**Series EB Light Touch Miniature Pushbuttons**

**General Specifications**

**Electrical Capacity (Resistive Load)**

- **Power Level (silver):** 3A @ 125V AC for silver contacts
- **Logic Level (gold):** 0.4VA maximum @ 28V AC/DC maximum for gold contacts
  
  (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

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

**Other Ratings**

- **Contact Resistance:** 10 milliohms maximum for silver; 20 milliohms maximum for gold
- **Insulation Resistance:** 1,000 megohms minimum @ 500V DC
- **Dielectric Strength:** 1,000V AC minimum between contacts for 1 minute minimum;
  1,500V AC minimum between contacts and case for 1 minute minimum
- **Mechanical Life:** 100,000 operations minimum
- **Electrical Life:** 25,000 operations minimum for silver;
  50,000 operations minimum for gold
- **Nominal Operating Force:** Single Pole: 1.75N for Momentary and 2.49N for Alternate Action
  Double Pole: 2.30N for Momentary and 3.05N for Alternate Action
- **Travel:** Momentary: Pretravel .047” (1.2mm); Overtravel .016” (0.4mm); Total Travel .063” (1.6mm)
  Alternate: Pretravel .071” (1.8mm); Overtravel .016” (0.4mm); Total Travel .087” (2.2mm)

**Materials & Finishes**

- **Plunger:** Brass with nickel plating
- **Bushing:** Brass with nickel plating
- **Frame:** Stainless steel
- **Case:** Melamine phenolic resin (UL94V-0)
- **Movable Contacts:** Copper with silver or gold plating
- **Stationary Contacts:** Silver & copper with silver or gold plating
- **Terminals:** Copper with silver or gold plating

**Environmental Data**

- **Operating Temp Range:** –10°C through +70°C (+14°F through +158°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)

**Installation**

- **Mounting Torque:** 1.47Nm (13.0 lb-in) for double nut; 0.68Nm (6.0 lb-in) for single nut
- **Cap Installation Force:** 78.5N (17.65 lbf) maximum downward force on actuator
- **Soldering Time & Temp:** Wave Solder (Straight PC): See Profile B in Supplement section.
- **Cleaning:** These devices are not process sealed. Hand clean locally using alcohol based solution.

**Standards & Certifications**

- **Flammability Standards:** UL94V-0 case
- **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 single and double pole models recognized at 3A @ 125V AC.
- **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.
  Single pole solder lug and PC models certified at 3A @ 125V AC; double pole PC models certified at 3A @ 125V AC.
**Distinctive Characteristics**

Power and logic level capabilities available to suit varying applications.

Bushinig and snap-in mount versions available; snap-in models offer many style and color choices to enhance front panel appearance.

Light touch actuation.

High torque bushing prevents rotation and separation from metal frame during installation.

Stainless steel frame resists corrosion.

Case of heat resistant resin meets UL 94V-0 flammability rating.

Higher insulating barriers protect against crossover in double pole devices.

1,500V dielectric strength between contacts and case is accomplished by clinching the frame away from the terminals.

Epoxy sealed terminals prevent entry of solder flux and other contaminants.
### TYPICAL SWITCH ORDERING EXAMPLE

**Series EB**

**Light Touch Miniature Pushbuttons**

#### Poles & Circuits

<table>
<thead>
<tr>
<th>Code</th>
<th>SPDT</th>
<th>ON</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

( ) = Momentary

#### Caps

- **B**: .315” (8.0mm) Dia.
- **C**: .394” (10.0mm) Dia.

#### Contacts, Ratings, & Terminals

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Silver Contacts; Solder Lug Terminals 3A @ 125V AC</td>
</tr>
<tr>
<td>G</td>
<td>Gold Contacts; Solder Lug Terminals 0.4VA max @ 28V AC/DC max</td>
</tr>
<tr>
<td>P</td>
<td>Silver Contacts; Straight PC Terminals; 3A @ 125V AC</td>
</tr>
<tr>
<td>PG</td>
<td>Gold Contacts; Straight PC Terminals 0.4VA max @ 28V AC/DC max</td>
</tr>
</tbody>
</table>

#### Colors

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

### 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

#### EB2065-BF

- **Green .315” (8.0mm) Diameter Cap**
- **SPDT ON-ON Circuit**
- **Silver Contacts & Solder Lug Terminals with 3-Amp Rating**
Series EBLight Touch Miniature Pushbuttons

POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal Keyway</th>
<th>Connected Terminals</th>
<th>Throw &amp; Switch Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>EB2011</td>
<td>ON ON</td>
<td>2-3 2-1</td>
<td>SPDT</td>
</tr>
<tr>
<td></td>
<td>EB2065</td>
<td>ON ON</td>
<td>2-3 5-6</td>
<td>DPDT</td>
</tr>
<tr>
<td>DP</td>
<td>EB2061</td>
<td>ON ON</td>
<td>2-3 5-6</td>
<td>DPDT</td>
</tr>
<tr>
<td></td>
<td>EB2085</td>
<td>ON ON</td>
<td>2-3 5-6</td>
<td>DPDT</td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

CONTACT MATERIALS, RATINGS, & TERMINALS

- **No Code**
  - Solder Lug
  - Silver Contacts
  - Power Level: 3A @ 125V AC

- **G**
  - Solder Lug
  - Gold Contacts
  - Logic Level: 0.4VA max @ 28V AC/DC max
  - Complete explanation of operating range in Supplement section.

- **P**
  - Straight PC
  - Silver Contacts
  - Power Level: 3A @ 125V AC

- **PG**
  - Straight PC
  - Gold Contacts
  - Logic Level: 0.4VA max @ 28V AC/DC max
  - Complete explanation of operating range in Supplement section.

PCB Footprints

<table>
<thead>
<tr>
<th>Single Pole</th>
<th>Double Pole</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

www.nkkswitches.com
**Series EB**

**Light Touch Miniature Pushbuttons**

### CAPS & COLORS

<table>
<thead>
<tr>
<th>B</th>
<th>AT443</th>
<th>.315” (8.0mm) Diameter Snap-on Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cap Colors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Yellow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>AT442</th>
<th>.394” (10.0mm) Diameter Snap-on Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cap Colors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Yellow</td>
<td></td>
</tr>
</tbody>
</table>

**Cap Material:** Polycarbonate  
**Finish:** Glossy

**Plunger Extension**

Due to a difference in plunger lengths on the momentary and alternate action models, cap distance from top of bushing varies.

### TYPICAL SWITCH DIMENSIONS

**Solder Lug**

<table>
<thead>
<tr>
<th>EB2011-BA</th>
</tr>
</thead>
</table>

**Solder Lug**

<table>
<thead>
<tr>
<th>EB2061-BA</th>
</tr>
</thead>
</table>

**Single Pole**

<table>
<thead>
<tr>
<th>M6 P0.75</th>
</tr>
</thead>
</table>

**Double Pole**

<table>
<thead>
<tr>
<th>M6 P0.75</th>
</tr>
</thead>
</table>
HARDWARE

Installation/Assembly

<table>
<thead>
<tr>
<th>2 AT513M Metric Hexagon Nuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 AT509 Internal Tooth Lockwasher</td>
</tr>
</tbody>
</table>

Standard Hardware

<table>
<thead>
<tr>
<th>AT513M Metric Hexagon Nut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: Brass with Nickel Plating</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AT509 Lockwasher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: Steel with Zinc/Chromate</td>
</tr>
</tbody>
</table>

Optional Hardware

<table>
<thead>
<tr>
<th>AT507M Metric Locking Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: Steel with Zinc/Chromate</td>
</tr>
</tbody>
</table>

Optional Hardware:

AT507M Metric Locking Ring

Note: Cap must be snapped on after the switch is mounted into the panel.

PANEL CUTOUTS & THICKNESSES

<table>
<thead>
<tr>
<th>Metric Bushing</th>
<th>With Standard Hardware</th>
<th>With Standard Hardware &amp; Optional Locking Ring</th>
<th>Without Bottom Hex Nut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Effective Panel Thickness: .118&quot; (3.0mm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Effective Panel Thickness: .055&quot; (1.4mm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Effective Panel Thickness: .185&quot; (4.7mm)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Accessories & Hardware section for optional Conical Nuts:
AT512M used with cap AT443 and AT512CM used with cap AT442.
**Series EB**

**Light Touch Miniature Pushbuttons**

**TYPICAL SWITCH**

**Series EB Light Touch Miniature Pushbuttons**

**EB20**

**Contacts, Ratings, & Terminals**

<table>
<thead>
<tr>
<th>No Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Silver Contacts; Solder Lug Terminals 3A @ 125V AC</td>
</tr>
<tr>
<td>G</td>
<td>Gold Contacts; Solder Lug Terminals 0.4VA max @ 28V AC/DC max</td>
</tr>
<tr>
<td>P</td>
<td>Silver Contacts; Straight PC Terminals; 3A @ 125V AC</td>
</tr>
<tr>
<td>PG</td>
<td>Gold Contacts; Straight PC Terminals 0.4VA max @ 28V AC/DC max</td>
</tr>
</tbody>
</table>

**Poles & Circuits**

<table>
<thead>
<tr>
<th></th>
<th>SPDT</th>
<th>On</th>
<th>On</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>SPDT</td>
<td>On</td>
<td>(ON)</td>
</tr>
<tr>
<td>65</td>
<td>SPDT</td>
<td>On</td>
<td>On</td>
</tr>
<tr>
<td>61</td>
<td>DPDT</td>
<td>On</td>
<td>(ON)</td>
</tr>
<tr>
<td>85</td>
<td>DPDT</td>
<td>On</td>
<td>On</td>
</tr>
</tbody>
</table>

( ) = Momentary

**Cap Colors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
</tr>
<tr>
<td>B</td>
<td>White</td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>E</td>
<td>Yellow</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
</tr>
<tr>
<td>G</td>
<td>Blue</td>
</tr>
<tr>
<td>H</td>
<td>Gray</td>
</tr>
</tbody>
</table>

**Cap Extensions & Bezel Types**

**Low Rise**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Bezel</td>
</tr>
<tr>
<td>Bezel without LED</td>
</tr>
<tr>
<td>Bezel with 1 Round LED</td>
</tr>
<tr>
<td>Bezel with 2 Round LEDs</td>
</tr>
<tr>
<td>Bezel with 2 Rectangular LEDs</td>
</tr>
</tbody>
</table>

**High Rise**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Bezel</td>
</tr>
<tr>
<td>Bezel without LED</td>
</tr>
<tr>
<td>Bezel with 1 Round LED</td>
</tr>
<tr>
<td>Bezel with 2 Round LEDs</td>
</tr>
<tr>
<td>Bezel with 2 Rectangular LEDs</td>
</tr>
</tbody>
</table>

**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 WITHOUT BEZEL**

**EB2011-A-J40**

- Without Bezel
- Black Cap with High Rise Extension
- SPDT On-(ON) Circuit
- Silver Contacts & Solder Lug Terminals with 3-Amp Rating
### ORDERING EXAMPLES

#### Bezel Colors

<table>
<thead>
<tr>
<th></th>
<th>Bezel without LEDs</th>
<th>Bezel with 1 Round LED</th>
<th>Bezel with 2 Round or Rectangular LEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
<td></td>
<td>Black</td>
</tr>
<tr>
<td>B</td>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Yellow</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### LED Colors

**1 LED**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
</tr>
</tbody>
</table>

**2 LEDs**

<table>
<thead>
<tr>
<th></th>
<th>Top LED</th>
<th>Bottom LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Red</td>
<td>C</td>
</tr>
<tr>
<td>E</td>
<td>Yellow</td>
<td>E</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
<td>F</td>
</tr>
</tbody>
</table>

#### Description for Typical Ordering Example with Bezel

**EB2011-B-J23ACF**

- Black Bezel with 2 Round LEDs:
  - Top LED Red
  - Bottom LED Green
- White Cap with Low Rise Extension
- SPDT ON-(ON) Circuit
- Silver Contacts & Solder Lug
- Terminals with 3-Amp Rating
## Series EB

### Light Touch Miniature Pushbuttons

#### POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal</th>
<th>Down</th>
<th>Normal</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>EB2011</td>
<td>ON</td>
<td>(ON)</td>
<td>2-3</td>
<td>2-1</td>
</tr>
<tr>
<td></td>
<td>EB2065</td>
<td>ON</td>
<td>(ON)</td>
<td>2-3</td>
<td>2-1</td>
</tr>
<tr>
<td>DP</td>
<td>EB2061</td>
<td>ON</td>
<td>(ON)</td>
<td>5-6</td>
<td>5-4</td>
</tr>
<tr>
<td></td>
<td>EB2085</td>
<td>ON</td>
<td>(ON)</td>
<td>5-6</td>
<td>5-4</td>
</tr>
</tbody>
</table>

**Note:** Terminal numbers are not actually on the switch.

#### CONTACT MATERIALS, RATINGS, & TERMINALS

- **No Code**
  - Solder Lug
    - Silver Contacts
    - Power Level: 3A @ 125V AC

- **G**
  - Solder Lug
    - Gold Contacts
    - Logic Level: 0.4VA maximum @ 28V AC/DC maximum
    - Complete explanation of operating range in Supplement section.

- **P**
  - Straight PC
    - Silver Contacts
    - Power Level: 3A @ 125V AC

- **PG**
  - Straight PC
    - Gold Contacts
    - Logic Level: 0.4VA maximum @ 28V AC/DC maximum
    - Complete explanation of operating range in Supplement section.

#### PCB Footprints

- **Single Pole**
- **Double Pole**

---

**CONTACT MATERIALS, RATINGS, & TERMINALS**

- **No Code**
  - Solder Lug
    - Silver Contacts
    - Power Level: 3A @ 125V AC

- **G**
  - Solder Lug
    - Gold Contacts
    - Logic Level: 0.4VA maximum @ 28V AC/DC maximum
    - Complete explanation of operating range in Supplement section.

- **P**
  - Straight PC
    - Silver Contacts
    - Power Level: 3A @ 125V AC

- **PG**
  - Straight PC
    - Gold Contacts
    - Logic Level: 0.4VA maximum @ 28V AC/DC maximum
    - Complete explanation of operating range in Supplement section.

#### PCB Footprints

- **Single Pole**
- **Double Pole**

---

**CONTACT MATERIALS, RATINGS, & TERMINALS**

- **No Code**
  - Solder Lug
    - Silver Contacts
    - Power Level: 3A @ 125V AC

- **G**
  - Solder Lug
    - Gold Contacts
    - Logic Level: 0.4VA maximum @ 28V AC/DC maximum
    - Complete explanation of operating range in Supplement section.

- **P**
  - Straight PC
    - Silver Contacts
    - Power Level: 3A @ 125V AC

- **PG**
  - Straight PC
    - Gold Contacts
    - Logic Level: 0.4VA maximum @ 28V AC/DC maximum
    - Complete explanation of operating range in Supplement section.

#### PCB Footprints

- **Single Pole**
- **Double Pole**
Series EB

**Light Touch Miniature Pushbuttons**

**CAP COLORS**

Factory Assembled on the Switch:
Square snap-on cap AT465, snap-in mounter AT529, and optional bezels which follow.

- **A** Black
- **B** White
- **C** Red
- **D** Green
- **E** Blue
- **F** Gray

**CAP EXTENSIONS & BEZEL TYPES**

<table>
<thead>
<tr>
<th>Cap Extension without Bezel</th>
<th>J20</th>
<th>J30</th>
<th>J40</th>
<th>J50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Rise Momentary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Rise Alternate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Rise Momentary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Rise Alternate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Panel Thickness**

.039” ~ .157” (.99mm ~ 4.00mm)

Cutout applies to SP & DP

<table>
<thead>
<tr>
<th>Part No.</th>
<th>EB2011-A-J40</th>
<th>EB2061-B-J21A</th>
</tr>
</thead>
</table>

**AT207 Bezel without LED**

- **A** Black
- **B** White
- **C** Red
- **D** Green
- **E** Blue
- **F** Gray

Material: Polycarbonate

Finish: Glossy

**Maximum Panel Thickness**

.039” ~ .126” (.99mm ~ 3.20mm)

Cutout applies to SP & DP

For Momentary Devices

<table>
<thead>
<tr>
<th>Part No.</th>
<th>EB2011-A-J40</th>
<th>EB2061-B-J21A</th>
</tr>
</thead>
</table>

Max. Panel Thickness .039” ~ .157” (.99mm ~ 4.00mm)
Cutout applies to SP & DP

For Momentary Devices

Low Rise

Double Pole
Series EB

Light Touch Miniature Pushbuttons

CAP EXTENSIONS & BEZEL TYPES

Cap Extension with Bezel

J22
Low Rise Momentary

AT208 Bezel with 1 Round LED (AT070 LED)

A Black
Material: Polycarbonate
Finish: Glossy

Maximum Panel Thickness
.039” ~ .126” (1.0mm ~ 3.2mm)
Cutout applies to SP & DP

LED colors and specifications on next to last page of this EB section.

J32
Low Rise Alternate

J42
High Rise Momentary

J52
High Rise Alternate

EB2011-B-J42AC

High Rise Single Pole

AT212 Bezel with 2 Round LEDs (AT617 LEDs)

A Black
Material: Polycarbonate
Finish: Glossy

Maximum Panel Thickness
.039” ~ .126” (1.0mm ~ 3.2mm)
Cutout applies to SP & DP

LED colors and specifications on next to last page of this EB section.

J23
Low Rise Momentary

J33
Low Rise Alternate

J43
High Rise Momentary

J53
High Rise Alternate

EB2065-B-J33ACF

Low Rise Single Pole

For Momentary Devices

For Alternate Devices

Maximum Panel Thickness
.039” ~ .126” (1.0mm ~ 3.2mm)
Cutout applies to SP & DP

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Light Touch Miniature Pushbuttons

Series EB

**CAP EXTENSIONS & BEZEL TYPES**

<table>
<thead>
<tr>
<th>Cap Extension with Bezel</th>
<th>Low Rise Momentary</th>
<th>Low Rise Alternate</th>
<th>High Rise Momentary</th>
<th>High Rise Alternate</th>
</tr>
</thead>
<tbody>
<tr>
<td>J24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J34</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>J44</td>
<td></td>
<td></td>
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<tr>
<td>J54</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**AT213 Bezel with 2 Rectangular LEDs (AT618 LEDs)**

- **A** Black
- Material: Polycarbonate
- Finish: Glossy

*Maximum Panel Thickness: 0.039” ~ 0.126” (1.0mm ~ 3.2mm) Cutout applies to SP & DP*

**EB2085-B-J54ACF**

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**For Alternate Devices**

**LED colors and specifications on next page of this EB section.**

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LED COLORS & SPECIFICATIONS

Bezel Orientation on Switch

<table>
<thead>
<tr>
<th>AT070 LED</th>
<th>AT617 LED</th>
<th>AT618 LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Bezel AT208 with 1 LED</td>
<td>For Bezel AT212 with 2 Round LEDs</td>
<td>For Bezel AT213 with 2 Rectangular LEDs</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Color</th>
<th>AT070</th>
<th>AT617</th>
<th>AT618</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
<td>Green</td>
<td>Green</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>AT070</th>
<th>AT617</th>
<th>AT618</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Forward Current $I_{FM}$</td>
<td>25mA</td>
<td>30mA</td>
<td>30mA</td>
</tr>
<tr>
<td>Typical Forward Current $I_{F}$</td>
<td>20mA</td>
<td>20mA</td>
<td>20mA</td>
</tr>
<tr>
<td>Forward Voltage $V_{F}$</td>
<td>2.8V</td>
<td>2.1V</td>
<td>2.0V</td>
</tr>
<tr>
<td>Maximum Reverse Voltage $V_{RM}$</td>
<td>4V</td>
<td>5V</td>
<td>5V</td>
</tr>
<tr>
<td>Current Reduction Rate $\Delta I$ Above 25°C</td>
<td>0.33 mA/°C</td>
<td>0.40 mA/°C</td>
<td>0.40 mA/°C</td>
</tr>
<tr>
<td>Ambient Temperature Range (when used with a bezel)</td>
<td>−10° ~ +70°C</td>
<td>−15° ~ +70°C</td>
<td>−25° ~ +50°C</td>
</tr>
</tbody>
</table>

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

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 ballast resistor calculation and more lamp detail are shown in the Supplement section.
LEGENDS

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

Suggested Printable Area for Cap

Recommended Print Method:
Screen Print or Pad Print

Epoxy based ink is recommended.

Shaded areas are printable areas.