

# Distinctive Characteristics

Bright or super bright LEDs (an integral part of the switch) of red, amber, green, blue, or white, in full face or spot illumination plus square or rectangular models.

Combination of PCB mountability and short body allows use in compact applications.

Small behind panel dimension for snap-in mounting in tight spaces.

Snap-acting contact mechanism provides sensitive actuation with audible feedback; quick-make, quick-break characteristic limits arcing and prolongs electrical life.

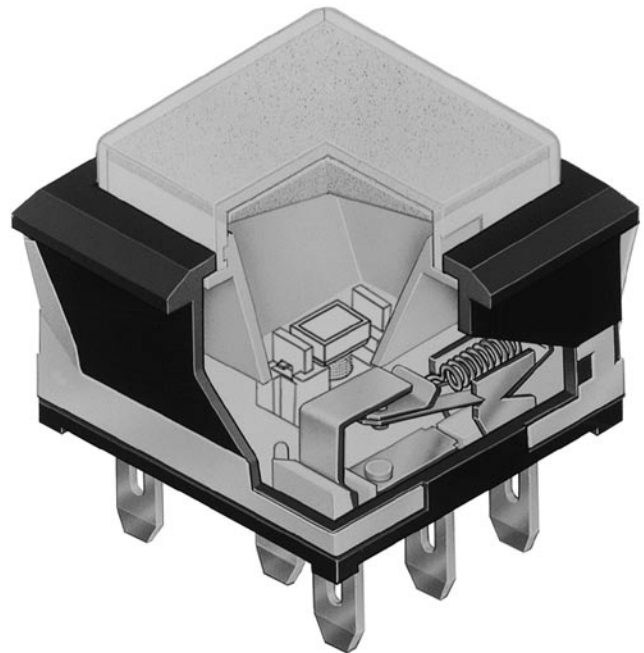
Latchdown mechanism, independent of switching mechanism, gives visible and tactile indication of circuit status.

Terminals are epoxy sealed to lock out flux, solvents, and other contaminants.

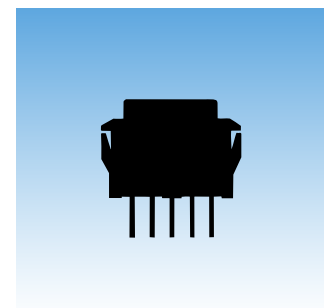
Momentary and alternate action circuits available in the same space-saving body size.

Nonilluminated models available and shown in Pushbutton section.

Matching indicators available and shown at the end of Section M.



Actual Size



# General Specifications

## Electrical Capacity (Resistive Load)

<b>Power Level (code W):</b>	5A @ 125/250V AC or 5A @ 30V DC
<b>Logic Level (code G):</b>	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

<b>Contact Resistance:</b>	50 milliohms maximum for silver; 100 milliohms maximum for gold
<b>Insulation Resistance:</b>	200 megohms minimum @ 500V DC
<b>Dielectric Strength:</b>	1,000V AC minimum between contacts for 1 minute minimum; 1,500V AC minimum between contacts & case for 1 minute minimum
<b>Mechanical Life:</b>	1,000,000 operations minimum for momentary; 200,000 operations minimum for alternate action
<b>Electrical Life:</b>	10,000 operations minimum for silver; 100,000 operations minimum for silver with resistive load of 3A @ 125V AC 200,000 operations minimum for gold
<b>Nominal Operating Force:</b>	Single Pole: 1.9N for Square & 1.9N for Rectangular Double Pole: 2.55N for Square & 3.1N for Rectangular
<b>Contact Timing:</b>	Break before make
<b>Travel:</b>	Pretravel .067" (1.7mm); Overtravel .024" (0.6mm); Total Travel .091" (2.3mm)

## Materials & Finishes

<b>Housing/Bezel:</b>	Glass fiber reinforced polyamide (UL94V-0)
<b>Snap-in Frame:</b>	Stainless steel
<b>Movable Contactor:</b>	Phosphor bronze
<b>Movable Contacts:</b>	Silver alloy or copper with gold plating
<b>Stationary Contacts:</b>	Silver alloy or copper with gold plating
<b>Switch Terminals:</b>	Phosphor bronze with silver or gold plating
<b>Lamp Terminals:</b>	Brass with silver plating
<b>Base:</b>	Glass fiber reinforced liquid crystal polymer (UL94V-0)

## Environmental Data

<b>Operating Temp Range:</b>	-25°C through +50°C (-13°F through +122°F)
<b>Humidity:</b>	90 ~ 95% humidity for 96 hours @ 40°C (104°F)
<b>Vibration:</b>	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
<b>Shock:</b>	50G (490m/s <sup>2</sup> ) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

## Installation

<b>Cap Installation Force:</b>	7.55N (1.70 lbf) maximum downward force on cap
<b>Soldering Time &amp; Temp:</b>	Wave Soldering (PC version): See Profile A in Supplement section. Manual Soldering: See Profile A in Supplement section.
<b>Cleaning:</b>	These devices are not process sealed. Hand clean locally using alcohol based solution.

## Standards & Certifications

<b>Flammability Standards:</b>	UL94V-0 housing/bezel & base
<b>UL &amp; C-UL Recognized:</b>	All single & double pole models recognized at 5A @ 125/250V AC or 0.014A @ 28V DC; UL File No. WOYR2.E44145; add "/U" to end of part number to order UL mark on switch. C-UL File No. WOYR8.E44145; add "/C-UL" to end of part number to order C-UL mark on switch
<b>CSA Certified:</b>	All single & double pole models certified at 5A @ 125/250V AC or 5A @ 30V DC or 0.4VA maximum @ 28V AC/DC maximum; CSA File No. 023535-0-000; add "/C" to end of part number to order CSA mark on switch.



## TYPICAL SWITCH ORDERING EXAMPLE

**UB 1 5 SK G 03 5C — CC**

**POLES**

1	SPDT
2	DPDT

**CAP TYPES & COLORS**

**Full Face Illuminated Cap for Bright LED**

Lens/Diffuser Colors

CB	Red/White	FF	Green/Green
CC	Red/Red	*FJ	Green/Clear
*CJ	Red/Clear	JB	Clear/White
DB	Amber/White	JC	Clear/Red
DD	Amber/Amber	JD	Clear/Amber
*DJ	Amber/Clear	JF	Clear/Green
FB	Green/White	*JJ	Clear/Clear

\* Not available with Rectangular cap

**CIRCUITS**

5	ON	(ON)
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( ) = Momentary

6	ON	ON
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Alternate Action with Latchdown

**CONTACTS & RATINGS**

W	Silver Rated 5A @ 125/250V AC
G	Gold Rated 0.4VA max @ 28V AC/DC max

**LEDS**

**Bright LED**

5C	Red
5D	Amber
5F	Green

**Super Bright LED**

6B	White
6F	Green
6G	Blue

Available with Square only

**CAP TYPES & COLORS**

**Full Face Illuminated Cap for Super Bright LED**

JB	Clear Lens/White Diffuser
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For Square only; see cap detail page

**MOUNTING TYPES**

**PCB Mounting**

SK	Square
RK	Rectangular

**\* Snap-in Mounting**

KK	Square
NK	Rectangular
NBK	Rectangular with Side Barriers

\* Standard with Solder Lug terminals

**TERMINALS**

01	Solder Lug (for Snap-in Mounting)
03	Straight PC

**IMPORTANT:**

Switches are supplied without UL, C-UL, & CSA markings unless specified. Specific models & ratings noted on General Specifications page.

**DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**

**UB15SKG035C-CC**



## POLES & CIRCUITS

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Switch/Lamp Schematics
		Normal	Down	Normal	Down	
SP	UB15 *UB16	ON ON	(ON) ON	1-3 1-2		Notes: Switch is marked with NC, NO, COM, L+ & L-. Lamp circuit is isolated and requires an external power source.
DP	UB25 *UB26	ON ON	(ON) ON	1-3 4-6 1-2 4-5		

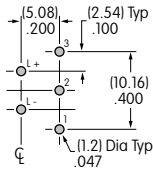
\* When in latchdown position for the alternate circuit, cap position is .039" (1.0mm) above the housing.

## MOUNTING TYPES & SHAPES

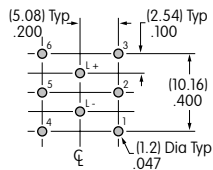
### PCB Mounting

**SK**

Square



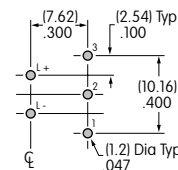
Single Pole



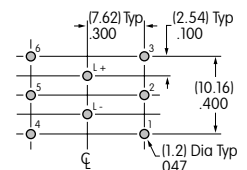
Double Pole

**RK**

Rectangular



Single Pole

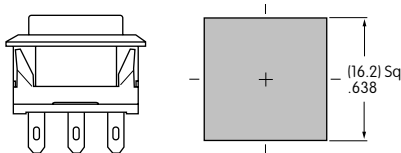


Double Pole

### Snap-in Mounting (Solder Lug)

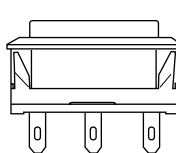
**KK**

Square with Built-in Bezel



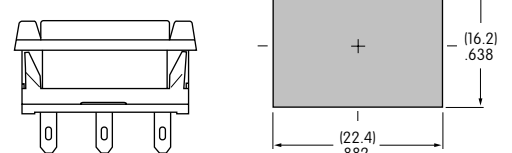
**NK**

Rectangular with Built-in Bezel



**NBK**

Rectangular with Built-in Side Barriers



Snap-in Mounting with Solder Lug terminals is the standard combination. Panel Thickness: .039 ~ .126" (1.0 ~ 3.2mm)

## CONTACT MATERIALS & RATINGS

**W**

Silver Contacts

Power Level

5A @ 125V AC & 250V AC

**G**

Gold Contacts

Logic Level

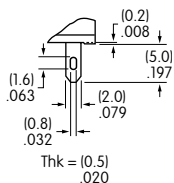
0.4VA maximum @ 28V AC/DC maximum

Complete explanation of operating range in Supplement section.

## TERMINALS

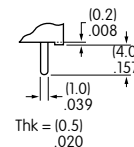
**01**

Solder Lug



**03**

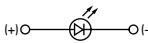

Straight PC



## 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 bottom of 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.

The LED is an integral part of the switch and not available separately.

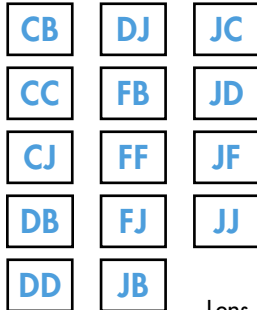
Super Bright LEDs are Electrostatic Sensitive			Bright			Super Bright			Unit
			<b>5C</b>	<b>5D</b>	<b>5F</b>	<b>6B</b>	<b>6F</b>	<b>6G</b>	
	Color		Red	Amber	Green	White	Green	Blue	
Forward Peak Current	$I_{FM}$		30	30	25	25	25	25	mA
Continuous Forward Current	$I_F$		20	20	20	20	20	20	mA
Forward Voltage	$V_F$		1.85	2.0	2.1	3.8	3.8	3.8	V
Reverse Peak Voltage	$V_{RM}$		5	5	5	5	5	5	V
Current Reduction Rate Above 25°C	$\Delta I_F$		0.40	0.42	0.46	0.47	0.47	0.47	mA/°C
Ambient Temperature Range			-25° ~ +50°C			-25° ~ +50°C			

## CAP TYPES & COLOR COMBINATIONS

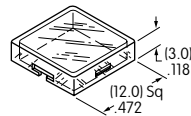
### Full Face Illuminated Cap for Bright LED

#### Lens/Diffuser

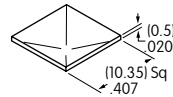
#### Colors Available for Square Cap:



**AT4074**  
Lens



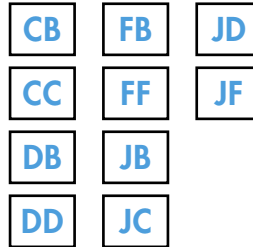
**AT4075**  
Diffuser



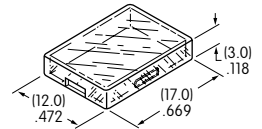
Lens & Diffuser Material: Polycarbonate

#### Lens/Diffuser

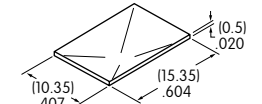
#### Colors Available for Rectangular Cap:



**AT4117**  
Lens



**AT4118**  
Diffuser



Lens Finish: Glossy

Diffuser Finish: Textured

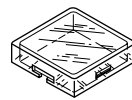
### Full Face Illuminated Cap for Super Bright LED

#### Lens/Diffuser

#### Colors Available for Square Cap:



**AT4074 Lens & AT4075 Diffuser**  
(Dimensioned above)



Rectangular lens & diffuser are not available for combining with super bright LED.

Lens & Diffuser Material: Polycarbonate

Lens Finish: Glossy

Diffuser Finish: Textured

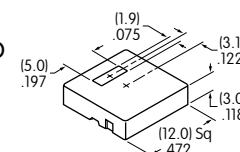
### Spot Illuminated Caps



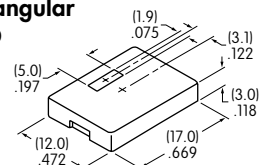
**Black Cap with Translucent White Window for LED Display**

Material: Polycarbonate  
Finish: Matte

**AT4119 Square**  
for Bright and Super Bright LED



**AT4120 Rectangular**  
for Bright LED



Color Codes:

**A** Black

**B** White

**C** Red

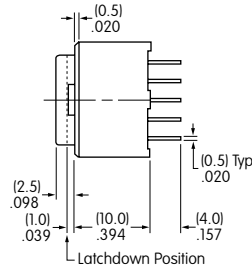
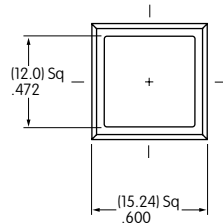
**D** Amber

**F** Green

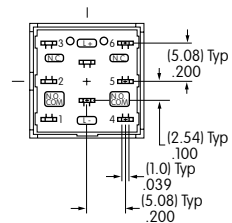
**J** Clear

## TYPICAL SWITCH DIMENSIONS

### Square • PCB Mount



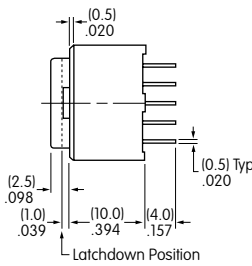
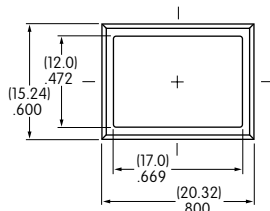
### Single & Double Pole



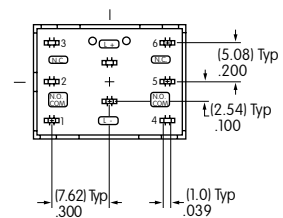
Single pole models do not have terminals 4, 5, & 6.

UB15SKG035C-CB

### Rectangular • PCB Mount



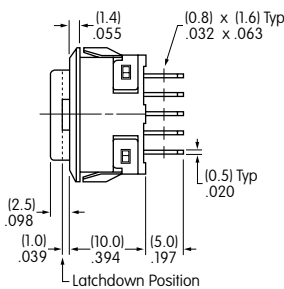
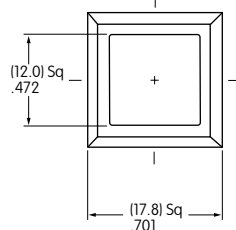
### Single & Double Pole



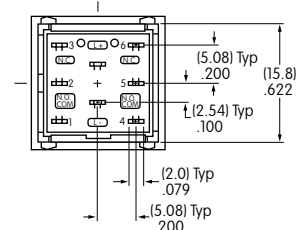
Single pole models do not have terminals 4, 5, & 6.

UB26RKG035D-DD

### Square • Snap-in Mount • Built-in Bezel



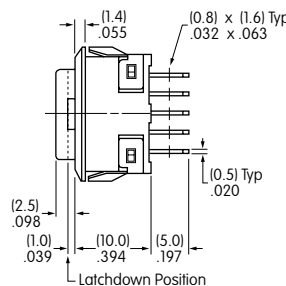
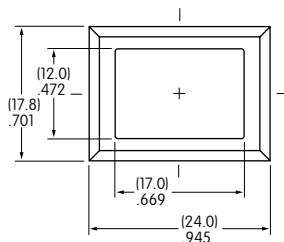
### Single & Double Pole



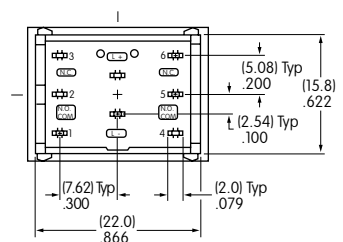
Single pole models do not have terminals 4, 5, & 6.

UB25KKW015C-CB

### Rectangular • Snap-in Mount • Built-in Bezel



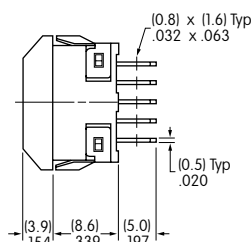
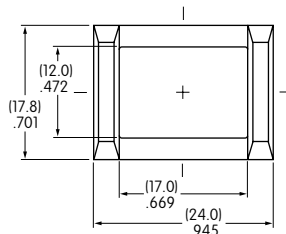
### Single & Double Pole



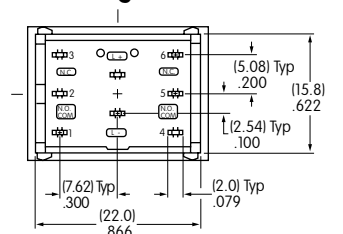
Single pole models do not have terminals 4, 5, & 6.

UB26NKW015F-FF

### Rectangular • Snap-in Mount • Built-in Side Barriers



### Single & Double Pole



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

UB25NBKW015F-FB