

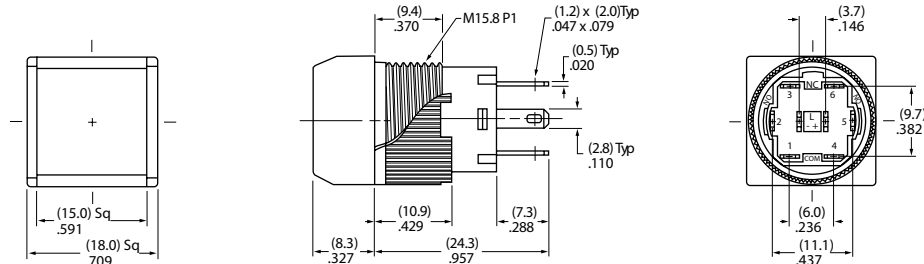
Short Body Pushbuttons

YB Series

Square • Bushing Mounting



Single & Double Pole



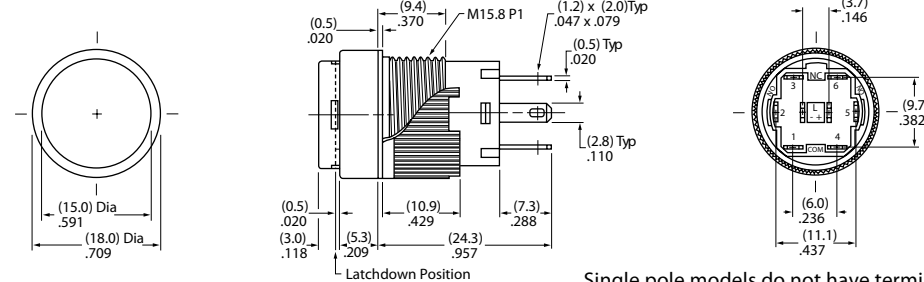
YB15SKW01-12-CB

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

Round • Panel Seal



Single & Double Pole



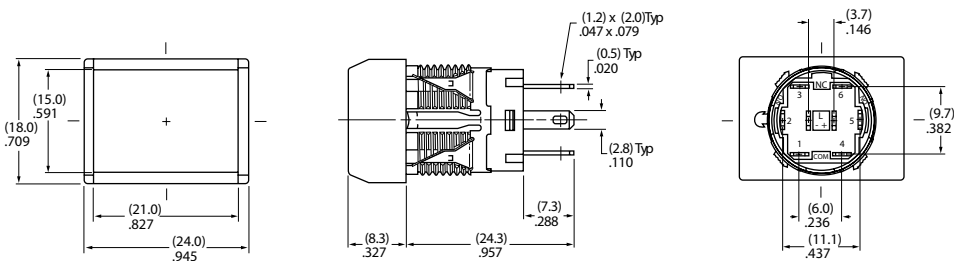
YB26WCKW01-12-EB

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 ²) 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

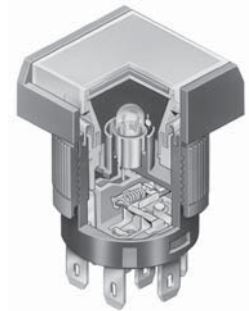
Flammability Standards:	UL94V-0 housing & base
UL & C-UL Recognized:	All models recognized at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum; UL File No. WOYR2.E44145; add "/U" to end of part number to order UL mark on switch. UL File No. WOYR8.E44145; add "/C-UL" to end of part number to order C-UL 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 latchdown position for the alternate circuit, cap position is .020" (0.5mm) above the built-in bezel.



PANEL SEAL

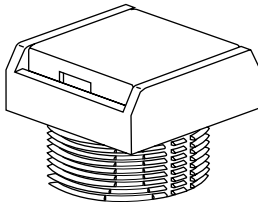
No Code

Without Panel Seal

W

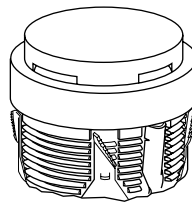
With Panel Seal

Bushing Mounting

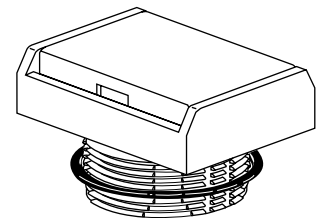


Supplied with mounting nut.

Snap-in Mounting



Bushing Mounting only



Supplied with mounting nut and o-ring AT089.

SHAPES & MOUNTING TYPES

Bushing Mounting

Snap-in Mounting

S Square

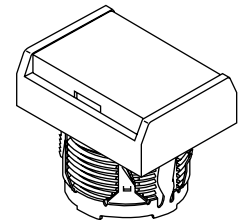
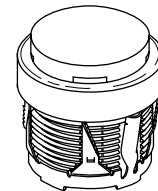
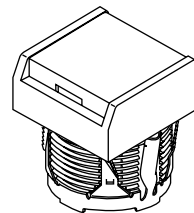
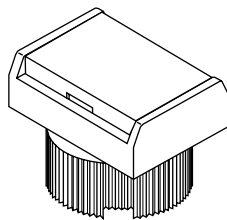
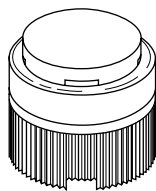
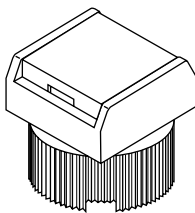
C Round

R Rectangular

K Square

M Round

N Rectangular

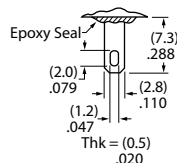


Bezel-barrier is an integral part of the switch body.

TERMINALS

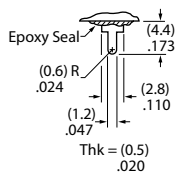
01

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

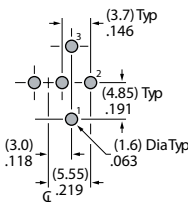


03

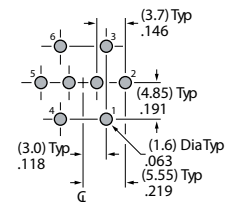
Straight PC



Single Pole



Double Pole



INCANDESCENT LAMP & SOLID CAP

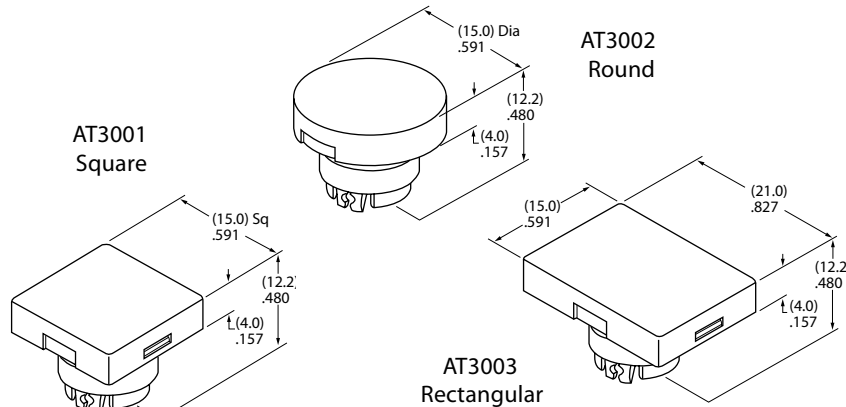
Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.
For dimension drawing of lamp see the Accessories & Hardware section.

 AT611 T-1 Bi-pin		05	12	
	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	

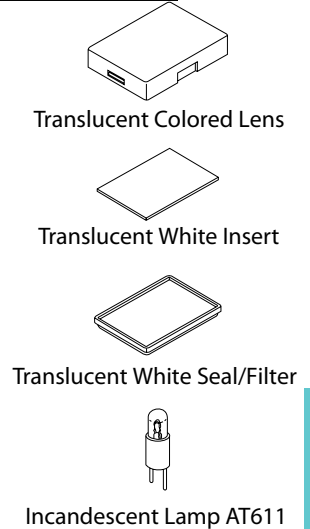
Solid Cap for Incandescent Lamp

Lens/Insert
Colors Available:

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



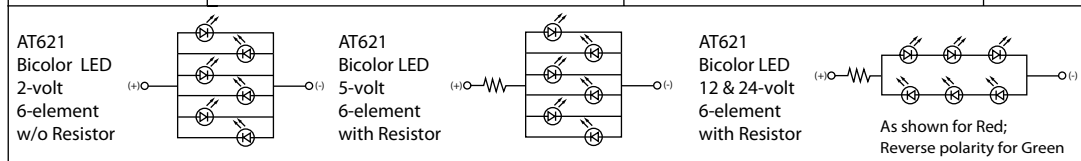
Materials: Polycarbonate (Lens & Insert)
Thermoplastic Elastomer (Seal/Filter)



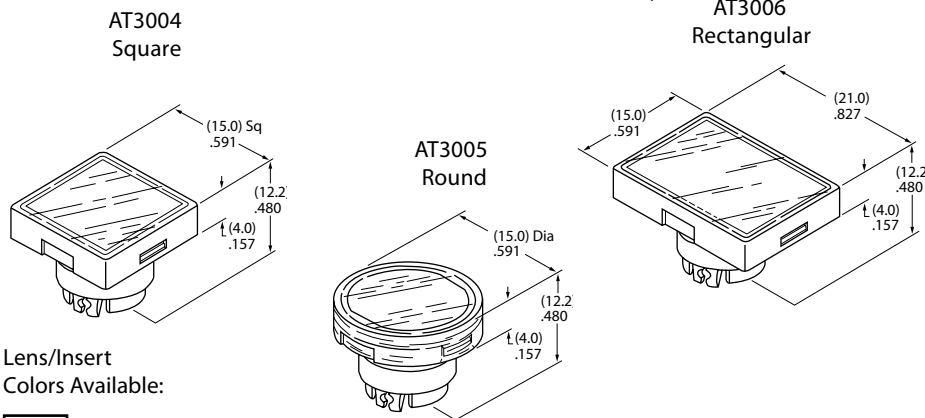
BICOLOR LED & LED CAPS

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 2CF T-1 1/2 Bi-pin		02	05	12	24	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	ΔI_F	0.80	---	---	---	mA/°C
Ambient Temperature Range		-25 ~ +50				°C	



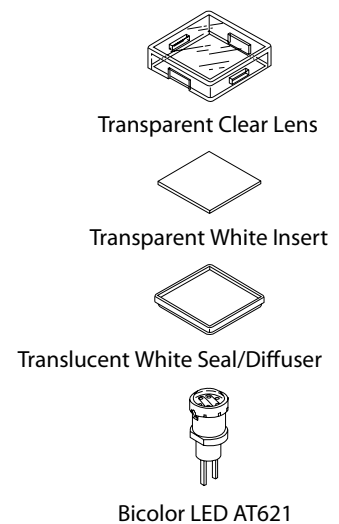
LED Caps



Lens/Insert
Colors Available:

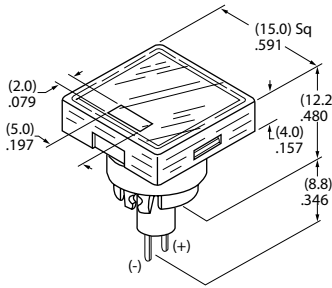
- JB** Clear/White

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

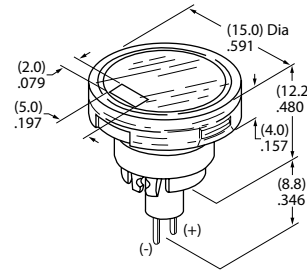


SPOT ILLUMINATED CAP WITH BUILT-IN LED

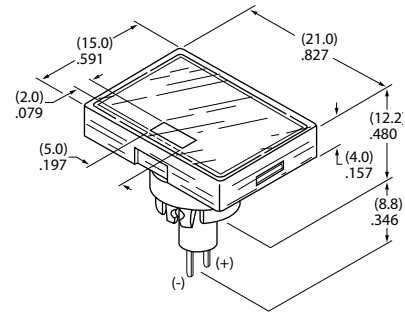
This spot-illuminated cap is factory assembled.



AT3010
Square



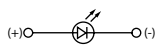
AT3011
Round



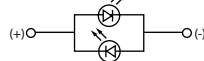
AT3012
Rectangular

Colors Available:	02	05	12	24	Unit
1C Red 1D Amber 1F Green 1CF 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	ΔI_F 0.27	----	----	----	mA/°C
Ambient Temperature Range	-25 ~ +50				°C

Without Resistor 2-volt

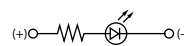


Single Color

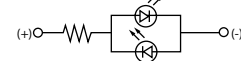


Bicolor

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

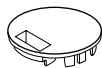
JC Clear/Red

JE Clear/Yellow

JF Clear/Green



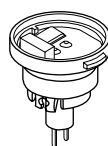
Clear Lens



Colored Insert



Seal




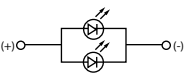
Built-in LED
(integral part
of the cap)


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

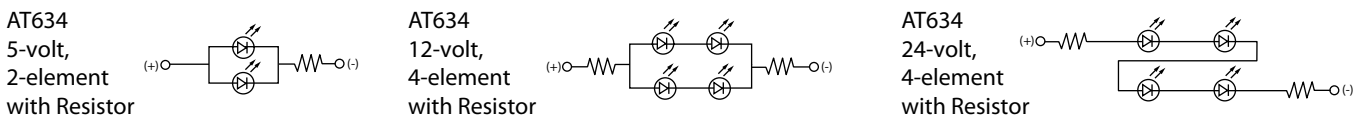
Materials: Polycarbonate (Lens & Insert) and Thermoplastic Elastomer (Seal)

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:	5C Red	5D Amber	5F Green	No Code	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	ΔI_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:	5C Red	5D Amber	5F Green	05	12	24	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	ΔI_F			----	----	----		mA/°C
	Ambient Temperature Range				-25 ~ +50				°C

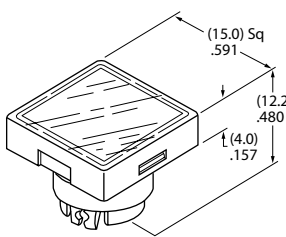


Cap for Bright LED

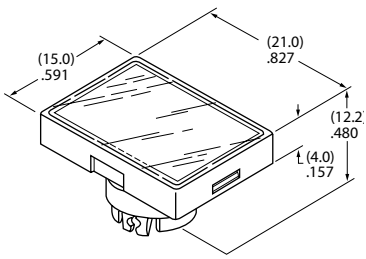
Lens/Insert Colors Available:

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

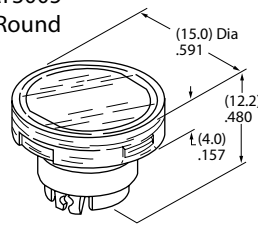
AT3004 Square

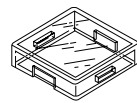


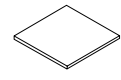
AT3006 Rectangular

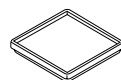


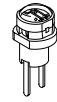
AT3005 Round




 Transparent Clear Lens


 Translucent Colored Insert


 Translucent White Seal/Diffuser


 Bright LEDs
 AT628 AT634

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

Illuminated Switches

SUPER BRIGHT LED & LED CAPS

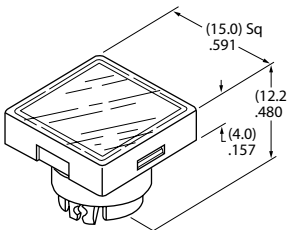
The electrical specifications shown are determined at a basic temperature of 25°C.
 LED circuit is isolated and requires external power source.
 If the source voltage exceeds the rated voltage, a ballast resistor is required.
 The resistor value can be calculated by using the formula in the Supplement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

Electrical Specifications for Super Bright LED

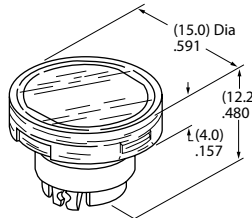
Super Bright AT625G Blue AT631B White AT632F Green			Colors:			Unit
			6B White	6F Green	6G Blue	
 T-1 Bi-pin	Forward Peak Current	I_{FM}	30	30	30	mA
	Continuous Forward Current	I_F	20	20	20	mA
	Forward Voltage	V_F	3.6	3.5	3.6	V
	Reverse Peak Voltage	V_{RM}	5	5	5	V
	Current Reduction Rate Above 25°C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

Cap for Super Bright LED

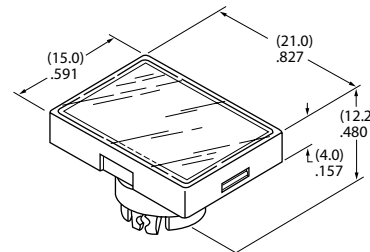
AT3014
Square



AT3015
Round

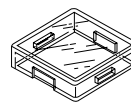


AT3016
Rectangular

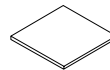


Lens/Insert
Colors Available:

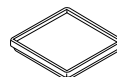
JB Clear/White



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:

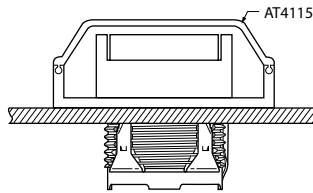
Bushing Mounting
.020" ~ .150" (0.5mm ~ 3.8mm)

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

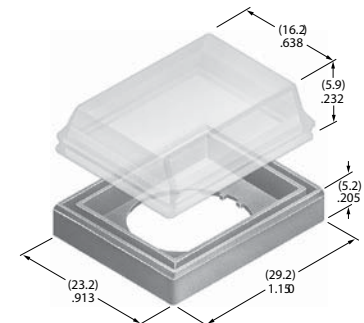
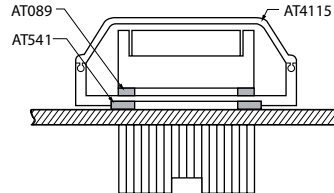
Dust Cover



AT4115 Splash Cover
and AT541 O-ring
for Bushing Mount

Dust/Splash Cover

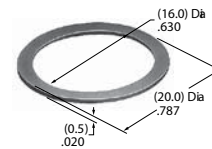
Splash Cover



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

Snap-in Mount

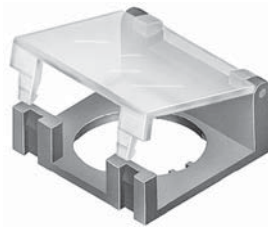
Panel Seal



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

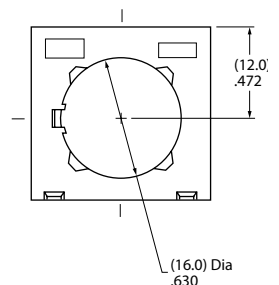
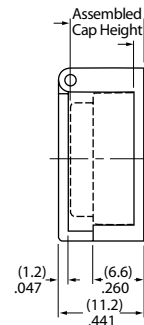
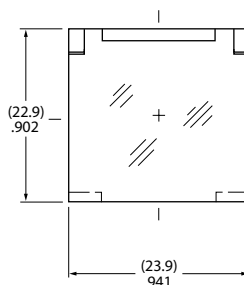
AT541

AT4072 Protective Guard
Opens 90°
Closes manually



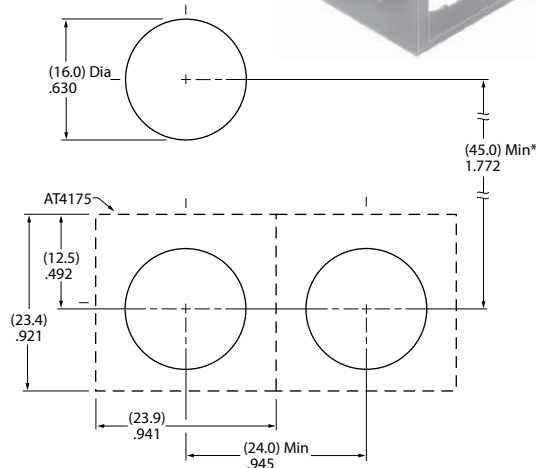
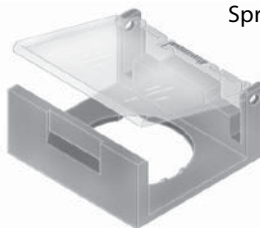
Materials:
Lid: Polycarbonate
Base: Glass Fiber
Reinforced Polycarbonate

Protective Guard

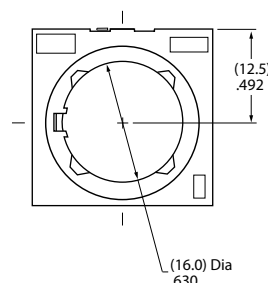
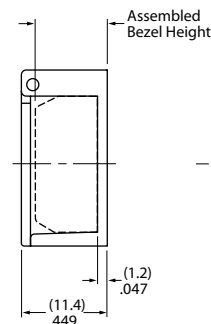
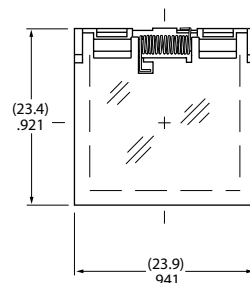


Illuminated Switches

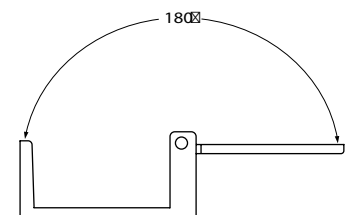
AT4175 Spring Loaded
Protective Guard
Opens 180°
Closes automatically



Spring Loaded Protective Guard



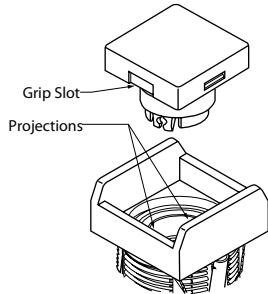
Materials :
Lid: Polycarbonate
Base: Glass Fiber Reinforced Polyamide
Coil Spring: Stainless Steel



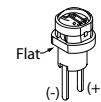
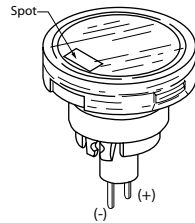
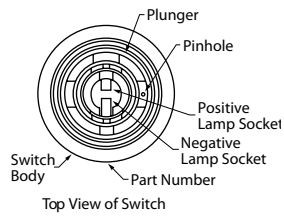
* Minimum dimension allows opening of cover to 180°

ASSEMBLY INSTRUCTIONS

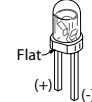
Cap Assembly



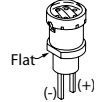
LED Polarity & Orientation in Lamp Socket



LED
AT628
AT634



LEDs
AT625G
AT631B AT632F



LED
AT621

Spot Illuminated Cap
with Built-in LED

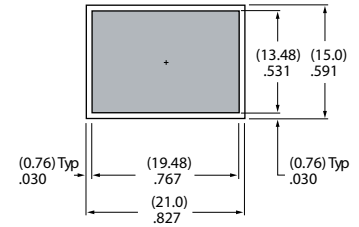
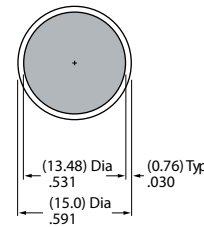
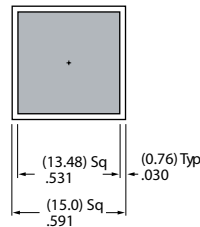
The following installation tools are available: AT106 Socket Wrench for bushing mounting (Overtightening the mounting nut AT092 may damage the switch housing.); AT109 Cap Extractor; AT111 Lamping Tool. Further details and dimensions are shown in the Accessories and Hardware section.

LEGENDS

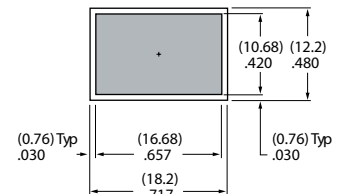
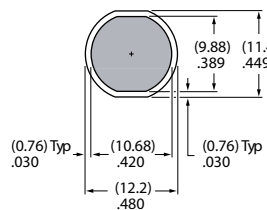
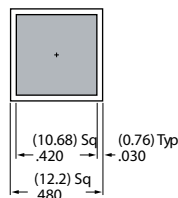
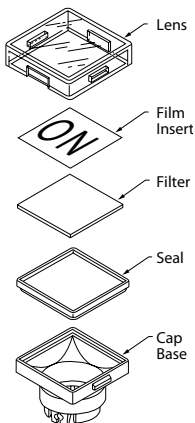
General information and basic specifications are presented here for customers who want to do their own legends.

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

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.