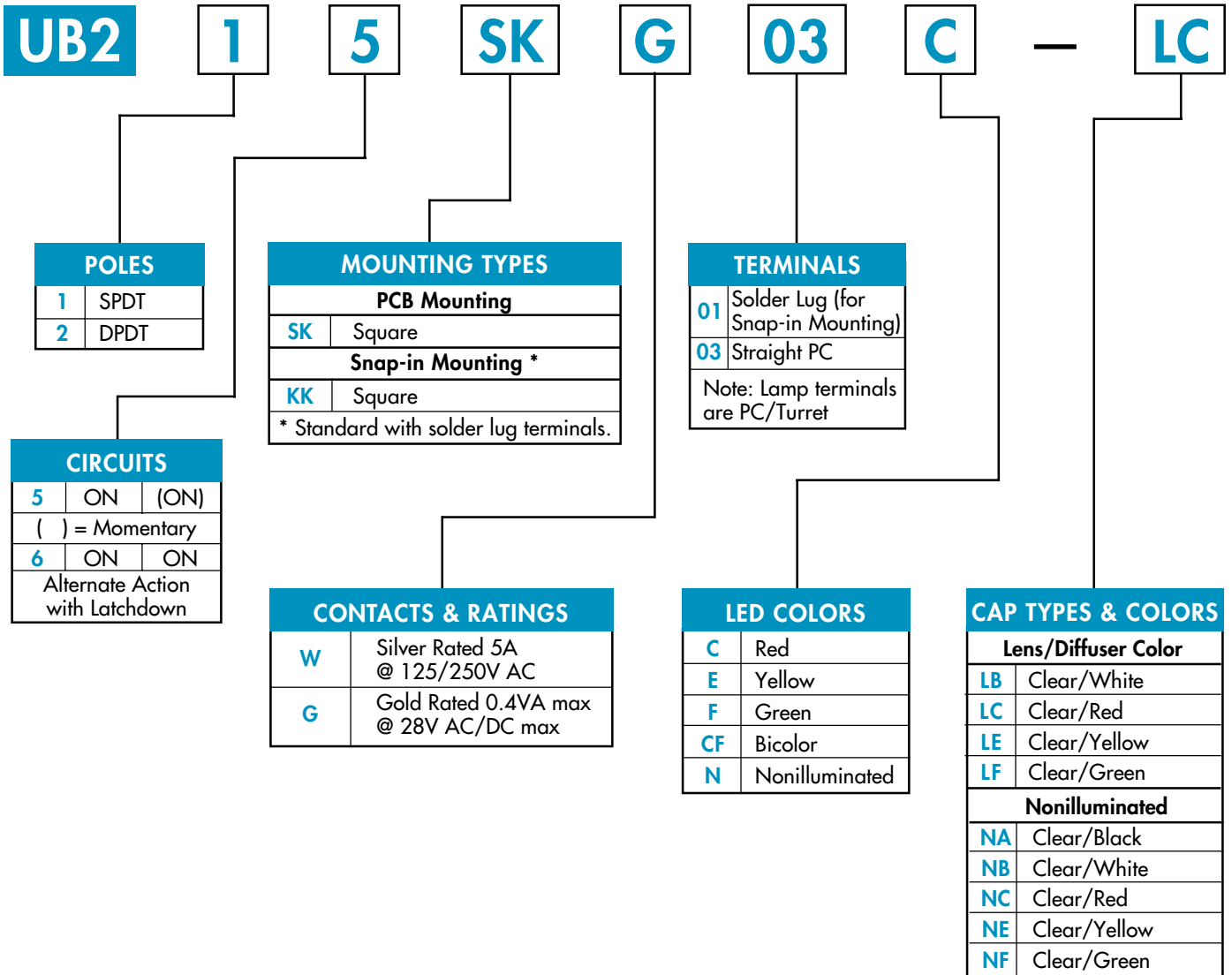




# Series UB

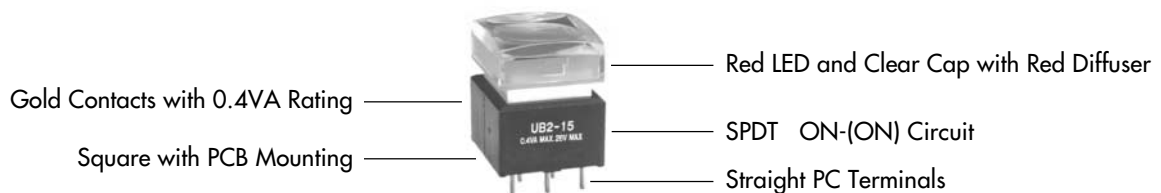
Low Profile Pushbutton Switches

## TYPICAL SWITCH ORDERING EXAMPLE



### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**UB215SKG03C-LC**





### 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;  
200,000 operations minimum for gold  
**Nominal Operating Force:** Single Pole: 194 grams  
Double Pole: 260 grams  
**Contact Timing:** Break before make  
**Travel:** 1.0mm (.039") pretravel; 1.3mm (.051") overtravel; 2.3mm (.091") total travel

#### Materials & Finishes

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

#### 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:** 1.53 kg (3.37 lb)  
**Soldering Time & Temperature:** 3 seconds @ 350°C or 5 seconds @ 270°C  
**Process Seal:** Not available

#### Standards & Certifications

**Flammability Standards:** UL94V-0 rated base



# Series UB

Low Profile Pushbutton Switches

## POLES & CIRCUITS

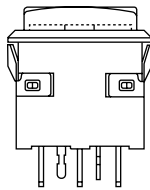
		Plunger Position ( ) = Momentary		Connected Terminals		Throw & Schematics
Pole	Model	Normal	Down	Normal	Down	
SP	UB215 UB216	ON ON	(ON) ON	1-3	1-2	Notes: Switch is marked with NC, NO, COM, L+ & L-. Lamp circuit is isolated and requires external power source (schematics on following page). 
DP	UB225 UB226	ON ON	(ON) ON	1-3 4-6	1-2 4-5	

## SHAPES & MOUNTING TYPES

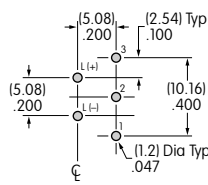
### PCB Mounting

**SK**

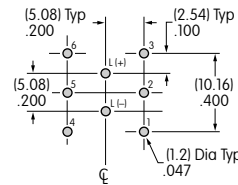
Square



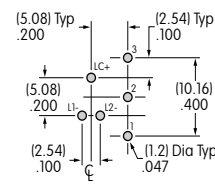
Single Color Single Pole



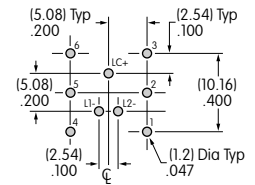
Single Color Double Pole



Bicolor Single Pole



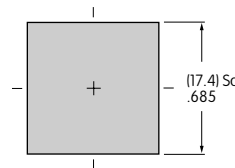
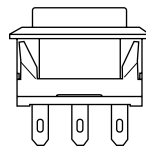
Bicolor Double Pole



### Snap-In Mounting (Solder Lug)

**KK**

Square with Bezel



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

## 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

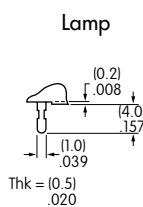
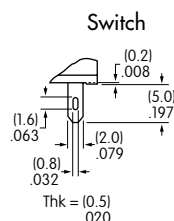
See [Supplement Index](#) for complete explanation of operating range.

## TERMINALS

**01**

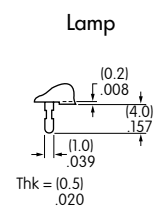
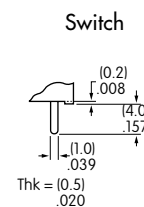
Solder Lug

0.8mm x 1.6mm oblong hole accommodates one solid 20-gauge wire or two solid or stranded 22-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](#).

### Multi Element LED

		<b>C</b>	<b>E</b>	<b>F</b>	<b>CF</b>	
	Color	Red	Yellow	Green	Red/Green	
Forward Peak Current	$I_{FM}$	40mA	40mA	40mA	60/60mA	Orange color can be achieved by lighting red and green simultaneously on the bicolor LED.
Continuous Forward Current	$I_F$	30mA	30mA	30mA	48/48mA	
Forward Voltage	$V_F$	3.6V	3.8V	4.0V	1.8/2.0V	
Reverse Peak Voltage	$V_{RM}$	10V	10V	10V	5/5V	
Current Reduction Rate Above 25°C	$\Delta I_F$	0.67mA/°C	0.67mA/°C	0.67mA/°C	1.0/1.0mA/°C	

<p>Single Color LED with 4 elements</p>	<p>Bicolor LED with 6 elements</p>
---	------------------------------------

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

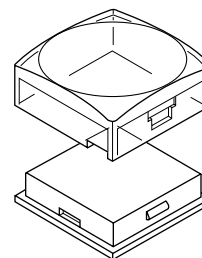
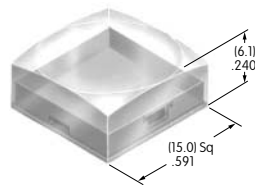
## CAP TYPES & COLOR COMBINATIONS

### Cap for Illuminated

#### AT3074

Diffuser Colors Available:

- B** White
- C** Red
- E** Yellow
- F** Green



Clear Lens

Translucent Colored Diffuser

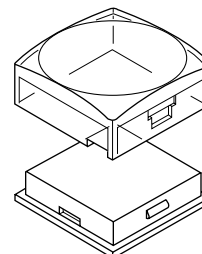
Material: Polycarbonate Finish: Glossy

### Cap for Nonilluminated

#### AT3073

Insert Colors Available:

- A** Black
- B** White
- C** Red
- E** Yellow
- F** Green



Clear Lens

Opaque Colored Insert

Material: Polycarbonate Finish: Glossy



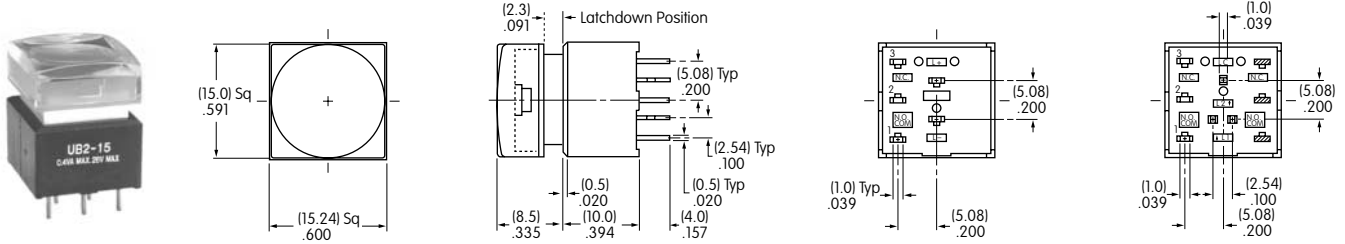
# Series UB

Low Profile Pushbutton Switches

## TYPICAL SWITCH DIMENSIONS

### Single Color • PCB Mount

### Single Pole

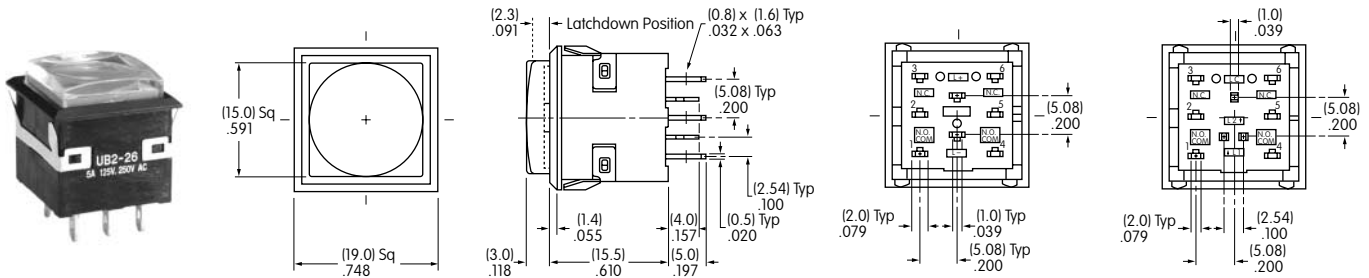


UB215SKG03C-LC

Nonilluminated models do not have lamp terminals.

### Single Color • Snap-in Mount

### Double Pole

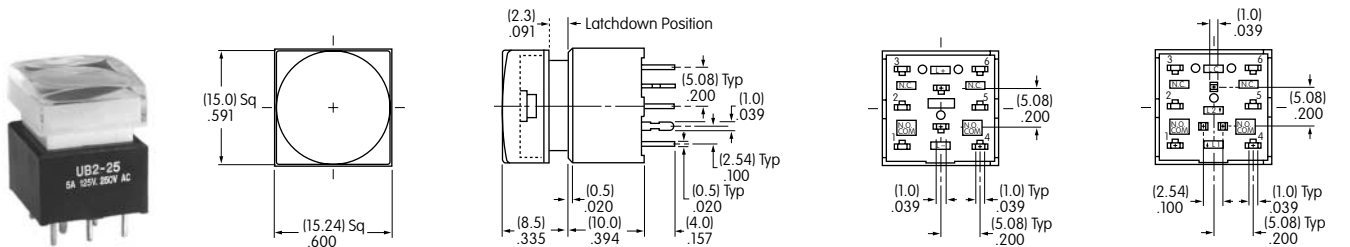


UB226KKW01C-LC

Nonilluminated models do not have lamp terminals.

### Bicolor • PCB Mount

### Double Pole

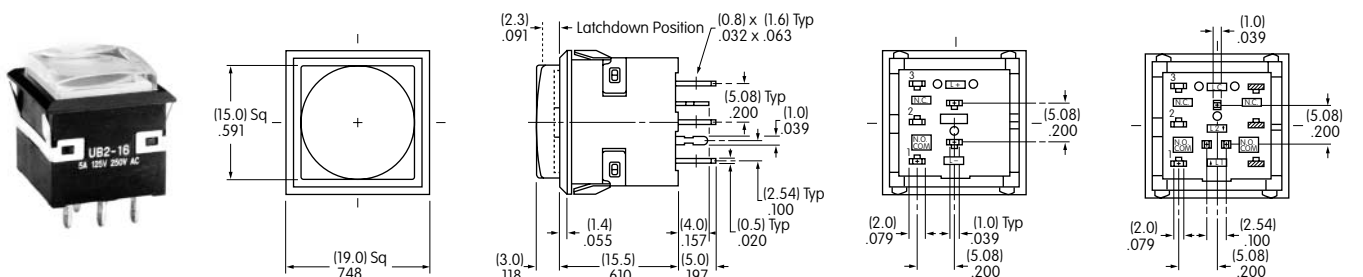


UB225SKG03CF-LB

Nonilluminated models do not have lamp terminals.

### Bicolor • Snap-in Mount

### Single Pole



UB216KKW01CF-LB

Nonilluminated models do not have lamp terminals.