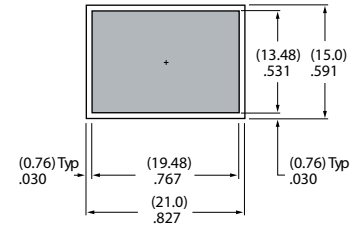
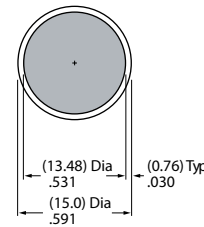
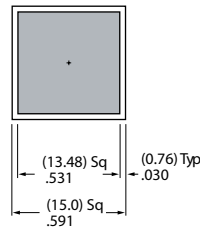
### LEGENDS

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

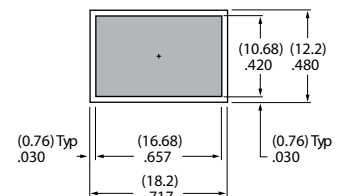
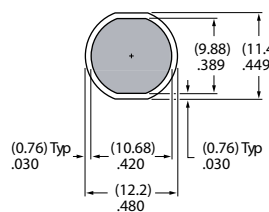
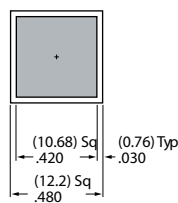
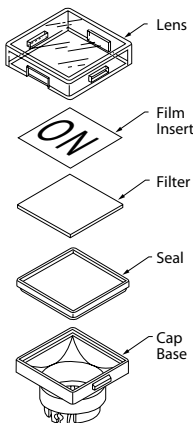
Recommended Methods: Laser Etch on clear lens, Screen Print or Pad Print on lens.  
Epoxy based ink is recommended.

Illuminated Switches

#### Shaded Areas Are Printable Areas for Lens



#### Shaded Areas Are Printable Areas for Film Insert



Film Material and Thickness:  
Clear Polyester, 4 mil max.

Recommended Print Method:  
Screen Print; Epoxy based ink is recommended.

#### Additional Methods

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