

# General Specifications

## Electrical Capacity (Resistive Load)

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

## Other Ratings

**Contact Resistance:** 50 milliohms maximum  
**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 and case for 1 minute minimum  
**Mechanical Life:** 500,000 operations minimum  
**Electrical Life:** 50,000 operations minimum for 3A @ 125V/250V AC & 3A @ 30V DC  
 100,000 operations minimum for 1A @ 125V/250V AC & 1A @ 30V DC  
**Nominal Operating Force:** 1.5N for Single Pole; 3.0N for Double Pole  
**Contact Timing:** Nonshorting (break-before-make)  
**Travel:** Total Travel .118" (3.0mm)

## Materials & Finishes

**Actuator:** Polycarbonate  
**Housing:** Bushing mount: Glass fiber reinforced polyamide (UL94V-0);  
 Snap in mount: Polyphenylene ether (UL94V-0)  
**Base:** Diallyl phthalate (UL94V-0)  
**Movable Contact:** Phosphor bronze & silver with silver plating  
**Stationary Contacts:** Common terminal: Phosphor bronze with silver plating;  
 Contact terminals: Phosphor bronze with tin & copper plating  
**Lamp Terminals:** Phosphor bronze with tin and copper plating

## Environmental Data

**Operating Temperature Range:** -10°C through +50°C (+14°F through +122°F) for Illuminated  
 -25°C through +70°C (+13°F through +158°F) for Nonilluminated  
**Humidity:** 90 ~ 95% humidity for 240 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/s<sup>2</sup>) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

## Installation

**Mounting Torque:** 0.8Nm (7.08 lb•in)  
**Soldering Time & Temperature:** Manual Soldering: See Profile A in Supplement section.  
**Cleaning:** Hand clean locally with alcohol based solution

## Standards & Certifications

**Flammability Standards:** UL94V-0 housing & base  
**UL:** File No. E44145 - Recognized only when ordered with marking on switch.  
 Add "/U" or "/CUL" to end of part number to order UL recognized switch.  
 All single & double pole models recognized at 3A @ 125V/250V AC or 3A @ 30V DC.

# Distinctive Characteristics

Environmentally friendly components and packaging materials meet RoHS Directive restricting use of hazardous materials. Suited for lead-free soldering because of heat resistant resin materials.

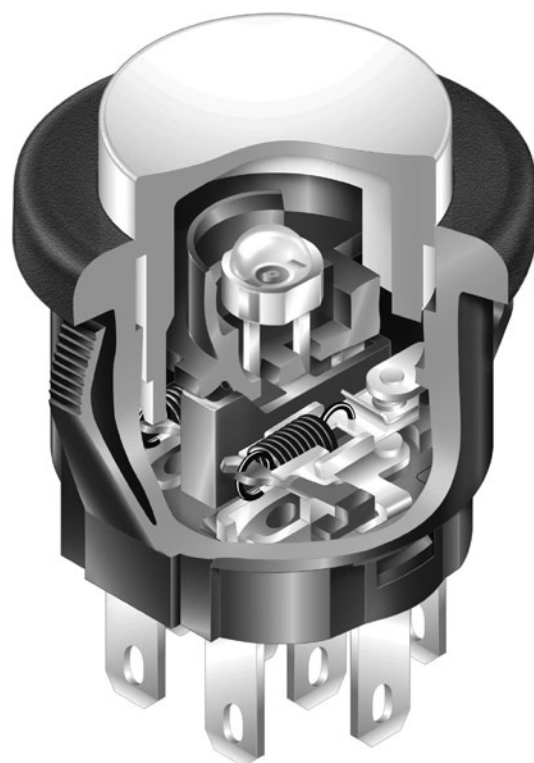
Smooth, slightly concave surface of cap designed to fit fingertip. Unique design and construction of cap prevents its removal and limits tampering.

Bright LED illumination in choice of red, green, or amber through translucent white cap.

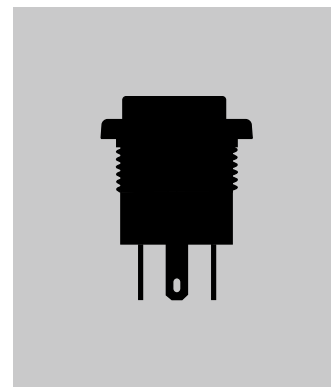
Short body of .551" (14.0mm) conserves behind-panel space.

Combination solder lug and .110" quick connect terminals.

Crisp actuation and clear circuit status provided by snap-action contact mechanism. Arc barrier between movable contacts protects against crossover.



Actual Size



### TYPICAL SWITCH ORDERING EXAMPLE

LP01 1 5 C C K W01 5C B

| Poles |      | Mounting Types |         | Contacts & Terminals |                                                                                 | LEDs |       | Cap Color |       |
|-------|------|----------------|---------|----------------------|---------------------------------------------------------------------------------|------|-------|-----------|-------|
| 1     | SPDT | C              | Bushing | W01                  | Silver Rated<br>3A @ 125V AC/250V AC<br>Solder Lug/<br>Quick Connect Terminals* | 5C   | Red   | B         | White |
| 2     | DPDT | M              | Snap-in |                      |                                                                                 | 5D   | Amber |           |       |
|       |      |                |         |                      |                                                                                 | 5F   | Green |           |       |

| Circuit         |    |      |
|-----------------|----|------|
| 5               | ON | (ON) |
| ( ) = Momentary |    |      |

| Housing |       |
|---------|-------|
| K       | Black |

| LEDs |       |
|------|-------|
| 5C   | Red   |
| 5D   | Amber |
| 5F   | Green |

| Cap Color |       |
|-----------|-------|
| B         | White |

#### IMPORTANT:



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

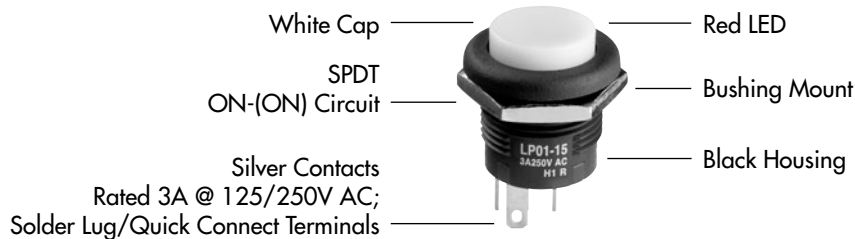
| Nonilluminated |                |
|----------------|----------------|
| No Code        | Nonilluminated |

| Nonilluminated Cap Colors |       |
|---------------------------|-------|
| A                         | Black |
| C                         | Red   |
| F                         | Green |

\* Wire harness & cable assemblies offered only in Americas

### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**LP0115CCKW015CB**



### POLES & CIRCUIT

|      |        | Plunger Position<br>( ) = Momentary |      | Connected Terminals |         | Throw & Power/Lamp Schematics                                                                                         |
|------|--------|-------------------------------------|------|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------|
| Pole | Model  | Normal                              | Down | Normal              | Down    | Note: Terminal markings "COM, NO, NC, L, + and -" are actually on the switch; terminal numbers are not on the switch. |
| SP   | LP0115 | ON                                  | (ON) | 1-3                 | 1-2     |                                                                                                                       |
| DP   | LP0125 | ON                                  | (ON) | 1-3 4-6             | 1-2 4-5 | DPDT                                                                                                                  |

## MOUNTING TYPES

**C****Bushing**

.630" (16.0mm) Diameter

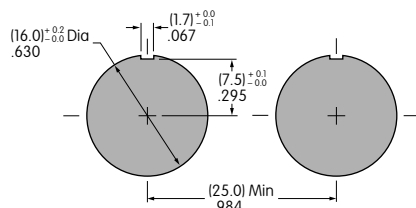
This mounting option is supplied with a brass hexagon nut with nickel plating.

**M****Snap-in**

.669" (17.0mm) Diameter

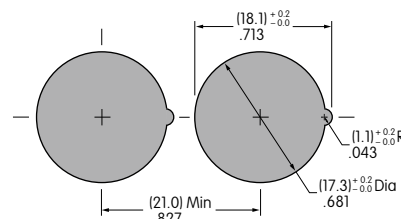


Recommended  
Panel Thickness:  
.079" ~ .256"  
(2.0mm ~ 6.5mm)



Allow .984" (25.0mm) distance from center-to-center between switches when mounted side-by-side.

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



Allow .827" (21.0mm) distance from center-to-center between switches when mounted side-by-side.

## HOUSING

**K****Black**

Housing available in black only. The one-piece body and bezel have a matte finish.

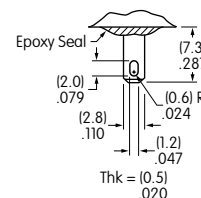
## CONTACT MATERIALS, RATINGS, &amp; TERMINALS

**W01****Silver****Power Level**

3A @ 125V AC/250V AC; 3A @ 30V DC

Solder Lug/  
.110" (2.8mm) Quick Connect

Note: If used at 1A @ 125V AC/250V AC or 1A @ 30V DC, electrical life will be 100,000 operations minimum.



## LED COLORS &amp; 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.

|                                                                           |                                                                                                                        |              |                  |                    |                    |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------|------------------|--------------------|--------------------|
| LEDs are an integral part of the switch and are not available separately. | Single Color LED with 1 Element<br> | Colors       | <b>5C</b><br>Red | <b>5D</b><br>Amber | <b>5F</b><br>Green |
|                                                                           | Forward Peak Current                                                                                                   | $I_{FM}$     | 30mA             | 30mA               | 30mA               |
|                                                                           | Typical Forward Current                                                                                                | $I_F$        | 20mA             | 20mA               | 20mA               |
|                                                                           | Forward Voltage                                                                                                        | $V_F$        | 1.95V            | 2.0V               | 2.1V               |
|                                                                           | Reverse Peak Voltage                                                                                                   | $V_{RM}$     | 5V               | 5V                 | 5V                 |
|                                                                           | Current Reduction Rate Above 25°C                                                                                      | $\Delta I_F$ | 0.41mA/°C        | 0.29mA/°C          | 0.39mA/°C          |
|                                                                           | Ambient Temperature Range                                                                                              |              | -10°C ~ +50°C    |                    |                    |

**No Code****No Lamp**

### CAP COLORS

#### Illuminated Cap

##### Cap Color Available:



White

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

Material: Polycarbonate

Finish: Matte



#### Nonilluminated Caps

##### Cap Colors Available:



Black



Red



Green

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

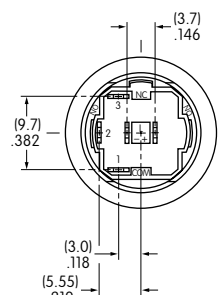
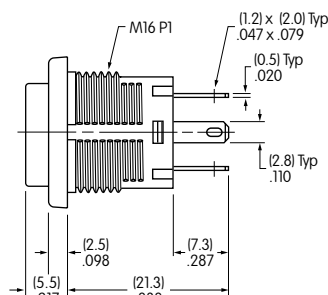
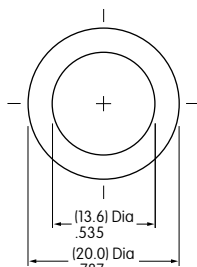
Material: Polycarbonate

Finish: Matte



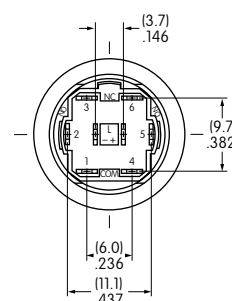
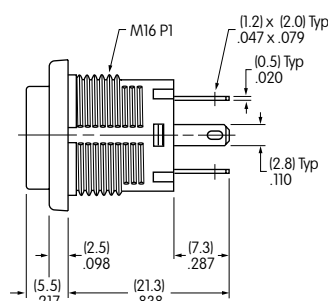
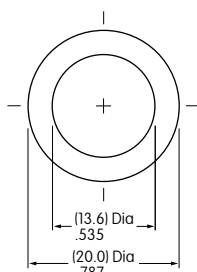
### TYPICAL SWITCH DIMENSIONS

#### Bushing Mount • Single Pole



LP0115CCKW015CB

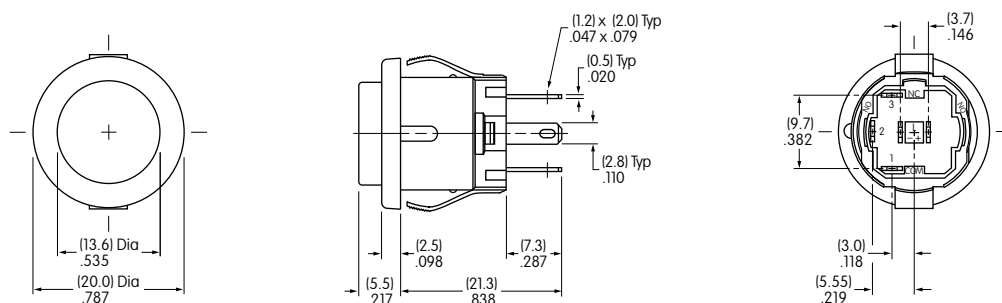
#### Bushing Mount • Double Pole



LP0125CCKW015CB

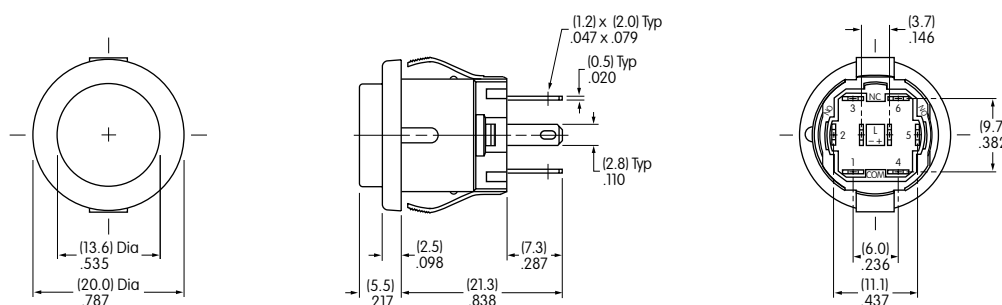
## TYPICAL SWITCH DIMENSIONS

### Snap-in • Single Pole



LP0115CMKW015CB

### Snap-in • Double Pole



LP0125CMKW015DB

## LEGENDS

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

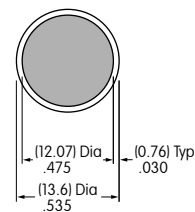
### Suggested Printable Area for LP01 Cap



#### Recommended Methods:

Pad Print or Laser Etch on cap.

Epoxy based ink is recommended.



Shaded area is printable area

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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