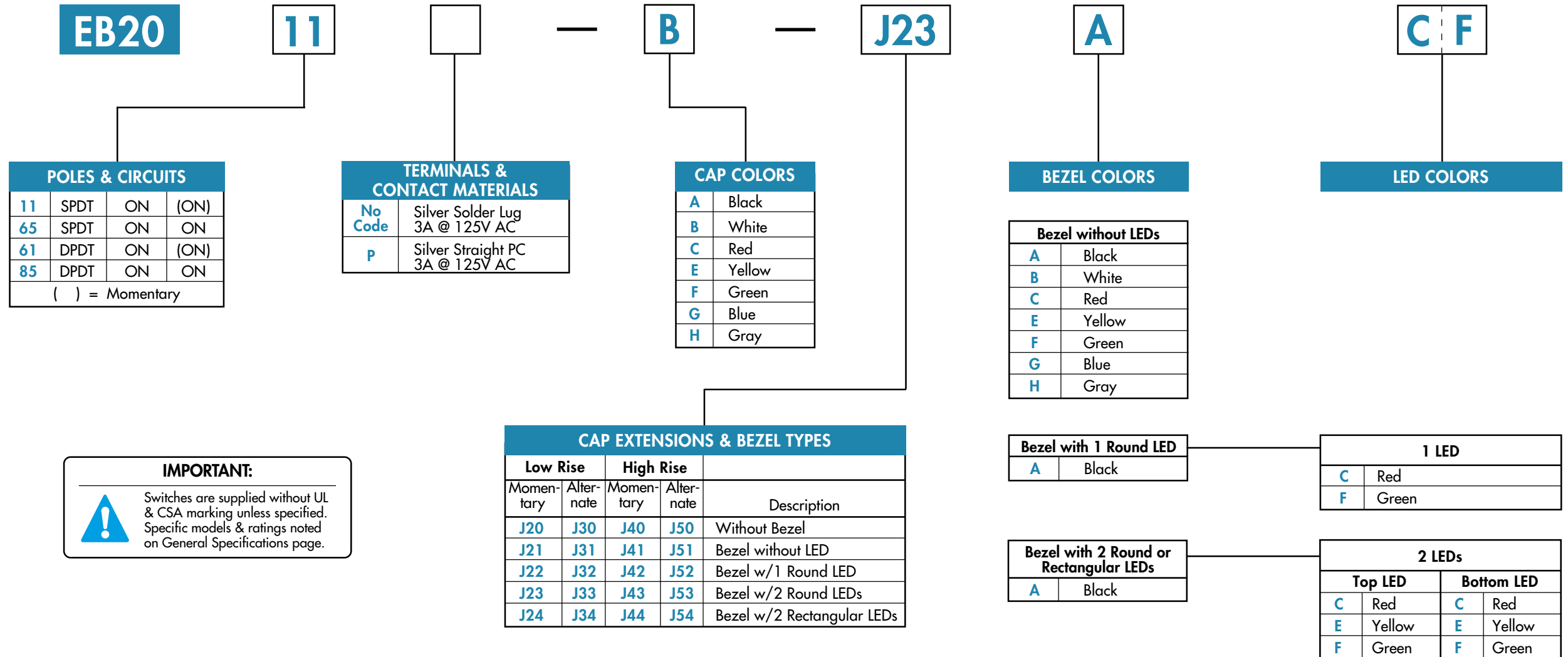
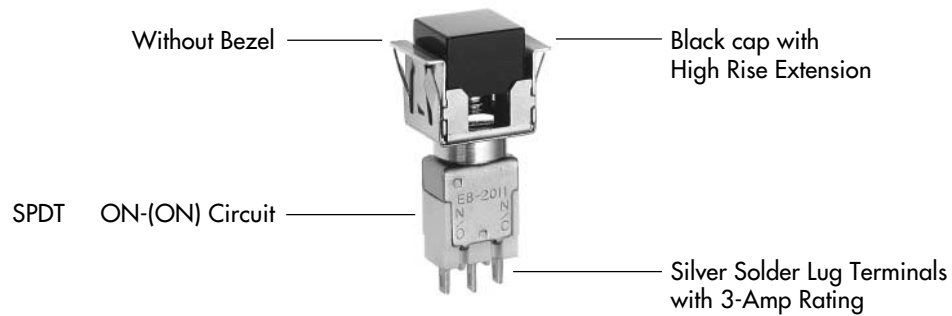


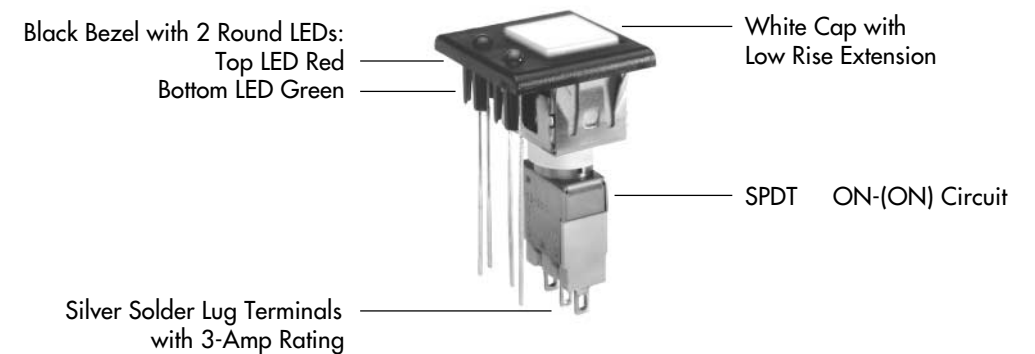
TYPICAL SWITCH ORDERING EXAMPLES



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE WITHOUT BEZEL
EB2011-A-J40



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE WITH BEZEL
EB2011-B-J23ACF





GENERAL SPECIFICATIONS

Electrical Capacity (Resistive Load)

Power Level (code W): 3A @ 125V AC

Other Ratings

Contact Resistance: 10 milliohms maximum
Insulation Resistance: 1,000 megohms minimum @ 500V DC
Dielectric Strength: 1,000V AC minimum between contacts
1,500V AC minimum between contacts & case
Mechanical Life: 100,000 operations minimum
Electrical Life: 25,000 operations minimum for silver
Nominal Operating Force: Single Pole: 240 grams for momentary & 270 grams for alternate action
Double Pole: 300 grams for momentary & 370 grams for alternate action
Pretravel: 0.47mm (.019") for Momentary & 1.5mm (.059") for Alternate Action
Overtravel: 1.13mm (.044") for Momentary & 0.7mm (.028") for Alternate Action
Total Travel: 1.6mm (.063") for Momentary & 2.2mm (.087") for Alternate Action

Materials & Finishes

Plunger: Brass with chrome plating for Momentary; brass with nickel plating for Alternate
Bushing: Brass with nickel plating
Snap-in Frame: Stainless steel
Body Frame: Stainless steel
Case: Diallyl phthalate resin
Movable Contacts: Copper with silver plating
Stationary Contacts: Silver with silver plating
Terminals: Copper with silver plating

Environmental Data

Operating Temp Range: -10°C through +70°C (+14°F through +158°F)
Humidity: 93% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50g acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Mounting Torque: 15kgf/cm (13lb/in) for double nut; 7kgf/cm (6lb/in) for single nut
Cap Installation Force: 8 kg (17.6 lb) maximum downward force on actuator
Soldering Time & Temperature: 3 seconds @ 350°C or 5 seconds @ 270°C

Standards & Certifications

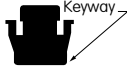



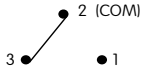
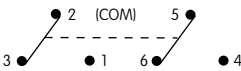
Flammability Standards: UL94V-0 rated case
UL Recognized: All single & double pole models recognized at 3A @ 125V AC; UL File No. E44145
CSA Certified: Single pole solder lug & straight PC models certified at 3A @ 125V AC;
Double pole straight PC models certified at 3A @ 125V AC; CSA File No. LR23535



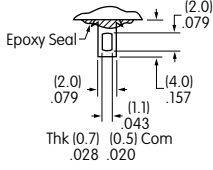
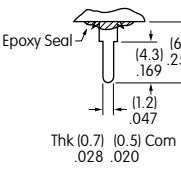
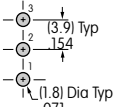
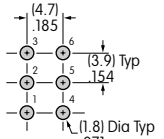
Series E

Light Touch Miniature Pushbutton Switches

POLES & CIRCUITS

		Plunger Position () = Momentary		Connected Terminals		Throw & Schematics
Pole	Model	Normal 	Down 	Normal 	Down 	Note: Terminal numbers are not actually on the switch.
SP	EB2011 EB2065	ON ON	(ON) ON	2-3	2-1	SPDT 
DP	EB2061 EB2085	ON ON	(ON) ON	2-3 5-6	2-1 5-4	DPDT 

TERMINALS, CONTACT MATERIALS, & RATINGS

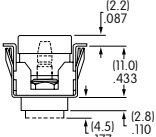
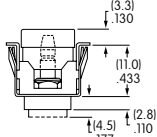
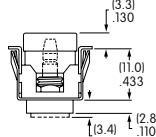
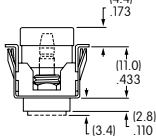
No Code	Solder Lug Silver Contacts	Power Level	3A @ 125V AC		Wiring The 1.1mm x 2mm oblong hole accommodates one solid 18-gauge wire or two solid or stranded 20-gauge wires.
P	Straight PC Silver Contacts	Power Level	3A @ 125V AC		PCB Footprints   Single Pole Double Pole

CAP COLORS

The square snap-on cap (AT465), snap-in moulder (AT529), & optional bezels are factory assembled on the switch.

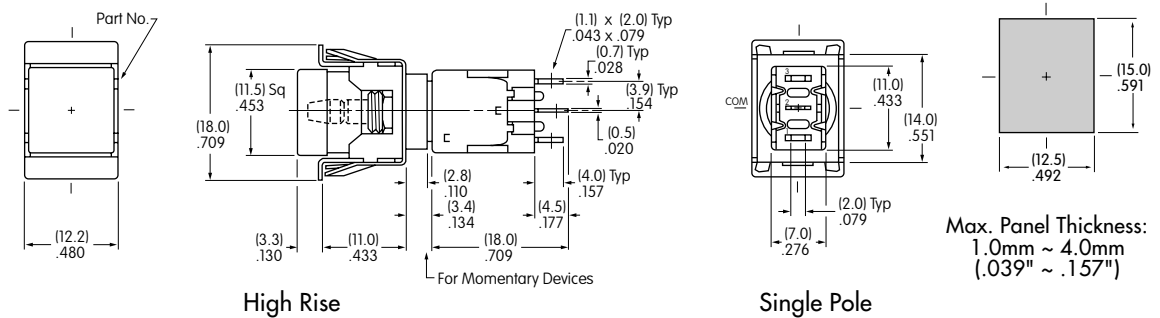
A Black **B** White **C** Red **E** Yellow **F** Green **G** Blue **H** Gray
Cap Material: Polycarbonate Cap Finish: Glossy

CAP EXTENSIONS & BEZEL TYPES

Cap Extension without Bezel	E*% Low Rise Momentary 	J30 Low Rise Alternate 	J40 High Rise Momentary 	J50 High Rise Alternate 
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EB2011-A-J40



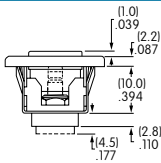
Max. Panel Thickness:
1.0mm ~ 4.0mm
(.039" ~ .157")

CAP EXTENSIONS & BEZEL TYPES

Cap Extension with Bezel

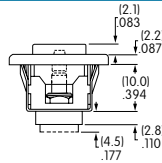
J21

Low Rise Momentary



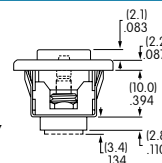
J31

Low Rise Alternate



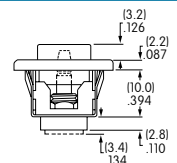
J41

High Rise Momentary



J51

High Rise Alternate



AT207 Bezel without LED

E

Yellow

A

Black

F

Green

B

White

G

Blue

C

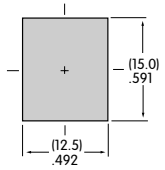
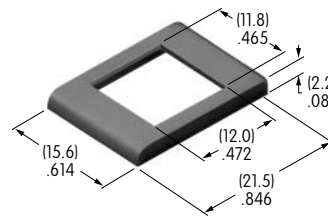
Red

H

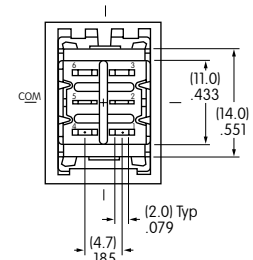
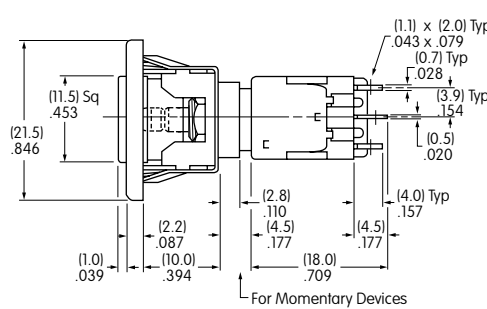
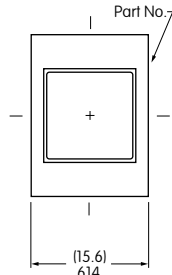
Gray

Material: Polycarbonate

Finish: Glossy



Max. Panel Thickness: 1.0mm ~ 3.2mm (.039" ~ .126")



EB2061-B-J21A

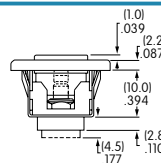
Low Rise

Double Pole

Cap Extension with Bezel

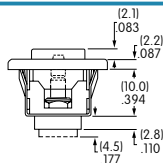
J22

Low Rise Momentary



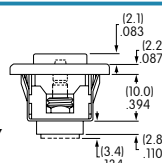
J32

Low Rise Alternate



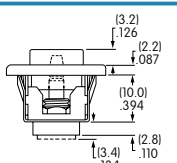
J42

High Rise Momentary



J52

High Rise Alternate



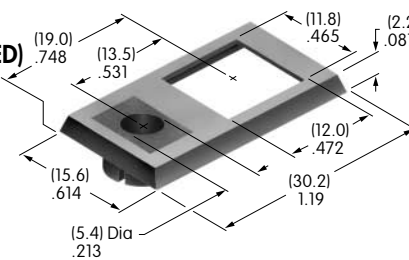
AT208 Bezel with 1 Round LED (AT070 LED)

A

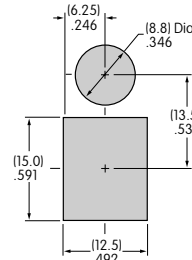
Black

Material: Polycarbonate

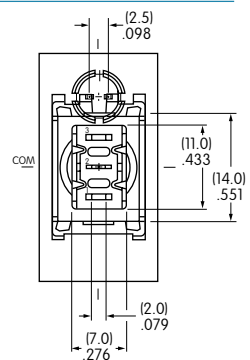
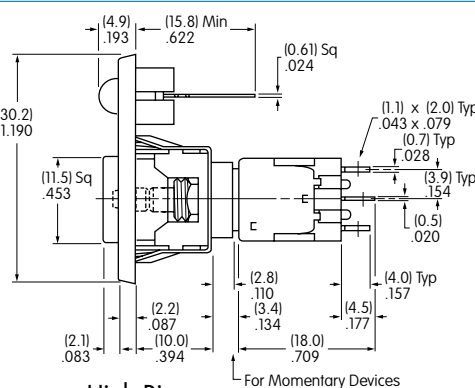
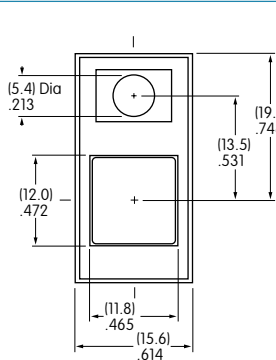
Finish: Glossy



Max. Panel Thickness: 1.0mm ~ 3.2mm (.039" ~ .126")



LED colors and specifications



EB2011-B-J42AC

High Rise

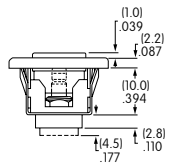
Single Pole

CAP EXTENSIONS & BEZEL TYPES

Cap Extension with Bezel

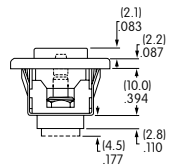
J23

Low Rise Momentary



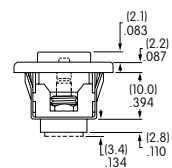
J33

Low Rise Alternate



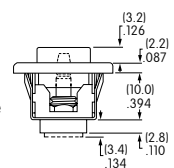
J43

High Rise Momentary



J53

High Rise Alternate

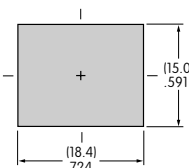
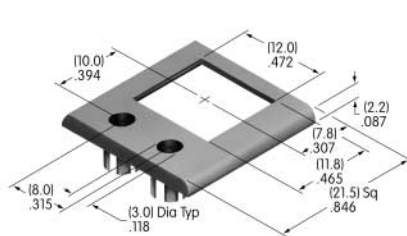


AT212 Bezel with 2 Round LEDs (AT617 LEDs)

A Black

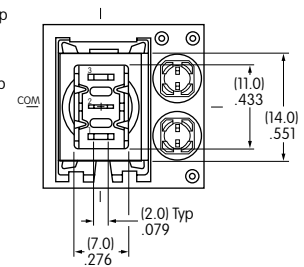
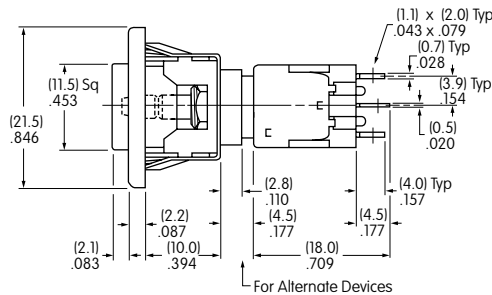
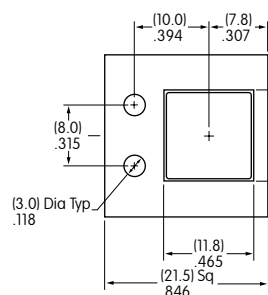
Material: Polycarbonate

Finish: Glossy



LED colors and specifications

Max. Panel Thickness:
1.0mm ~ 3.2mm
(.039" ~ .126")



EB2065-B-J33ACF

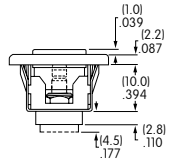
Low Rise

Single Pole

Cap Extension with Bezel

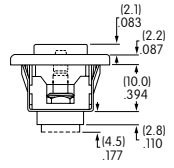
J24

Low Rise Momentary



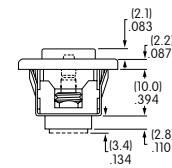
J34

Low Rise Alternate



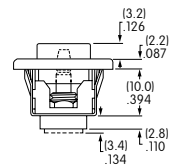
J44

High Rise Momentary



J54

High Rise Alternate

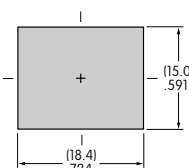
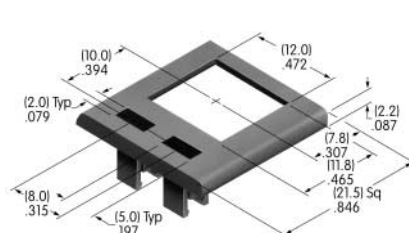


AT213 Bezel with 2 Rectangular LEDs (AT618 LEDs)

A Black

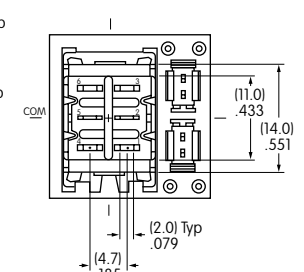
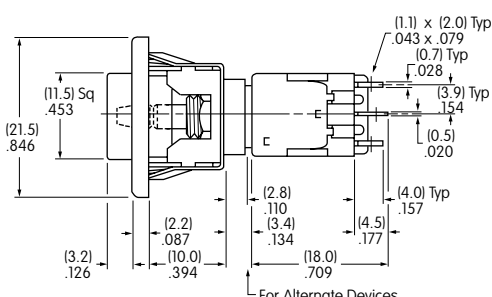
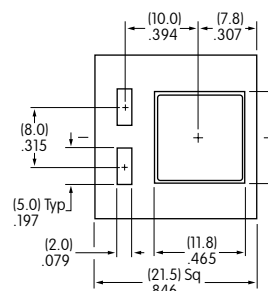
Material: Polycarbonate

Finish: Glossy



LED colors and specifications

Max. Panel Thickness:
1.0mm ~ 3.2mm
(.039" ~ .126")



EB2085-B-J54ACF

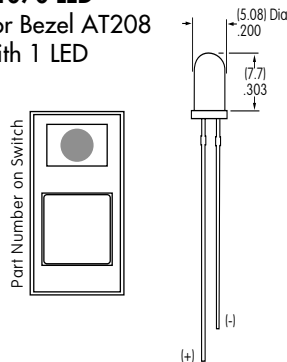
High Rise

Double Pole

LED COLORS & SPECIFICATIONS

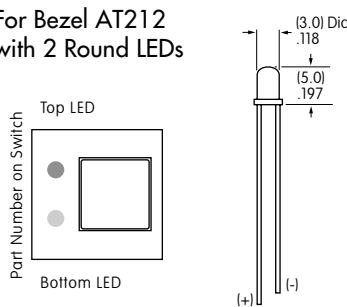
AT070 LED

For Bezel AT208
with 1 LED



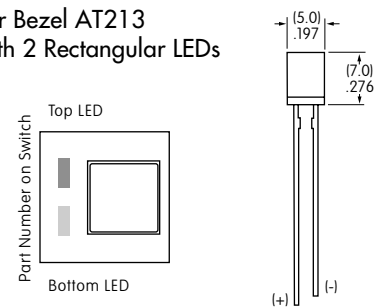
AT617 LED

For Bezel AT212
with 2 Round LEDs



AT618 LED

For Bezel AT213
with 2 Rectangular LEDs



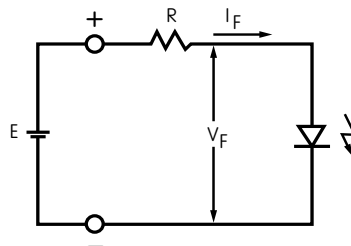
Note: Lead lengths may differ from manufacturing lot to lot. The longer lead is the anode (+).

		AT070		AT617			AT618		
Lamp Color		C Red	F Green	C Red	E Yellow	F Green	C Red	E Yellow	F Green
Forward Peak Current	I_{FM}	25mA	30mA	30mA	20mA	30mA	10mA	20mA	30mA
Continuous Forward Current	I_F	20mA	20mA	24mA	16mA	24mA	8mA	16mA	24mA
Forward Voltage	V_F	2.8V	2.1V	2.01V	1.96V	1.95V	1.9V	1.9V	2.0V
Reverse Peak Voltage	V_{RM}	4V	5V	5V	4V	5V	5V	4V	5V
Current Reduction Rate Above 25°C	ΔI_F	0.33 mA/°C	0.40 mA/°C	0.40 mA/°C	0.27 mA/°C	0.40 mA/°C	0.13 mA/°C	0.27 mA/°C	0.40 mA/°C
Ambient Temperature Range (when used with a bezel)		-10°C ~ +70°C		-15°C ~ +70°C			-15°C ~ +70°C		

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

Use of Ballast Resistor

If the source voltage is greater than the rated voltage of the LED, a ballast resistor must be connected in series with the lamp. The circuit diagram and formula will assist in calculating the value of the required ballast resistor.



$$R = \frac{E - V_F}{I_F}$$

Where
E = Source Voltage
R = Resistor Value (Ohms)
 V_F = Forward Voltage (V)
 I_F = Current (mA)

For additional information, see table of lamp resistor values in the [Supplement Index](#).