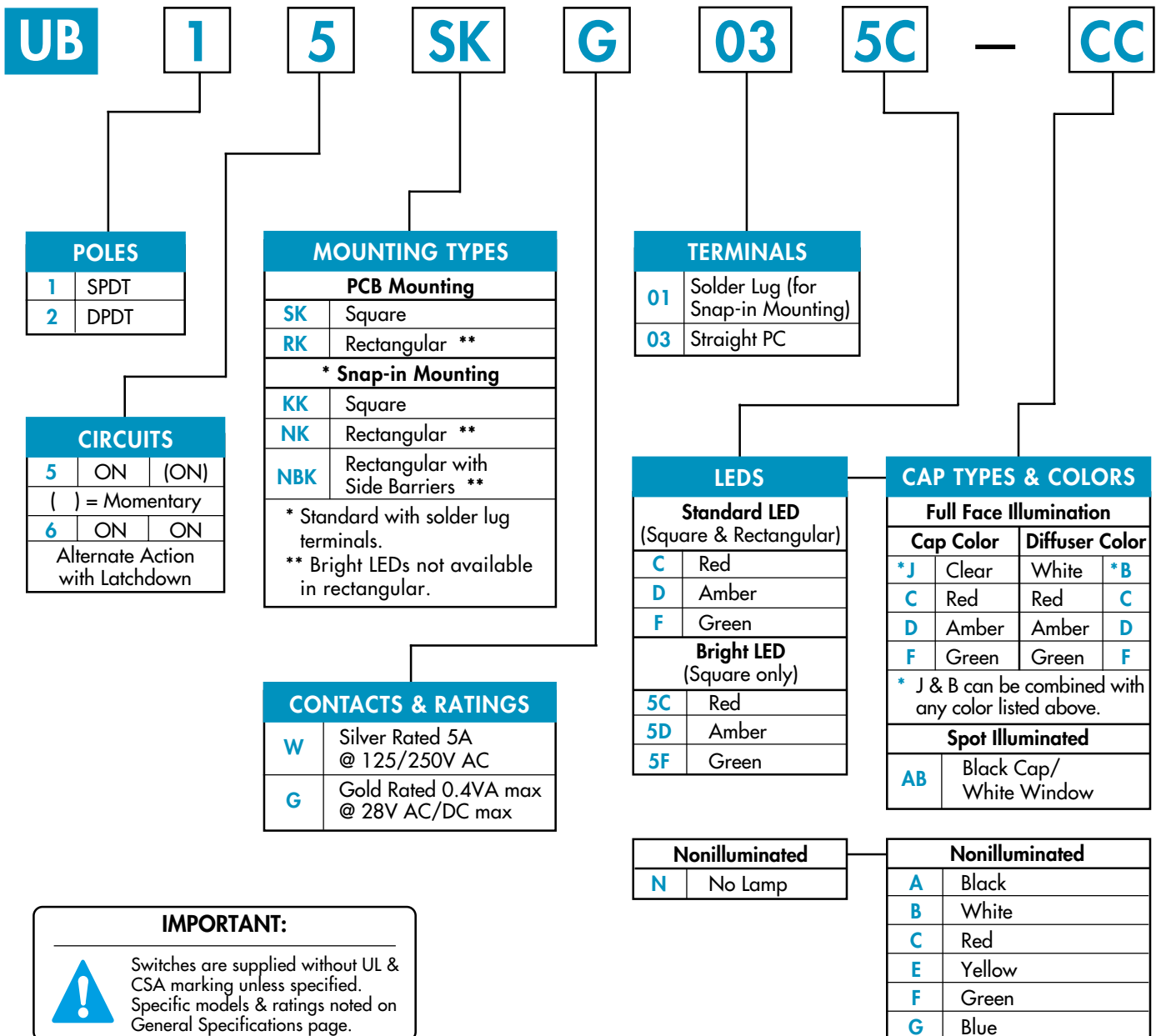


## TYPICAL SWITCH ORDERING EXAMPLE



## DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

### UB15SKG035C-CC



## GENERAL SPECIFICATIONS

### Electrical Capacity (Resistive Load)

**Power Level (code W):** 5A @ 125/250V AC or 5A @ 30V DC  
**Logic Level (code G):** 0.4VA maximum @ 28V AC/DC maximum  
 Note: See [Supplement Index](#) to find explanation of operating range.

### 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;  
 1,500V AC minimum between contacts & case  
**Mechanical Life:** 1,000,000 operations minimum for momentary;  
 200,000 operations minimum for alternate action  
**Electrical Life:** 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  
**Nominal Operating Force:** Single Pole: 160 grams for Square & 194 grams for Rectangular  
 Double Pole: 260 grams for Square & 316 grams for Rectangular  
**Contact Timing:** Break before make  
**Travel:** Square: 1.7mm (.067") pretravel; 0.6mm (.024") overtravel; 2.3mm (.091") total  
 Rectangular: 1.7mm (.067") pretravel; 0.7mm (.028") overtravel; 2.4mm (.095") total

### Materials & Finishes

**Housing/Bezel:** Glass fiber reinforced polyamide  
**Snap-in Frame:** Stainless steel  
**Movable Contactor:** Phosphor bronze  
**Movable Contacts:** Silver alloy or copper with gold plating over nickel  
**Stationary Contacts:** Silver alloy or copper with gold plating over nickel  
**Switch Terminals:** Phosphor bronze with silver or gold plating  
**Lamp Terminals:** Brass with tin-lead plating  
**Base:** Glass fiber reinforced diallyl phthalate

### Environmental Data

**Operating Temp Range:** Illuminated: -25°C through +50°C (-13°F through +122°F)  
 Nonilluminated: -20°C through +70°C (-4°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 acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

### Installation

**Cap Installation Force:** .77 kg (1.69 lb)  
**Soldering Time & Temperature:** 3 seconds @ 350°C or 5 seconds @ 270°C  
**Process Seal:** Not available

### Standards & Certifications

**Flammability Standards:** UL94V-0 housing/bezel of GFR polyamide & base of GFR diallyl phthalate  
**UL Recognized:** All single & double pole models recognized at 5A @ 125/250V AC or  
 0.014A maximum @ 28V DC; UL File No. E44145  
**CSA Certified:** 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 Nos. LR23535

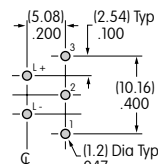
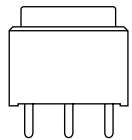
### POLES & CIRCUITS

		Plunger Position ( ) = Momentary		Connected Terminals		Throw & Power/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	UB15 UB16	ON ON	(ON) ON	1-3	1-2	
DP	UB25 UB26	ON ON	(ON) ON	1-3 4-6	1-2 4-5	SPDT: 1 COM, 3 NC, 2 NO DPDT: 1 COM, 3 NC, 2 NO, 4 COM, 6 NC, 5 NO L (+) - L (-)

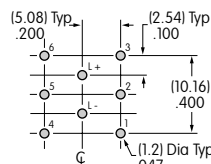
### SHAPES & MOUNTING TYPES

#### PCB Mounting

##### SK Square

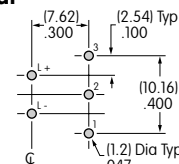
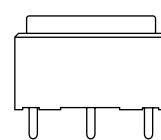


Single Pole

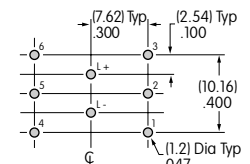


Double Pole

##### RK Rectangular



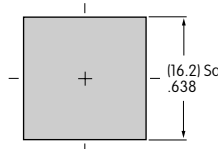
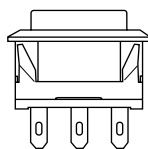
Single Pole



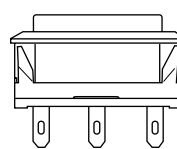
Double Pole

#### Snap-In Mounting

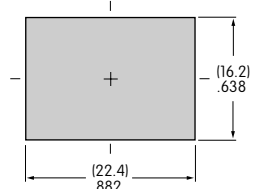
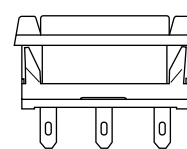
##### KK Square with Bezel



##### NK Rectangular with Bezel



##### NBK Rectangular with Side Barriers



Snap-in Mounting with Solder Lug terminals is the standard combination.

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

### CONTACT MATERIALS & RATINGS



Silver Contacts

Power Level

5A @ 125V AC & 250V AC



Gold Contacts

Logic Level

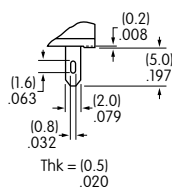
0.4VA maximum @ 28V AC/DC maximum

See [Supplement Index](#) for complete explanation of operating range.

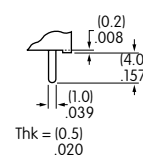
### TERMINALS

##### 01 Solder Lug

The .032" x .063" oblong hole accommodates two solid or stranded 24-gauge wires.




##### 03 Straight PC



### LED COLORS & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C.  
LED circuit is independent of switch operation. If the source voltage is greater than rated voltage, a ballast resistor is required.  
The ballast resistor calculation and more lamp detail are shown in the Supplement; see [Supplement Index](#).

		Standard LED			Bright LED			Unit
		C	D	F	5C	5D	5F	
LEDs are an integral part of the switch and not available separately (1 LED in square model, 2 LEDs in rectangular model).  * The 2 LEDs in the rectangular model are wired in parallel; all current values are doubled for this model.	 Color	Red	Amber	Green	Red	Amber	Green	
	Forward Peak Current $I_{FM}$	30	20	20	30	30	25	mA
	* Continuous Forward Current $I_F$	20	15	15	20	20	20	mA
	Forward Voltage $V_F$	2.0	1.9	1.95	1.85	2.0	2.25	V
	Reverse Peak Voltage $V_{RM}$	5	5	5	5	5	5	V
	* Current Reduction Rate Above 25°C $\Delta I_F$	0.40	0.27	0.27	0.40	0.42	0.46	mA/°C

**N** Code N indicates that no lamp is used.

### CAP TYPES & COLOR COMBINATIONS

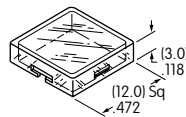
#### Transparent Cap with Diffuser for Full Face Illuminated

**J**

Clear

#### Caps

**AT4074 Square**  
(for Standard or Bright LED)



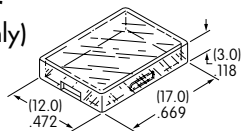
**C**

Red

**D**

Amber

**AT4117 Rectangular**  
(for Standard LED only)



**F**

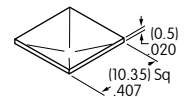
Green

**B**

White

#### Diffusers

**AT4075 Diffuser**  
for AT4074 Square Cap  
(for Standard or Bright LED)



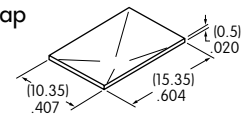
**C**

Red

**D**

Amber

**AT4118 Diffuser**  
for AT4117 Rectangular Cap  
(for Standard LED only)



**F**

Green

Cap & Diffuser Material: Polycarbonate Lens Finish: Glossy Diffuser Finish: Textured

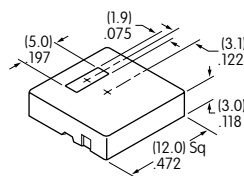
Note: Both cap & diffuser colors must be selected. J & B can be combined with any color.

#### Spot Illuminated Cap

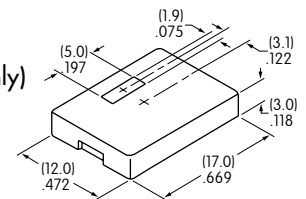
**AB**

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

**AT4119 Square**  
(for Standard or Bright LED)



**AT4120 Rectangular**  
(for Standard LED only)



Material: Polycarbonate Finish: Matte

#### Opaque Cap for Nonilluminated

#### Colors Available:

**A**

Black

**E**

Yellow

**B**

White

**F**

Green

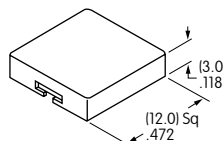
**C**

Red

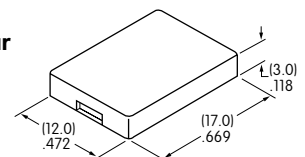
**G**

Blue

**AT4073 Square**



**AT4116 Rectangular**



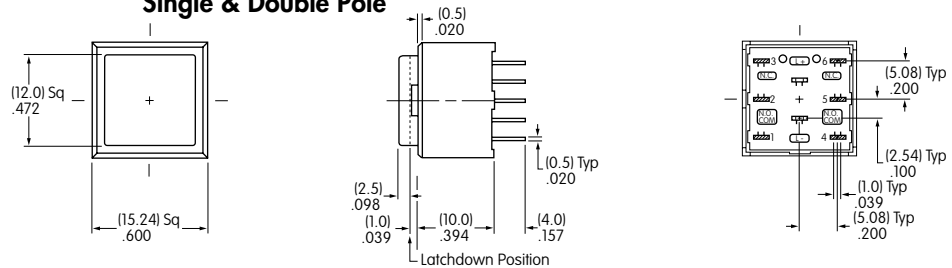
Material: Polycarbonate Finish: Glossy

### TYPICAL SWITCH DIMENSIONS

#### Square • PCB Mount



#### Single & Double Pole



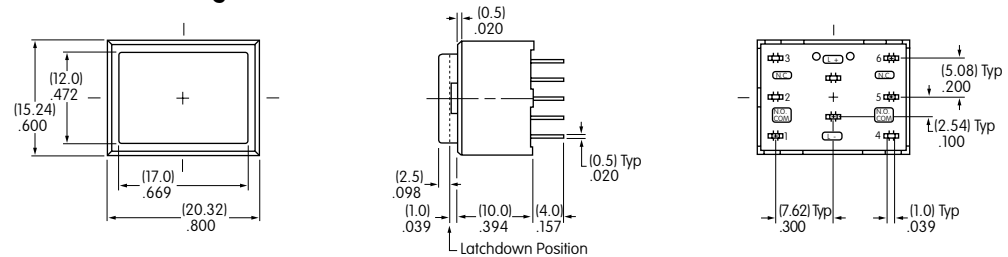
UB15SKG035C-CB

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

#### Rectangular • PCB Mount



#### Single & Double Pole



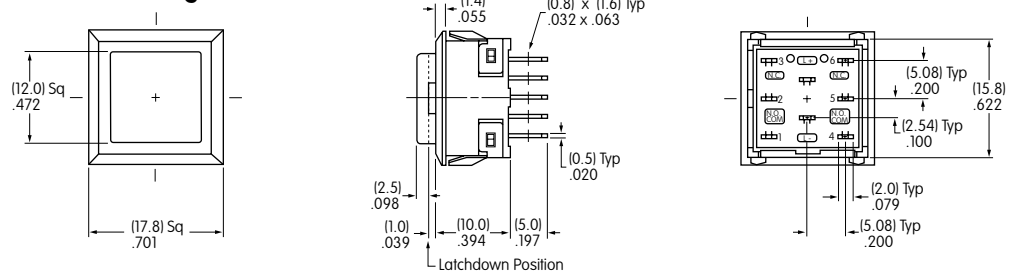
UB26RKG03E-EE

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

#### Square • Snap-in Mount • Bezel



#### Single & Double Pole

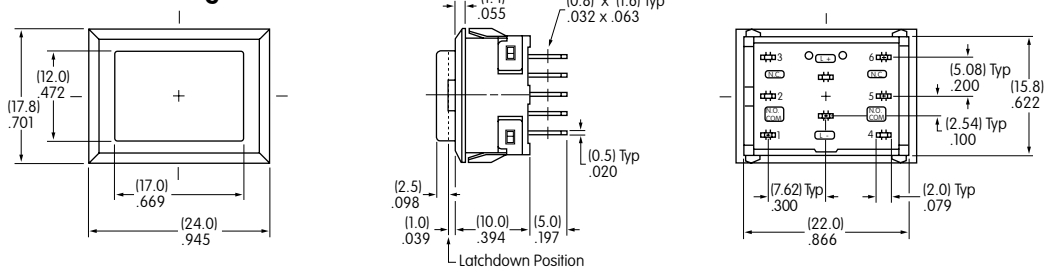


UB25KKW015C-CB

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

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

#### Single & Double Pole

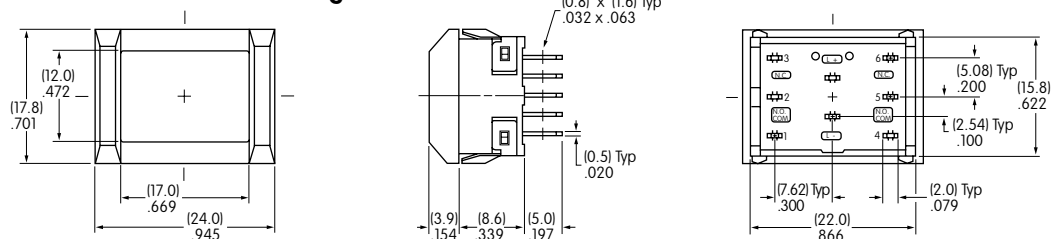


UB26NKKW01F-FF

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

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

#### Single & Double Pole



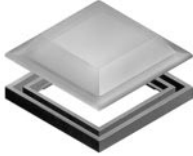
UB25NBKKW01F-FB

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

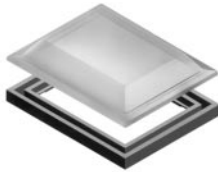
## OPTIONAL ACCESSORIES

### Splash Covers

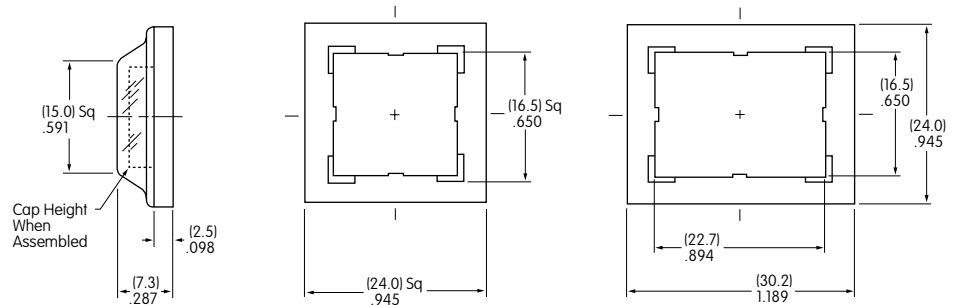
**AT4001  
Square**



**AT4011 Rectangular**



Not for use with barrier type models.



**Materials:**

Lid: PVC with polyethylene gasket (PVC loses pliability below 0°C (32°F).)

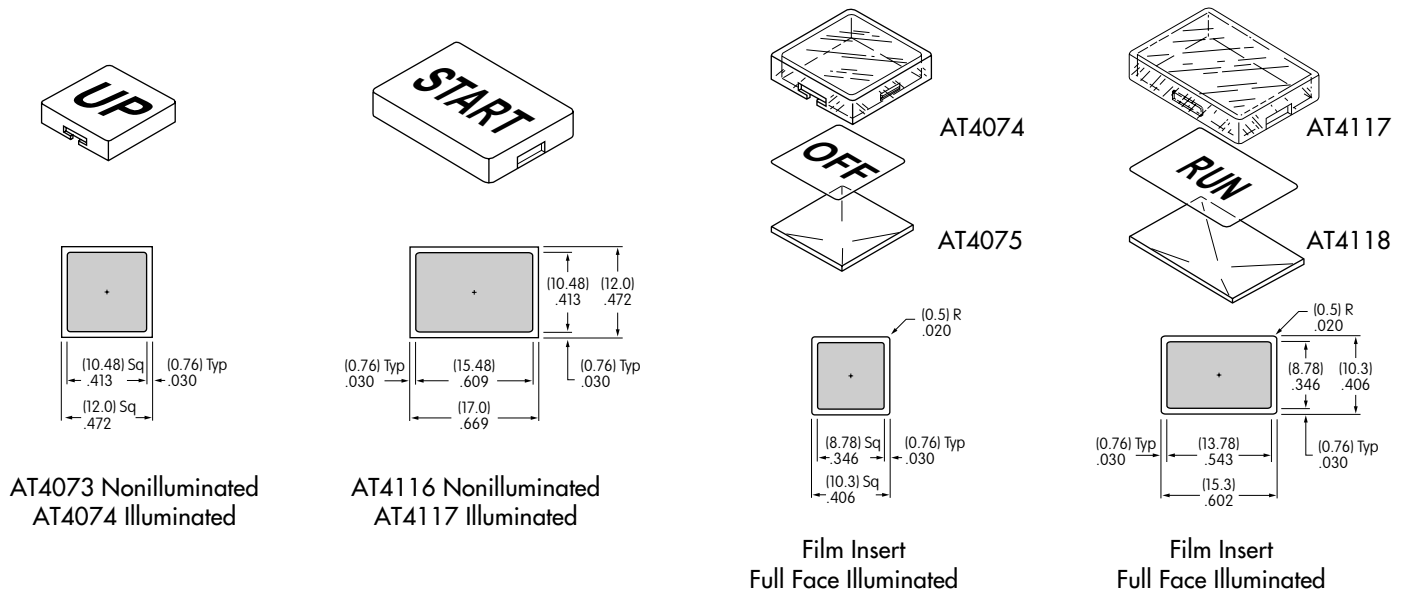
Base: Polyamide

Panel Thickness 1.0mm ~ 2.5mm (.039" ~ .098")

### LEGENDS

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

#### Suggested Printable Area for UB Lens & Film Insert



#### Recommended Print Method:

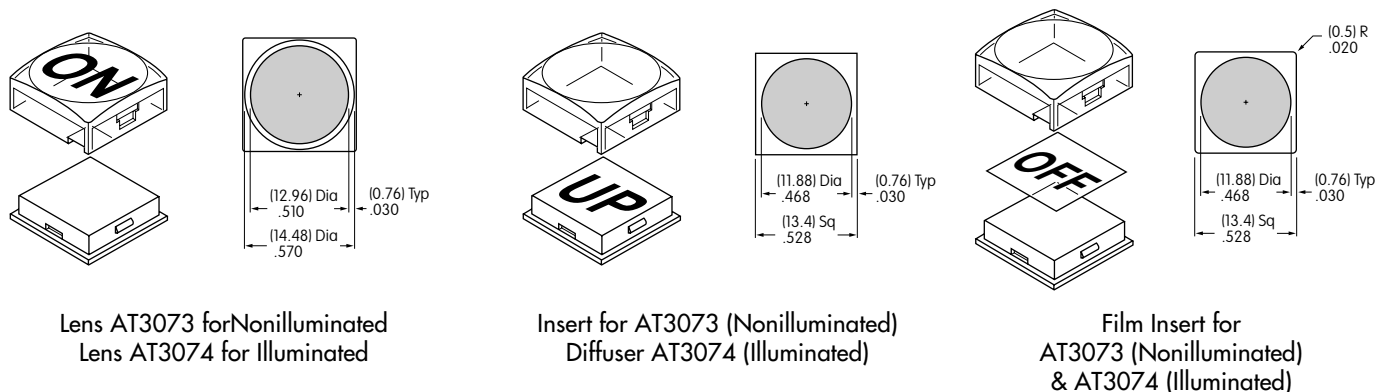
Screen Print or Pad Print (not on Film)  
Epoxy based ink is recommended.

Shaded areas are printable areas.

#### Film Material and Thickness:

Clear Polyester, 4 mil max.

#### Suggested Printable Area for UB2 Lens, Insert, Diffuser, & Film Insert



#### Recommended Print Method:

Screen Print or Pad Print (not on Film)  
Epoxy based ink is recommended.

Shaded areas are printable areas.

#### Film Material and Thickness:

Clear Polyester, 4 mil max.

### LEGEND PACKET FOR ORDERING CAPS WITH LEGENDS



1. To order caps with legends contact the factory and request the UB/UB2 Legend Packet.
2. Once you determine your desired legend, fill out the ordering work sheet included in the packet.
3. Return the completed work sheet to receive a quotation.

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## NKK Switches:

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