

General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 3A @ 125V AC or 3A @ 250V AC or 3A @ 30V DC

Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum

(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 50 milliohms maximum for silver; 100 milliohms maximum for gold

Insulation Resistance: 200 megohms minimum @ 500V DC

Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum;

1,500V AC minimum between contacts & case for 1 minute minimum

Mechanical Life: 1,000,000 operations minimum for momentary circuit

200,000 operations minimum for maintained circuit

Electrical Life: 100,000 operations minimum

Nominal Operating Force: 4.41N

Contact Timing: Nonshorting (break-before-make)

Travel: Pretravel .059" (1.5mm); Overtravel .059" (1.5mm); Total Travel .118" (3.0mm)

Materials & Finishes

Housing: Glass fiber reinforced polyamide (UL94V-0)

Snap-in Frame: Stainless steel

Movable Contact: Silver alloy or copper with gold plating

Stationary Contacts: Silver alloy or copper with gold plating

Base: Liquid crystal polymer (UL94V-0)

Switch Terminals: Phosphor bronze with silver or gold plating

Lamp Terminals: Brass with silver plating

Environmental Data

Operating Temperature 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

Note: When used with a polyvinyl chloride splash cover, the lowest limit is 0°C (32°F)

90 ~ 95% humidity for 96 hours @ 40°C (104°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/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Sealing: Not available for snap-in; see next section for panel seal.

Installation

Cap Installation Force: 3.92N maximum downward force on cap

Quick Connect Force: 52.95N maximum downward force on connector

Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

Standards & Certifications

Flammability Standards: UL94V-0 housing & base

UL: File No. E44145 - Recognized only when ordered with marking on switch.

Add "/U" or "/CUL" before first dash in part number to order UL recognized switch.

All models recognized at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum.

CSA: File No. 023535_0_000 - Certified only when ordered with marking on switch.

Add "/C" before first dash in part number to order CSA certified switch.

All models certified at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum.

Distinctive Characteristics

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

Spot illumination available in single and bicolor LEDs.

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

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

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

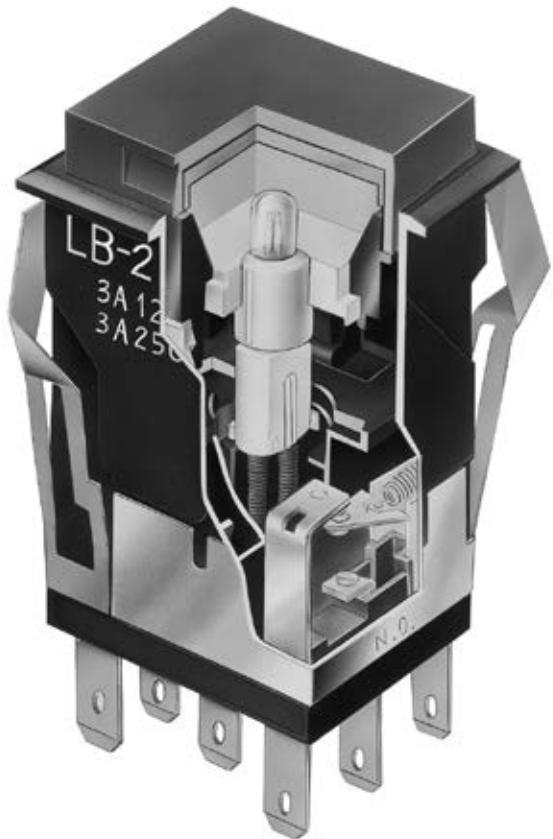
Snap-action contact mechanism gives long electrical life and sensitivity of actuation.

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

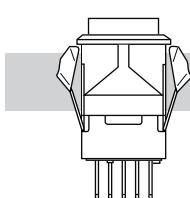
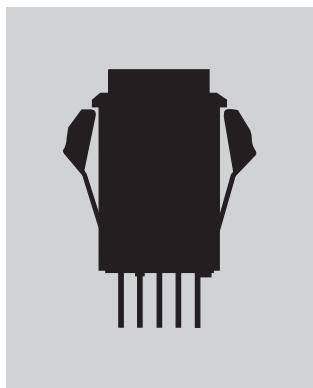
Panel sealed model meets IP65 of IEC60529 specifications (similar to NEMA 4 & 13).

Compact switch design minimizes behind panel depth.

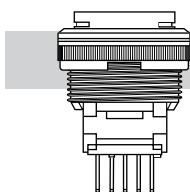
Matching indicators available.



Actual Size



Snap-in Mount Page D48



Panel Seal Page D59

Toggles

Rockers

Pushbuttons

Illuminated PB

Keylocks

Rotaries

Slides

Tactiles

Tilt

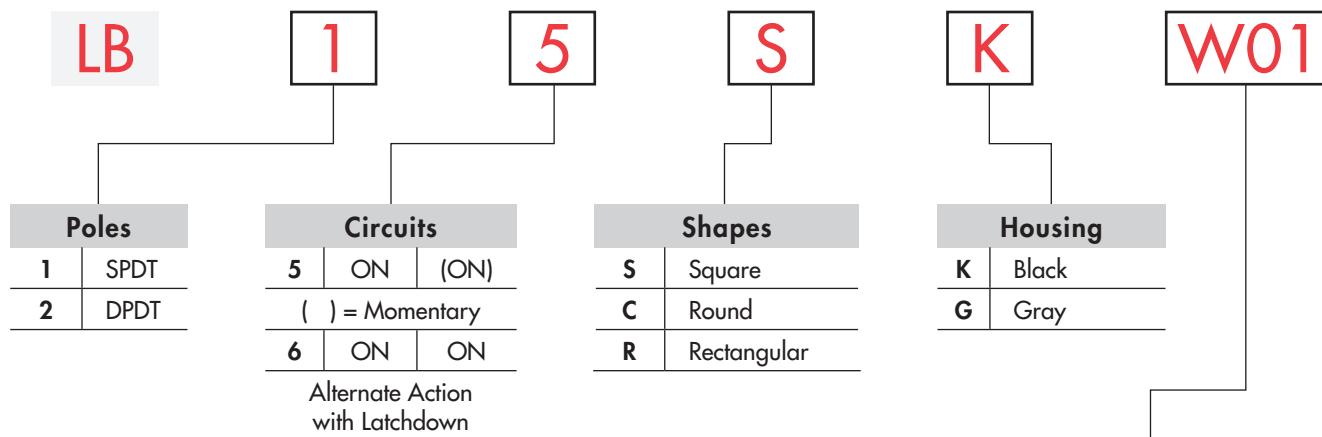
Touch

Indicators

Accessories

Supplement

TYPICAL SWITCH



Contacts & Terminals

| | |
|------------|---|
| W01 | Silver Contacts Rated 3A @ 125/250V AC Solder Lug/Quick Connect Terminals |
| G01 | Gold Contacts Rated 0.4VA @ 28V AC/DC Solder Lug/Quick Connect Terminals |

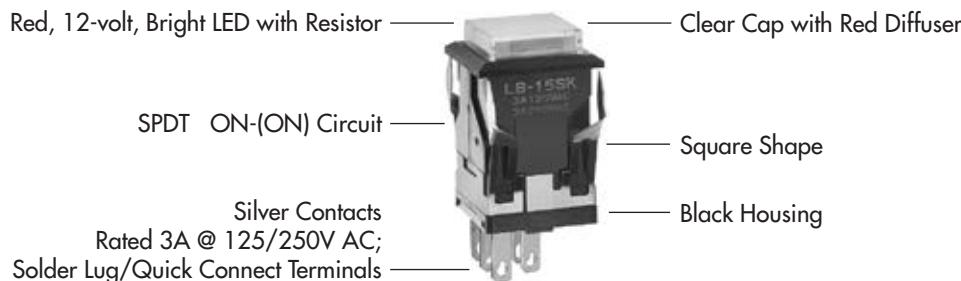
IMPORTANT:



Switches are supplied without UL, cULus and CSA marking unless specified.
UL, cULus & CSA recognized only when ordered with marking on the switch.
 Specific models, ratings, and ordering instructions are noted on the General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LB15SKW01-5C12-JC



ORDERING EXAMPLE

5C 12

JC

Lamps

Incandescent Lamp Used with Solid Cap

| | |
|---------|----------------|
| 05 | 5-volt |
| 12 | 12-volt |
| No Code | Nonilluminated |

Cap Types & Colors

Solid Cap: Lens/Filter Colors

| | |
|----|--------------|
| BJ | White/Clear |
| CJ | Red/Clear |
| EJ | Yellow/Clear |
| FJ | Green/Clear |
| GJ | Blue/Clear |

Incandescent or Neon Used with Insert Cap

| | |
|---------|----------------------|
| 01 | 110-volt Neon |
| 05 | 5-volt Incandescent |
| 12 | 12-volt Incandescent |
| No Code | Nonilluminated |

Insert Cap: Lens/Filter Colors

| | |
|-----|--------------|
| JB | Clear/White |
| JC | Clear/Red |
| JE | Clear/Yellow |
| *JF | Clear/Green |
| *JG | Clear/Blue |

* JF & JG not suitable with neon.

Bright LED Used with LED Cap

| Colors | Resistor | |
|--------|----------|---------|
| 5C | Red | No Code |
| 5D | Amber | 05 |
| 5F | Green | 12 |
| | | 24 |

LED Cap: Lens/Diffuser Colors

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

Super Bright LED Used with LED Cap

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

LED Cap: Lens/Diffuser Colors

| | |
|----|-------------|
| JB | Clear/White |
|----|-------------|

LED in Spot Illuminated Cap

| | |
|----|--------------------|
| 1C | Red Single Color |
| 1D | Amber Single Color |
| 1F | Green Single Color |
| CF | Red/Green Bicolor |

Spot Illuminated Cap Colors

| | | |
|---|-------|-------------------------------------|
| A | Black | Available in Square and Round only. |
| B | White | |
| C | Red | |
| F | Green | |

Nonilluminated

| | |
|---------|----------------|
| No Code | Nonilluminated |
|---------|----------------|

Nonilluminated Cap Colors

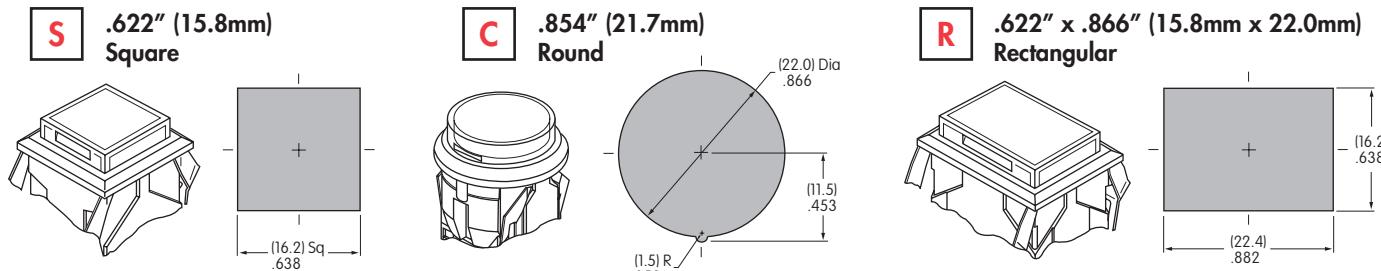
| | | | |
|---|--------|---|-------|
| A | Black | F | Green |
| B | White | G | Blue |
| C | Red | H | Gray |
| E | Yellow | | |

POLES & CIRCUITS

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

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

SHAPES & PANEL CUTOUTS



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

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

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

HOUSING

Housing Colors Available:



Black



Gray

CONTACT MATERIALS, RATINGS & TERMINALS



Silver Contacts

Power Level

3A @ 125V AC & 250V AC



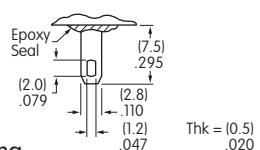
Gold Contacts

Logic Level

0.4VA max. @ 28V AC/DC max.

Solder Lug/Quick Connect

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



Complete explanation of operating range in Supplement section.

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

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

INCANDESCENT & NEON LAMP CODES & SPECIFICATIONS

| | | | | | | |
|---|--|------------|---------------|-----------|-------------|---|
| AT607 & AT607N  T-1 Bi-pin | AT607 Incandescent 5-volt or 12-volt; AT607N Neon 110-volt | | 05 | 12 | 01 * | The electrical specifications shown are determined at a basic temperature of 25°C. Lamp circuit is isolated and requires external power source. |
| | Voltage | V | 5V AC | 12V AC | 110V AC | |
| | Current | I | 115mA | 60mA | 1.5mA | |
| | Endurance | Avg. Hours | 10,000 | | 10,000 | |
| | Ambient Temp. Range | | -25°C ~ +50°C | | | |

LED COLORS & SPECIFICATIONS

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

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

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

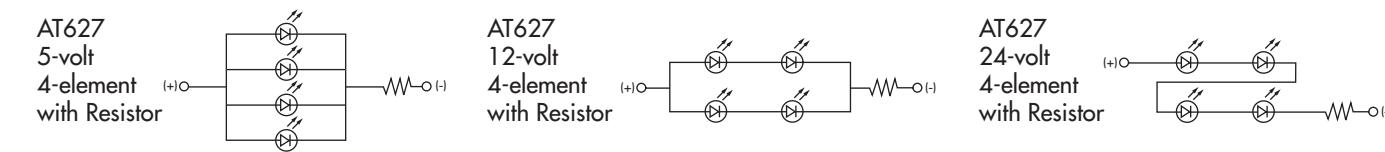
Additional lamp detail is shown in the Accessories & Hardware section.

Bright LED without Resistor

| AT635 | LEDs are colored in OFF state. | T-1½ Bi-pin | Red | Amber | Green | No Code | | No Resistor | |
|-------|--------------------------------|-------------|-----------------------------------|--------------|--------------|---------|------|-------------|-------|
| | | | Color Codes | 5C | 5D | 5F | Red | Amber | Green |
| | | | Maximum Forward Current | I_{FM} | 30mA | 30mA | 30mA | | |
| | | | Typical Forward Current | I_F | 20mA | 20mA | 20mA | | |
| | | | Forward Voltage | V_F | 1.9V | 2.0V | 2.1V | | |
| | | | Maximum Reverse Voltage | V_{RM} | 5V | 5V | 5V | | |
| | | | Current Reduction Rate Above 25°C | ΔI_F | 0.42mA/°C | | | | |
| | | | Ambient Temperature Range | | -25° ~ +50°C | | | | |

Bright LED with Resistor

| AT627 with Resistor | T-1 Bi-pin | Red | Amber | Green | Resistor Codes | | | |
|------------------------|------------|-----------------------------------|--------------|--------------|----------------|------|----|----|
| | | Color Codes: | 5C | 5D | 5F | 05 | 12 | 24 |
| | | Maximum Forward Current | I_{FM} | — | — | — | — | — |
| | | Typical Forward Current | I_F | 52mA | 26mA | 13mA | | |
| | | Forward Voltage | V_F | 5V | 12V | 24V | | |
| | | Maximum Reverse Voltage | V_{RM} | 4V | 8V | 16V | | |
| | | Current Reduction Rate Above 25°C | ΔI_F | 0.50mA/°C | | | | |
| | | Ambient Temperature Range | | -25° ~ +50°C | | | | |



Super Bright Single Element LED

| AT625G Blue AT631B White AT632F Green | T-1 Bi-pin |  ATTENTION ELECTROSTATIC SENSITIVE DEVICES | Color | 6B | 6F | 6G | |
|---|------------|---|-----------------------------------|--------------|--------------|-----------|-----------|
| | | | | White | Green | Blue | |
| | | | Maximum Forward Current | I_{FM} | 30mA | 30mA | 30mA |
| | | | Typical Forward Current | I_F | 20mA | 20mA | 20mA |
| | | | Forward Voltage | V_F | 3.3V | 3.3V | 3.3V |
| | | | Maximum Reverse Voltage | V_{RM} | 7V | 7V | 7V |
| | | | Current Reduction Rate Above 25°C | ΔI_F | 0.40mA/°C | 0.40mA/°C | 0.40mA/°C |
| | | | Ambient Temperature Range | | -25° ~ +50°C | | |

No Code

No Lamp

CAP TYPES & COLOR COMBINATIONS

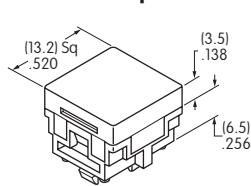
Color Codes: B White C Red D Amber E Yellow F Green G Blue J Clear

Solid Cap for Incandescent Lamp & Nonilluminated

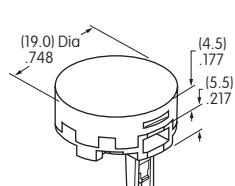
Lens/Filter
Colors Available:

- BJ**
- FJ**
- CJ**
- GJ**
- EJ**

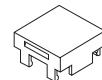
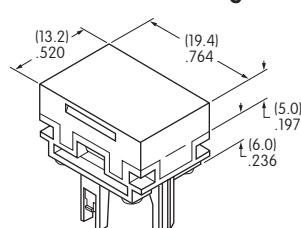
AT476
Square



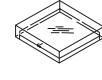
AT4012
Round



AT4026
Rectangular



Translucent Colored Lens



Transparent Clear Filter



Lamp AT607

Material: Polycarbonate

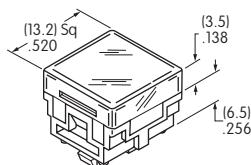
Finish: Glossy

Insert Cap for Incandescent or Neon Lamp & Nonilluminated

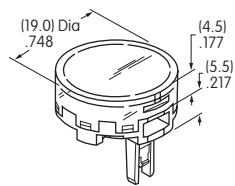
Lens/Filter
Colors Available:

- JB**
- JF**
- JC**
- JG**
- JE**

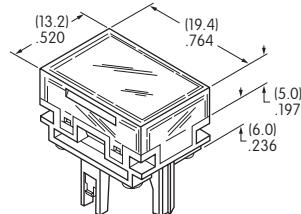
AT477
Square



AT4013
Round



AT4027
Rectangular



Transparent Clear Lens



Translucent Colored Filter



JF and JG not suitable
with neon lamp.

Material: Polycarbonate

Finish: Glossy

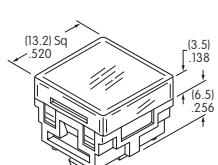
Lamp AT607 or 607N

Cap for Bright LED without Resistor

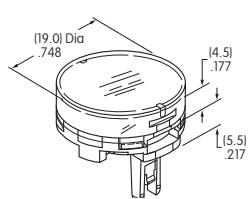
Lens/Diffuser
Colors Available:

- JB**
- JC**
- JD**
- JF**

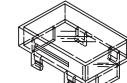
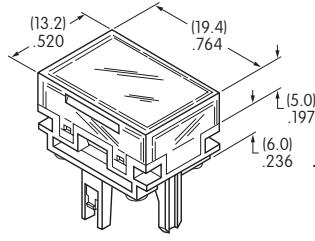
AT4176
Square



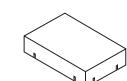
AT4178
Round



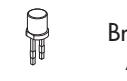
AT4177
Rectangular



Transparent Clear Lens



Translucent Colored Diffuser



Bright LED
AT635

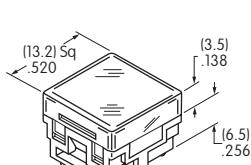
Material: Polycarbonate

Finish: Glossy

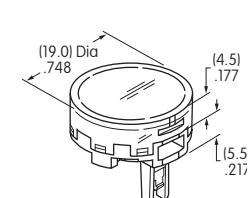
Lens/Diffuser
Colors Available:

- JB**
- JC**
- JD**
- JF**

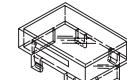
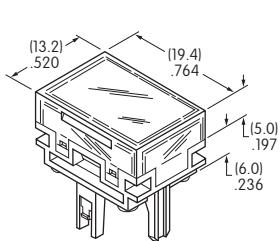
AT4162
Square



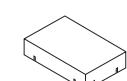
AT4164
Round



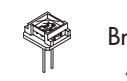
AT4163
Rectangular



Transparent Clear Lens



Translucent Colored Diffuser



Bright LED
AT627

Material: Polycarbonate

Finish: Glossy

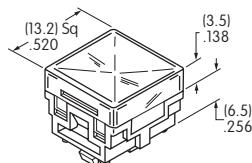
CAP TYPES & COLOR COMBINATIONS

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

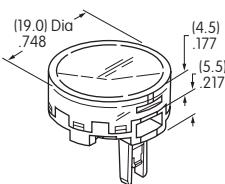
Cap for Super Bright LEDs

JB Clear Lens White Diffuser

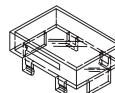
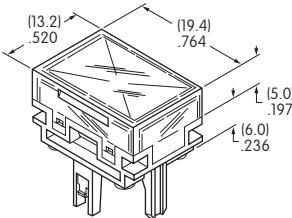
AT4129 Square

Material: Polycarbonate
Finish: Glossy

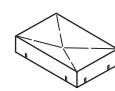
AT4128 Round



AT4130 Rectangular



Transparent Clear Lens



Translucent White Diffuser

LEDs AT625
AT631 AT632Toggles
Rockers
Pushbuttons

D Illuminated PB

Programmable

Keylocks

Rotaries
Slides

Tactiles

Tilt

Touch
IndicatorsAccessories
Supplement
Indicators
Supplement

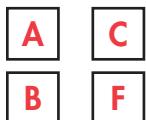
Spot Illuminated Cap with LED

The electrical specifications shown are determined at a basic temperature of 25°C. LED circuit is isolated and requires an external power source. Single color LEDs are colored in OFF state; bicolor LEDs are translucent white in OFF state. Polarity marks are on the switch. If the source voltage exceeds the rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula in the Supplement section. Additional lamp detail is shown in the Accessories & Hardware section.

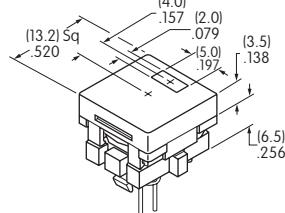
LED Specifications

| LED factory assembled in Spot Illuminated Caps Not Available Separately | Single Color LED with 1 Element | Bicolor LED with 2 Elements | Single Color | | Bicolor | |
|--|-----------------------------------|-----------------------------|------------------|--------------------|--------------------|------------------------|
| | | | 1C Red | 1D Amber | 1F Green | CF Red/Green |
| | Maximum Forward Current | I_{FM} | 25mA | 30mA | 25mA | 30/25mA |
| | Typical Forward Current | I_F | 20mA | 20mA | 20mA | 20mA |
| | Forward Voltage | V_F | 2.25V | 2.1V | 2.2V | 2.0/2.2V |
| | Maximum Reverse Voltage | V_{RM} | 5V | 5V | 5V | — |
| | Current Reduction Rate Above 25°C | ΔI_F | 0.33mA/°C | 0.40mA/°C | 0.33mA/°C | 0.43/0.38mA/°C |
| | Ambient Temperature Range | | | | | -25° ~ +70°C |

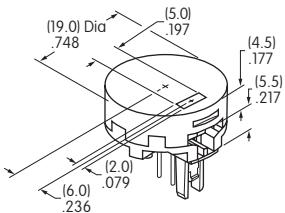
Cap Colors Available:

Material: Polycarbonate
Finish: Glossy

AT480 Square



AT4016 Round



Cap with Window

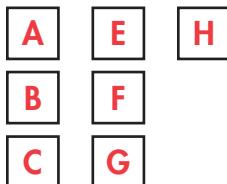
Factory Assembled LED;
Not Available Separately

When ordering spot illuminated cap separately, LED color must be specified.

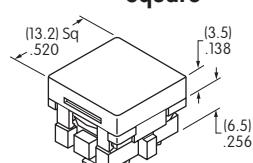
Examples: AT480CA (red LED, black cap); AT4016CFB (red/green bicolor LED, white cap)

Cap for Nonilluminated

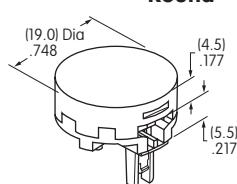
Cap Colors Available:



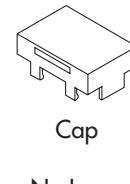
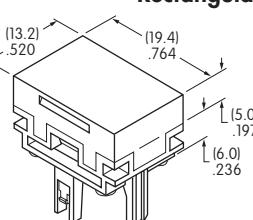
AT484 Square



AT4017 Round



AT4030 Rectangular

Cap
No Lamp

Material: Polycarbonate

Finish: Glossy

Toggles

Rockers

Pushbuttons

Illuminated PB
D

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

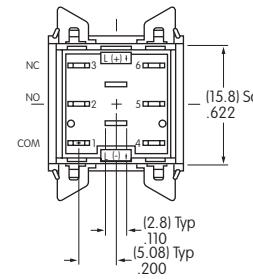
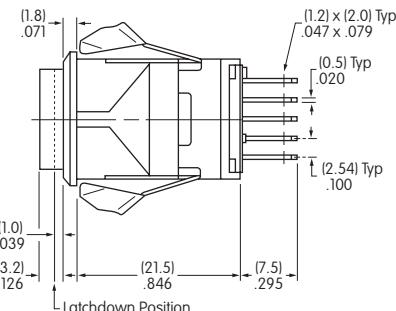
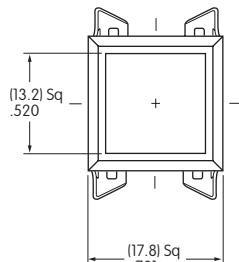
TYPICAL SWITCH DIMENSIONS

Square



LB15SKW01-12-CJ

Single & Double Pole



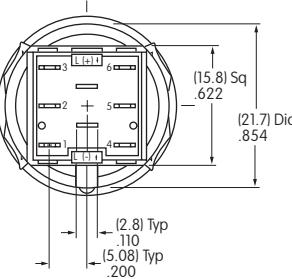
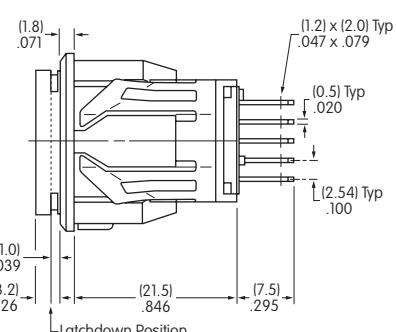
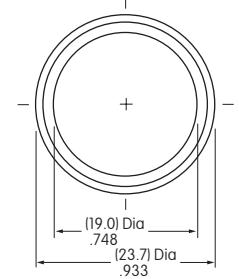
Single pole models do not have terminals 4, 5, & 6.

Round



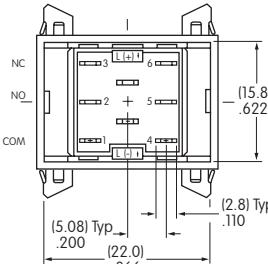
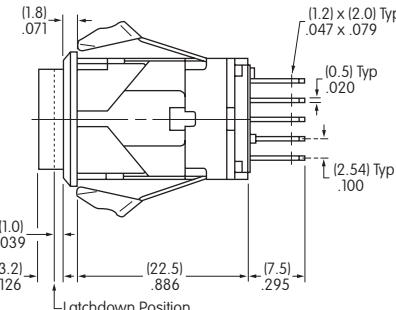
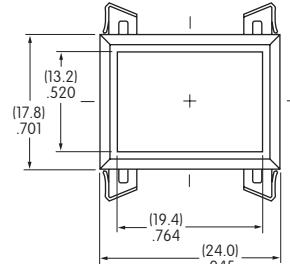
LB16CKW01-12-CJ

Single & Double Pole



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

Rectangular



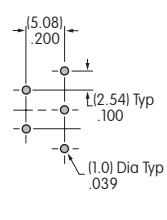
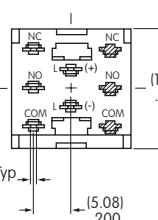
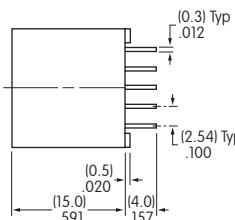
LB26RGW01-12-CJ

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

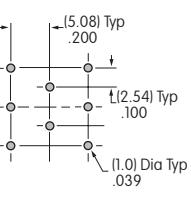
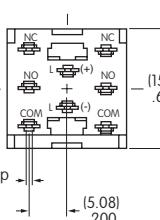
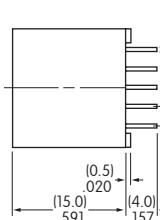
OPTIONAL ACCESSORIES

PCB Adaptors

AT711 Single Pole • Straight PC Terminals



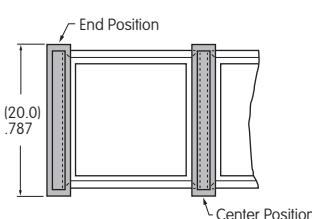
AT712 Double Pole • Straight PC Terminals



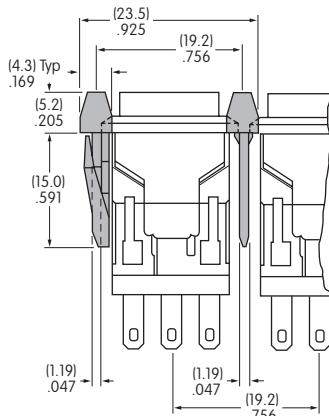
Note: Order adaptors separately.

OPTIONAL ACCESSORIES

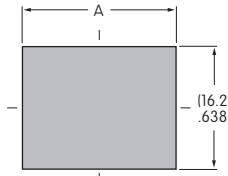
Barriers

AT497
End

Material: Polyamide

AT498
Center

Cutouts for More Than 1 Switch



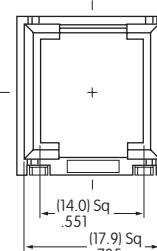
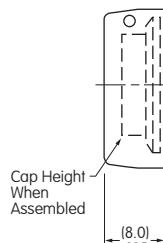
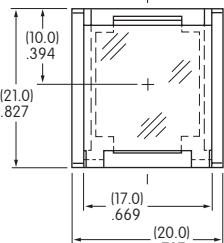
Square

A = .752" (19.1mm) x Number of Switches + .051" (1.3mm)

Rectangular

A = .996" (25.3mm) x Number of Switches + .051" (1.3mm)

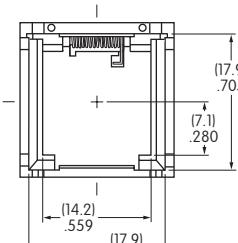
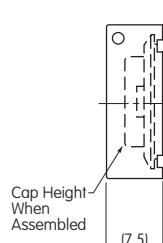
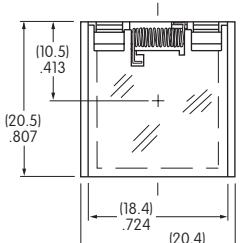
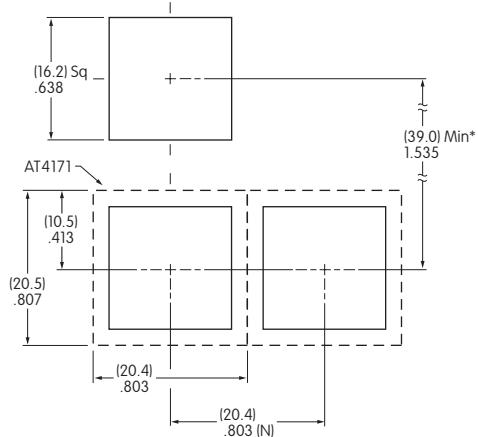
Protective Guard

AT499
Square
Protective GuardOpens 90°
Closes manually

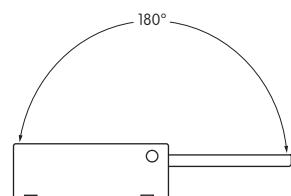
Material: Polyamide

Protective Guards reduce depth of switch behind panel by .020" (0.5mm).

Spring Loaded Protective Guard

AT4171
Square
Protective GuardOpens 180°
Closes automatically

Materials:

Cover: Clear Polycarbonate
Base: Black GFR Polyamide
Coil Spring: Stainless SteelRecommended Panel Thickness:
.039" ~ .106" (1.0mm ~ 2.7mm)

(N) = Number of switches * Minimum dimension allows opening of cover to 180°

OPTIONAL ACCESSORIES

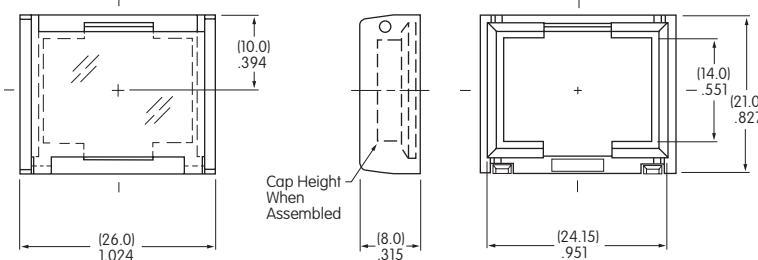
AT4057
Rectangular Protective Guard

Opens 90°
Closes manually



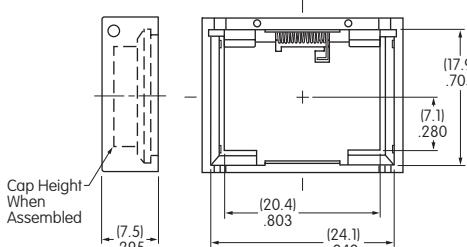
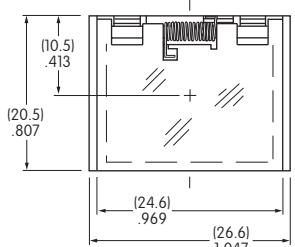
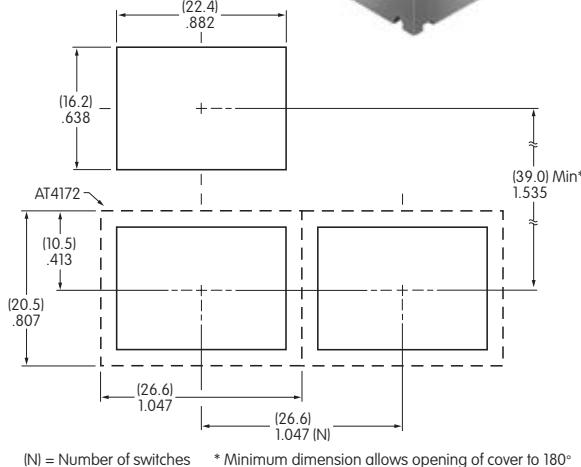
Material: Polyamide

Protective Guard



Spring Loaded Protective Guard

AT4172
Rectangular Protective Guard



(N) = Number of switches

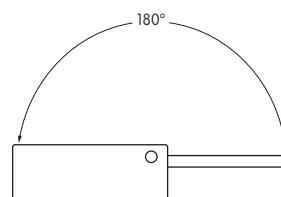
* Minimum dimension allows opening of cover to 180°

Opens 180°
Closes automatically

Materials:

Cover: Clear Polycarbonate
Base: Black GFR Polyamide
Coil Spring: Stainless Steel

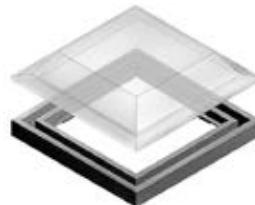
Recommended Panel Thickness:
.039" ~ .106" (1.0mm ~ 2.7mm)



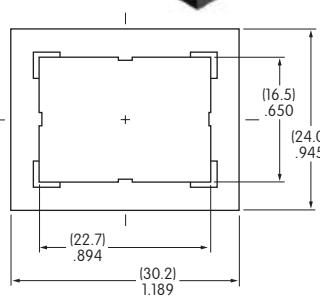
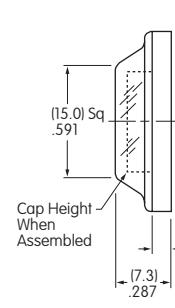
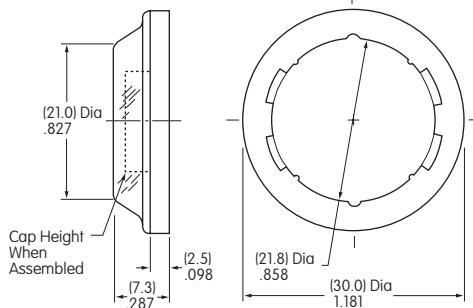
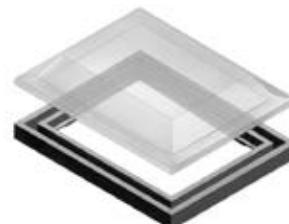
AT4002
Round



AT4001
Square



AT4011
Rectangular



Materials: PVC with polyethylene gasket; PVC loses pliability below 0°C (32°F). Dust Covers reduce depth of switch behind panel by .020" (0.5mm).

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

1,000,000 operations minimum for momentary circuit

200,000 operations minimum for maintained circuit

100,000 operations minimum

Mechanical Life:

Electrical Life:

Nominal Operating Force:

Contact Timing: Nonshorting (break-before-make)

Travel: Pretravel .059" (1.5mm); Overtravel .059" (1.5mm); Total Travel .118" (3.0mm)

Materials & Finishes

Housing: Glass fiber reinforced polyamide (UL94V-0)

O-ring: Nitrile butadiene rubber

Inner Seal: Silicone rubber

Movable Contact: Silver alloy or copper with gold plating

Stationary Contacts: Silver alloy or copper with gold plating

Base: Liquid crystal polymer (UL94V-0)

Switch Terminals: Phosphor bronze with silver or gold plating

Lamp Terminals: Brass with silver plating

Environmental Data

Operating Temperature 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

Note: When used with a polyvinyl chloride splash cover, the lowest limit is 0°C (32°F)

90 ~ 95% humidity for 96 hours @ 40°C (104°F)

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

50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Sealing: IP65 of IEC60529 standard (similar to NEMA 4 & 13)

Installation

Mounting Torque: 1.96Nm (17.35 lb•in) maximum

Cap Installation Force: 3.92N maximum downward force on cap

Quick Connect Force: 52.95N maximum downward force on connector

Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

Standards & Certifications

Flammability Standards: UL94V-0 housing & base

File No. E44145 - Recognized only when ordered with marking on switch.

Add "/U" or "/CUL" before first dash in part number to order UL recognized switch.

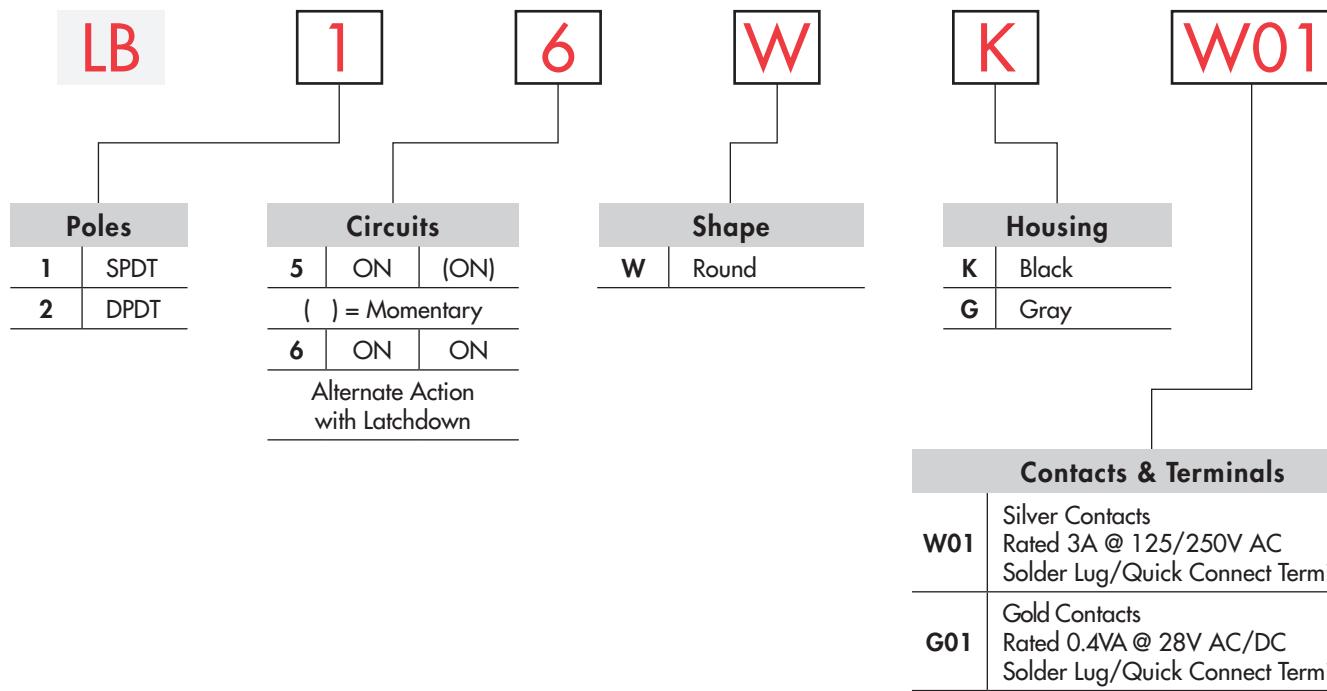
All models recognized at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum.

File No. 023535_0_000 - Certified only when ordered with marking on switch.

Add "/C" before first dash in part number to order CSA certified switch.

All models certified at 3A @ 125V or 250V AC or 0.4VA @ 28V AC/DC maximum.

TYPICAL SWITCH



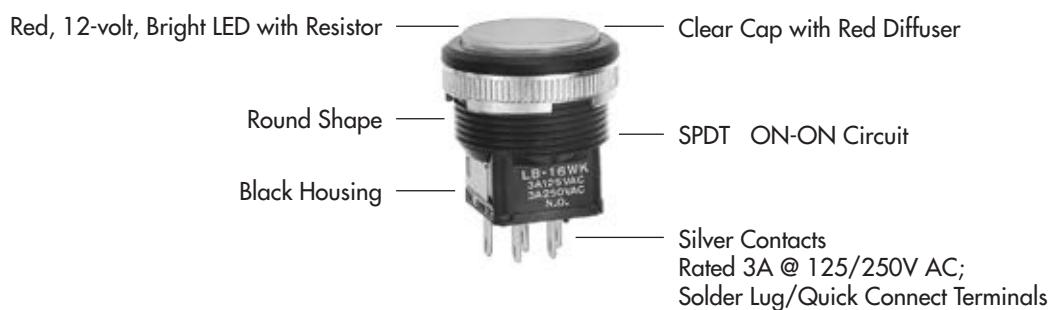
IMPORTANT:



Switches are supplied without UL, cULus & CSA marking unless specified.
UL, cULus & CSA recognized only when ordered with marking on the switch.
 Specific models, ratings, & ordering instructions are noted on the General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LB16WKW01-5C12-JC



ORDERING EXAMPLE



| Incandescent Lamp Used with Solid Cap | |
|---------------------------------------|----------------|
| 05 | 5-volt |
| 12 | 12-volt |
| No Code | Nonilluminated |

| Solid Cap: Lens/Filter Colors | |
|-------------------------------|--------------|
| BJ | White/Clear |
| CJ | Red/Clear |
| EJ | Yellow/Clear |
| FJ | Green/Clear |
| GJ | Blue/Clear |

| Incandescent or Neon Used with Insert Cap | |
|---|----------------------|
| 01 | 110-volt Neon |
| 05 | 5-volt Incandescent |
| 12 | 12-volt Incandescent |
| No Code | Nonilluminated |

| Insert Cap: Lens/Filter Colors | |
|--------------------------------|--------------|
| JB | Clear/White |
| JC | Clear/Red |
| JE | Clear/Yellow |
| *JF | Clear/Green |
| *JG | Clear/Blue |

* JF & JG not suitable with neon.

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

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

| Super Bright LED Used with LED Cap | |
|------------------------------------|-------|
| 6B | White |
| 6F | Green |
| 6G | Blue |

| LED Cap: Lens/Diffuser Colors | |
|-------------------------------|-------------|
| JB | Clear/White |

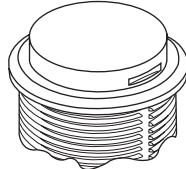
POLES & CIRCUITS

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

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

SHAPE & PANEL CUTOUT

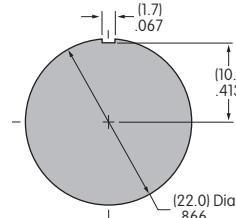
W .866" (22.0mm)
Round



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

Recommended Panel Thickness with Splash Cover:
.039" ~ .138" (1.0mm ~ 3.5mm)

Overtightening the mounting nut AT074
may damage the switch housing.



HOUSING

Housing Colors Available:

K Black

G Gray

CONTACT MATERIALS, RATINGS & TERMINALS

W01

Silver Contacts

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

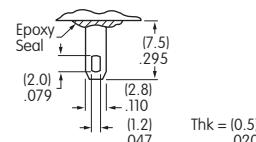
Solder Lug/Quick Connect

G01

Gold Contacts

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

Optional PCB adaptors AT711
& AT712 available; illustrated
in previous snap-in subsection.



Complete explanation of operating range in Supplement section.

INCANDESCENT & NEON LAMP CODES & SPECIFICATIONS

AT607 & AT607N



AT607 Incandescent 5-volt or
12-volt; AT607N Neon 110-volt

05

12

01 *

Voltage

V

5V AC

12V AC

110V AC

Current

I

115mA

60mA

1.5mA

Endurance

Avg. Hours

10,000

10,000

T-1 Bi-pin

Ambient Temp. Range

-25°C ~ +50°C

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

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

LED COLORS & SPECIFICATIONS

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

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

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

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

Bright LED without Resistor

AT635

LEDs are colored in OFF state.



T-1 1/2 Bi-pin

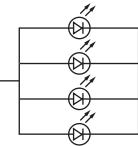
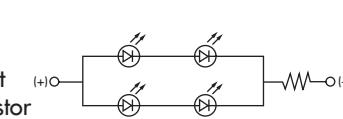
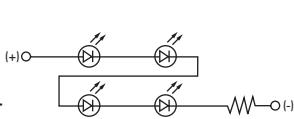
| Color Codes | Red | Amber | Green | No Code | | No Resistor |
|-----------------------------------|--------------|-------|-------|--------------|-------|-------------|
| | 5C | 5D | 5F | Red | Amber | Green |
| Maximum Forward Current | I_{FM} | | | 30mA | 30mA | 30mA |
| Typical Forward Current | I_F | | | 20mA | 20mA | 20mA |
| Forward Voltage | V_F | | | 1.9V | 2.0V | 2.1V |
| Maximum Reverse Voltage | V_{RM} | | | 5V | 5V | 5V |
| Current Reduction Rate Above 25°C | ΔI_F | | | 0.42mA/°C | | |
| Ambient Temperature Range | | | | -25° ~ +50°C | | |

Bright LED with Resistor

AT627
with Resistor

T-1 Bi-pin

| Color Codes: | Red | Amber | Green | Resistor Codes | | |
|-----------------------------------|--------------|-------|-------|----------------|------|------|
| | 5C | 5D | 5F | 05 | 12 | 24 |
| Maximum Forward Current | I_{FM} | | | — | — | — |
| Typical Forward Current | I_F | | | 52mA | 26mA | 13mA |
| Forward Voltage | V_F | | | 5V | 12V | 24V |
| Maximum Reverse Voltage | V_{RM} | | | 4V | 8V | 16V |
| Current Reduction Rate Above 25°C | ΔI_F | | | 0.50mA/°C | | |
| Ambient Temperature Range | | | | -25° ~ +50°C | | |

AT627
5-volt
4-element
with ResistorAT627
12-volt
4-element
with ResistorAT627
24-volt
4-element
with ResistorAT625G Blue
AT631B White
AT632F Green

T-1 Bi-pin



Color

6B

6F

6G

White

Green

Blue

| | | | | |
|-----------------------------------|--------------|--------------|-----------|-----------|
| Maximum Forward Current | I_{FM} | 30mA | 30mA | 30mA |
| Typical Forward Current | I_F | 20mA | 20mA | 20mA |
| Forward Voltage | V_F | 3.3V | 3.3V | 3.3V |
| Maximum Reverse Voltage | V_{RM} | 7V | 7V | 7V |
| Current Reduction Rate Above 25°C | ΔI_F | 0.40mA/°C | 0.40mA/°C | 0.40mA/°C |
| Ambient Temperature Range | | -25° ~ +50°C | | |

No Code

No Lamp

Toggles
Rockers
PushbuttonsD
Illuminated PB
ProgrammableKeylocks
Rotaries
Slides
Tactiles
TiltTouch
Indicators
AccessoriesSupplement
Accessories
Indicators
Accessories

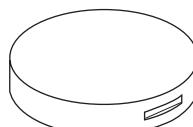
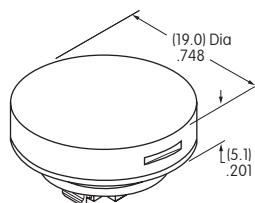
Color Codes: B White C Red D Amber E Yellow F Green G Blue J Clear

CAP TYPES & COLOR COMBINATIONS

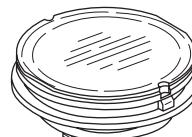
Lens/Filter Colors Available:

BJ **FJ**
CJ **GJ**
EJ

AT4054



Translucent Colored Lens



Transparent Clear Filter



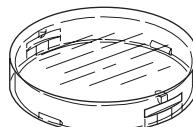
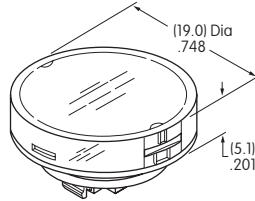
Lamp AT607

Material: Polycarbonate Finish: Glossy

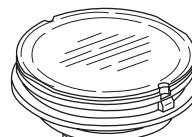
Lens/Filter Colors Available:

JB **JF**
JC **JG**
JE

AT4055



Transparent Clear Lens



Translucent Colored Filter



Lamp AT607



Lamp AT607N

JF and JG not suitable with neon lamp.

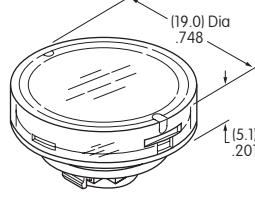
Material: Polycarbonate Finish: Glossy

Cap for Bright LED without Resistor

Lens/Diffuser Colors Available:

JB
JC
JD
JF

AT4179



Transparent Clear Lens



Translucent Colored Diffuser



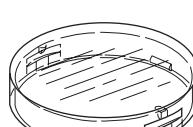
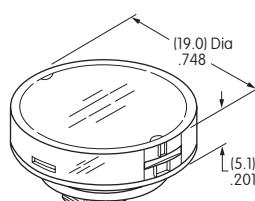
Bright LED AT635

Material: Polycarbonate Finish: Glossy

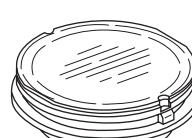
Lens/Diffuser Colors Available:

JB
JC
JD
JF

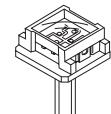
AT4165



Transparent Clear Lens



Translucent Colored Diffuser



Bright LED AT627

Material: Polycarbonate Finish: Glossy

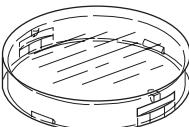
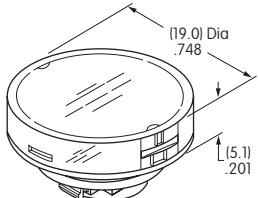
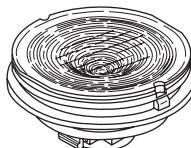
CAP TYPES & COLOR COMBINATIONS

Cap for Super Bright LEDs

JB Clear Lens
White Diffuser

Material:
Polycarbonate
Finish: Glossy

AT4131

Transparent
Clear LensTranslucent
Colored Diffuser

LEDs
AT625
AT631
AT632

Toggles

Rockers

Pushbuttons

D
Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

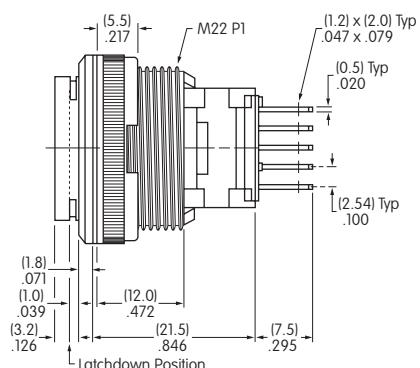
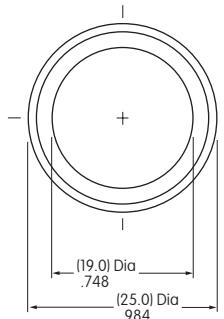
Accessories

Supplement

Series LB

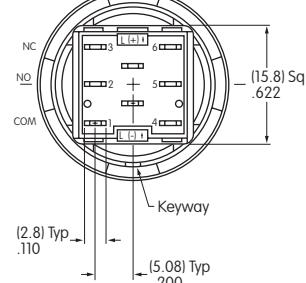
TYPICAL SWITCH DIMENSIONS

Single & Double Pole



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

Panel Seal



LB25WKW01-12-JC

OPTIONAL ACCESSORIES

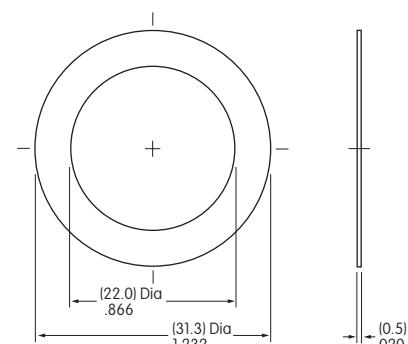
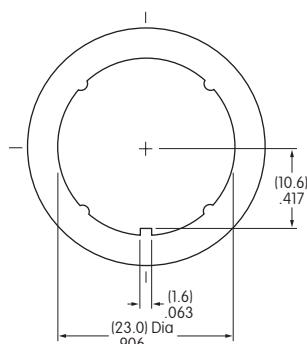
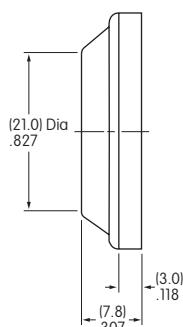
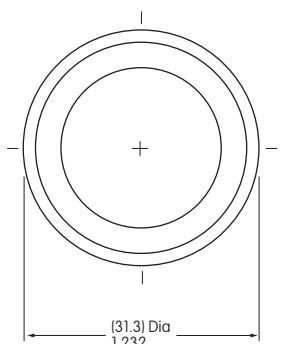
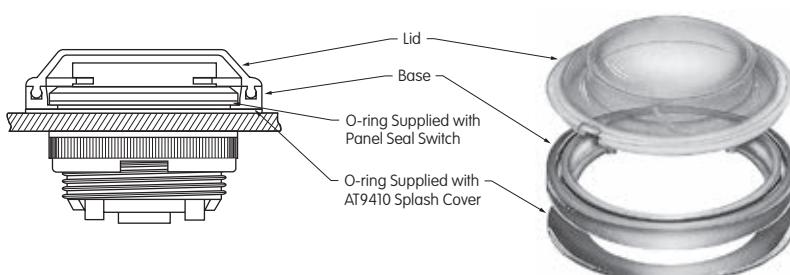
AT9410 Splash Cover for Panel Seal

Materials:

Lid: PVC (loses pliability below 0°C/32°F)

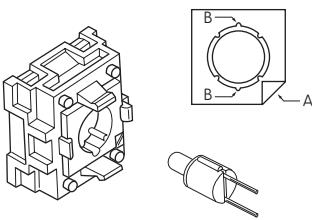
Base: Polyethylene

O-ring: NBR

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

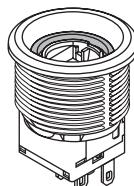
Incandescent & Neon Lamps AT607 & AT607N

Align projections on lamp with grooves (B) in holder when inserting lamp. To correctly join the lamp holder and cap base, match the cut corners (A).



Panel Seal Models

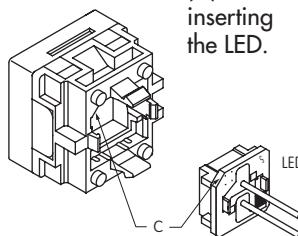
For panel seal models, Bright LED must first be inserted into the lamp socket which is built into the switch. The cap can then be placed on the switch.



Bright LED AT627

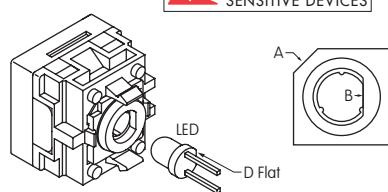
Snap-in Models

For snap-in models, Bright LED must be inserted into the cap first. Align cut corners (C) when inserting the LED.



Bright & Super Bright LEDs AT625, AT631, AT632, AT635

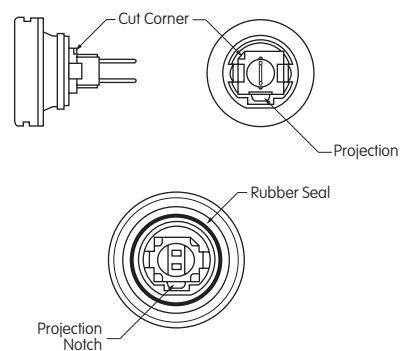
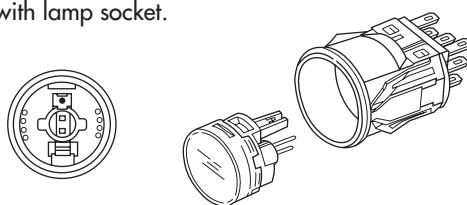
Align D-flat on LED with flat (B) in holder when inserting the LED. To correctly join the lamp holder and cap base, match the cut corners (A).



Switch & Cap Assembly

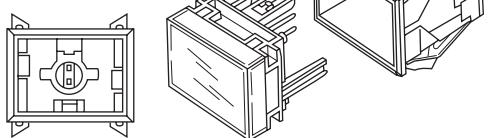
Round & Rectangular

Match clip on cap assembly with receptacle inside switch. Lamp terminals will then be aligned correctly with lamp socket.



Square

Match projection (C) on cap assembly with groove (C) inside switch. Lamp terminals will then be aligned correctly with lamp socket.



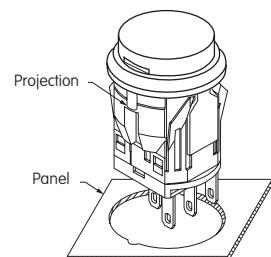
Panel Seal

With Lamps AT607, AT607N, and LEDs AT614, AT625, AT631, AT632: Match projection on cap assembly with notch inside switch. Lamp terminals will then be aligned correctly with lamp socket.

Snap-in Mount

Snap-in clip holds all switches firmly in place.

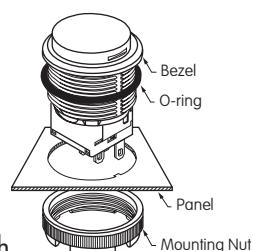
To mount round switch, match the antirotation projection on switch with guide cut in panel. Snap into panel cutout.



Installation & Maintenance

Panel Seal Bushing Mount

Insert switch from the front of the panel with the o-ring between the built-in bezel and the panel. Install mounting nut AT075 (supplied with switch) from the rear of the panel. Overtightening mounting nut may damage the switch housing.



Lamp Replacement

Actuator must be in UP position. Pull off cap with cap extractor AT109. Replace lamp and reassemble as shown above.



AT109
Cap Extractor



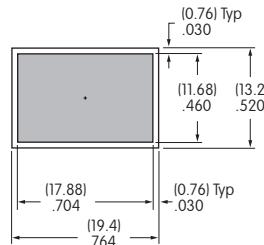
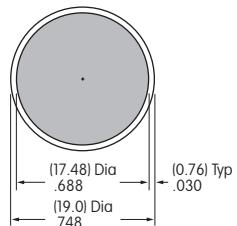
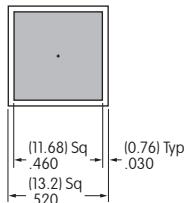
AT112
Socket Wrench

LEGENDS

NKK Switches can provide custom legends for caps. Contact factory for more information.

Suggested Printable Area for Lens

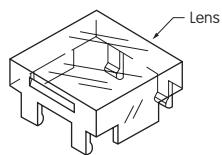
Recommended Methods: Laser Etch on clear lens, Screen Print, or Pad Print on lens.
Epoxy based ink is recommended.



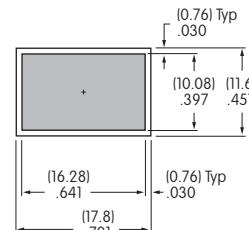
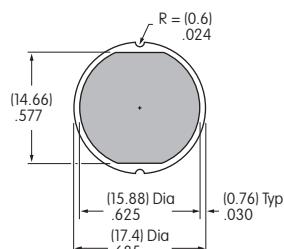
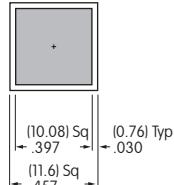
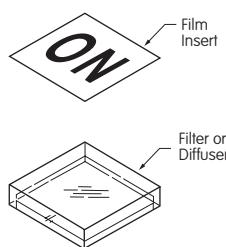
Shaded areas are printable areas.

Suggested Printable Area for Film Insert

Recommended Print Method: Laser Print or Screen Print with Epoxy based ink



Film Insert: Clear Polyester, 4 mil max. thickness



Shaded areas are printable areas.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

NKK Switches:

[LB25WKG01-EJ](#) [LB16WGW01-BJ](#) [LB16WGW01-FJ](#) [LB26WKG01-CJ](#) [LB26WKG01-EJ](#) [LB26WGW01-CJ](#)
[LB26WGW01-BJ](#) [LB26WGW01-GJ](#) [LB26WGW01-FJ](#) [LB26WGW01-EJ](#) [LB26WGG01-CJ](#) [LB26WGG01-EJ](#)
[LB16WKG01-BJ](#) [LB15WGW01-GJ](#) [LB15WGW01-EJ](#) [LB25WKG01-FJ](#) [LB25WKG01-BJ](#) [LB25WKG01-GJ](#)
[LB16WGW01-CJ](#) [LB16WGW01-GJ](#) [LB16WGW01-EJ](#) [LB26WGG01-BJ](#) [LB26WGG01-FJ](#) [LB15X046](#) [LB15X062](#)
[LB16WGG01-CJ](#) [LB16WGG01-EJ](#) [LB16WGG01-FJ](#) [LB16WGG01-GJ](#) [LB16WGG01-BJ](#) [LB25WGG01-FJ](#)
[LB25WGG01-BJ](#) [LB25WGG01-CJ](#) [LB25WGG01-GJ](#) [LB15WKG01-00-BJ](#) [LB26WKG01-BJ](#) [LB26WKG01-GJ](#)
[LB15CKG01-CJ](#) [LB15SKG01-JB](#) [LB15WGW01-JB](#) [LB16SKG01-FJ](#) [LB16WKW01-JF](#) [LB25CKG01-BJ](#)
[LB25CKW01/U-CJ](#) [LB25RGW01-JB](#) [LB26SKG01-FJ](#) [LB26SKW01-BJ](#) [LB26SKW01-JB](#) [LB26WGW01-JG](#)
[LB26SGW01-G](#) [LB16-2122](#) [LB25CGW01/UC-00-H](#) [LB25X027](#) [LB15CKW01-00-A](#) [LB15WGW01-00-CJ](#)
[LB15WKW01-00-BJ](#) [LB16RKW01-C](#)