

# General Specifications

## B Electrical Capacity

**Resistive Load:** 10A @ 125V AC, 6A @ 250V AC, or 6A @ 30V DC  
**Inductive Load:** 5A @ 125V AC (P. F. @ .60)

## Other Ratings

**Contact Resistance:** 10 milliohms maximum  
**Insulation Resistance:** 200 megohms minimum @ 500V DC  
**Dielectric Strength:** 1,500V AC minimum for 1 minute minimum  
**Mechanical Life:** 30,000 operations minimum  
**Electrical Life:** 10,000 operations minimum  
**Nominal Operating Force:** 11.77N for maintained & 17.65N for momentary  
**Angle of Throw:** 34°

## Materials & Finishes

**Housing:** Steel with chrome plating  
**Movable Contacts:** Silver clad copper with silver plating  
**Stationary Contacts:** Copper with silver plating  
**Base:** Melamine  
**Common Terminal:** Copper with silver plating  
**End Terminals:** Brass with silver plating  
**Lamp Terminals:** Phosphor bronze with nickel plating

## Environmental Data

**Operating Temperature Range:** -20°C through +50°C (-4°F through +122°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/s<sup>2</sup>) acceleration (tested in 3 right angled directions, with 3 shocks in each direction)

## Installation

**Cap Installation Force:** 19.61N (4.41 lbf)  
**Soldering Time & Temperature:** Manual Soldering: See Profile A in Supplement section.

## Standards & Certifications

**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 models recognized at 10A @ 125V AC & 6A @ 250V AC

## Distinctive Characteristics

Each half of the rocker face is distinctly illuminated due to partitioned rocker construction and dual lamps.

Numerous lighting effects achievable by using white or clear rocker with colored filters or lamp covers, plus using different colors on each side of rocker.

Snap-in mounting allows fast, easy installation of switch into panel.

Stainless steel retaining clips provide secure mounting over a wide range of panel thicknesses.

Dual incandescent or neon lamps operate independently of each other.

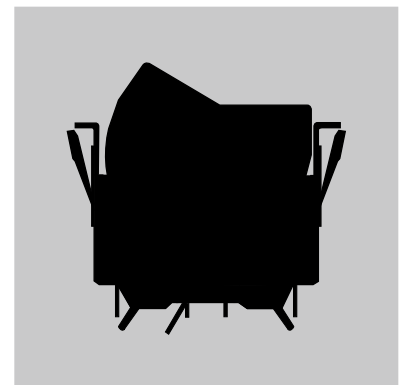
Front panel relamping.

Stationary lamp sockets are independent of rocker actuation, protecting lamps from damage due to shock and vibration.

Switch contacts are rated at 10 amps 125V AC which makes these devices well-suited for various power switching applications.



Actual Size



Toggles

**B** Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

### TYPICAL SWITCH ORDERING EXAMPLE

**LW31**

**2**

**2**

**H**

**4**

**C**

**F**

**A**

#### Pole

**2** DPDT

#### Circuits

	Up	Center	Down
<b>2</b>	ON	NONE	ON
<b>3</b>	ON	OFF	ON
<b>5</b>	ON	NONE	(ON)
<b>8</b>	(ON)	OFF	(ON)
<b>9</b>	ON	OFF	(ON)

( ) = Momentary

#### Lamps

Incandescent	
<b>E</b>	6-volt
<b>F</b>	12-volt
<b>H</b>	18-volt
<b>K</b>	24-volt
<b>L</b>	28-volt
Neon	
<b>N</b>	110-volt
Not suitable with green & blue	
Nonilluminated	
<b>0</b>	No Lamp

#### Bezel

No Code	No Bezel
<b>A</b>	Black
<b>B</b>	White
<b>C</b>	Red
<b>D</b>	Amber
<b>E</b>	Yellow
<b>F</b>	Green
<b>G</b>	Blue
<b>H</b>	Gray

#### Rocker Caps

<b>1</b>	White without filters or lamp covers
<b>2</b>	White with filters
<b>3</b>	White with lamp covers
<b>4</b>	Clear with filters

#### Lamp Cover/Filter Colors For Up Position

<b>0</b>	No Cover/Filter
Lamp Cover	
<b>C</b>	Red
<b>D</b>	Amber
<b>F</b>	Green
Filter	
<b>B</b>	White
<b>C</b>	Red
<b>D</b>	Amber
<b>E</b>	Yellow
<b>F</b>	Green
<b>G</b>	Blue

#### Lamp Cover/Filter Colors For Down Position

<b>0</b>	No Cover/Filter
Lamp Cover	
<b>C</b>	Red
<b>D</b>	Amber
<b>F</b>	Green
Filter	
<b>B</b>	White
<b>C</b>	Red
<b>D</b>	Amber
<b>E</b>	Yellow
<b>F</b>	Green
<b>G</b>	Blue

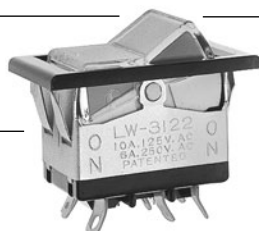
Note: Wire harness & cable assemblies offered only in Americas

#### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**LW3122-H4CF-A**

Clear Rocker with  
Red Filter in Up Position and  
Green Filter in Down Position

DPDT  
ON-NONE-ON Circuit



18-volt  
Incandescent Lamp  
Black Bezel

#### 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.

## POLES & CIRCUITS

Pole	Model	Rocker Position ( ) = Momentary			Connected Terminals			Throw & Power/Lamp Schematics
		Up	Center	Down	Up	Center	Down	
DP	LW3122	ON	NONE	ON	2-3 5-6	OPEN	2-1 5-4	Notes: Terminal numbers are not actually on switch. Lamp circuit is isolated and requires an external power source.  DPDT 
	LW3123	ON	OFF	ON				
	LW3125	ON	NONE	(ON)				
	LW3128	(ON)	OFF	(ON)				
	LW3129	ON	OFF	(ON)				



## LAMP CODES & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.

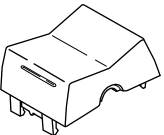
For dimension drawing of lamps see Accessories & Hardware section.

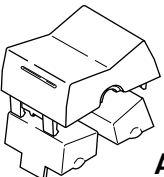
For neon, if the source voltage is greater than rated voltage, a ballast resistor is required. The ballast resistor calculation and more lamp detail are shown in the Supplement section. Neon not for use with green lamp cover or blue and green filters.

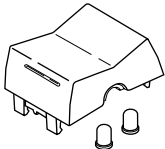
### Incandescent & Neon Lamps for Solid & Design Caps

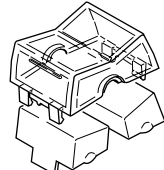
<div>AT602 Incandescent</div> <div></div>	<div>AT602N Neon</div> <div></div>		<div>E</div>	<div>F</div>	<div>H</div>	<div>K</div>	<div>L</div>	<div>N</div>	
		Voltage	V	6V AC	12V AC	18V AC	24V AC	28V AC	110V AC
		Current	I	80mA	50mA	35mA	25mA	22mA	1.5mA
		MSCP		.159	.215	.398	.215	.247	NA
		Endurance	Hours	2,000 Average					15,000 Average
		Ambient Temperature Range		-20°C ~ +50°C					-20°C ~ +50°C
		Recommended Resistor for Neon: 33K ohms for 110V AC; 100K ohms for 220V AC							
T-1½ Pilot Slide Base		<div>0</div>	<div>No Lamp</div> Code 0 indicates that no lamp is used.						

## ROCKER CAPS, LAMP COVER & FILTER

**1** AT420B  
White Rocker  
without Filters  
or Lamp Covers  


**2** AT420B  
White Rocker  
with Filters  


**3** AT420B  
White Rocker  
with Lamp Covers  


**4** AT420J  
Clear Rocker  
with Filters  


AT421

AT416


AT421

Rocker Cap Material: Polycarbonate      Finish: Glossy

Indicate the lamp cover or filter color desired in both the up and down positions.

**AT416 Lamp Cover**

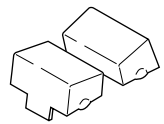
**C** Red  
**D** Amber  
**F** Green

  
 Material: Silicon Rubber

**AT421 Filter**

**B** White  
**C** Red  
**D** Amber

**E** Yellow  
**F** Green  
**G** Blue

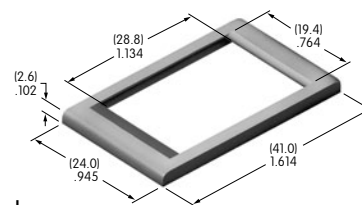
  
 Material: Polycarbonate

### BEZEL & BEZEL COLORS

#### AT206 Bezel & Color Codes

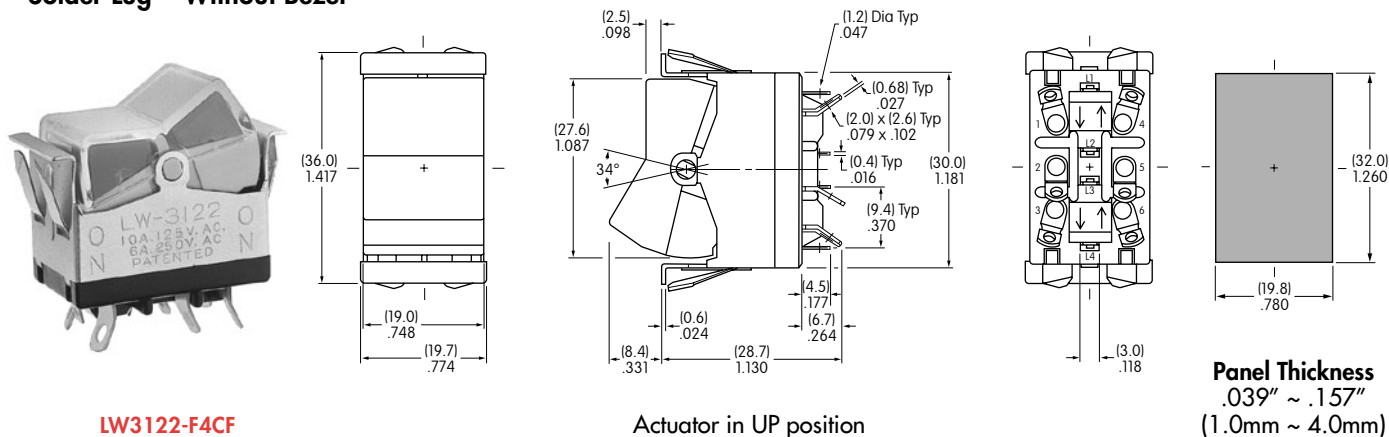
<b>No Code</b>	No Bezel	<b>B</b>	White	<b>D</b>	Amber	<b>F</b>	Green	<b>H</b>	Gray
<b>A</b>	Black	<b>C</b>	Red	<b>E</b>	Yellow	<b>G</b>	Blue		

Material: Polycarbonate

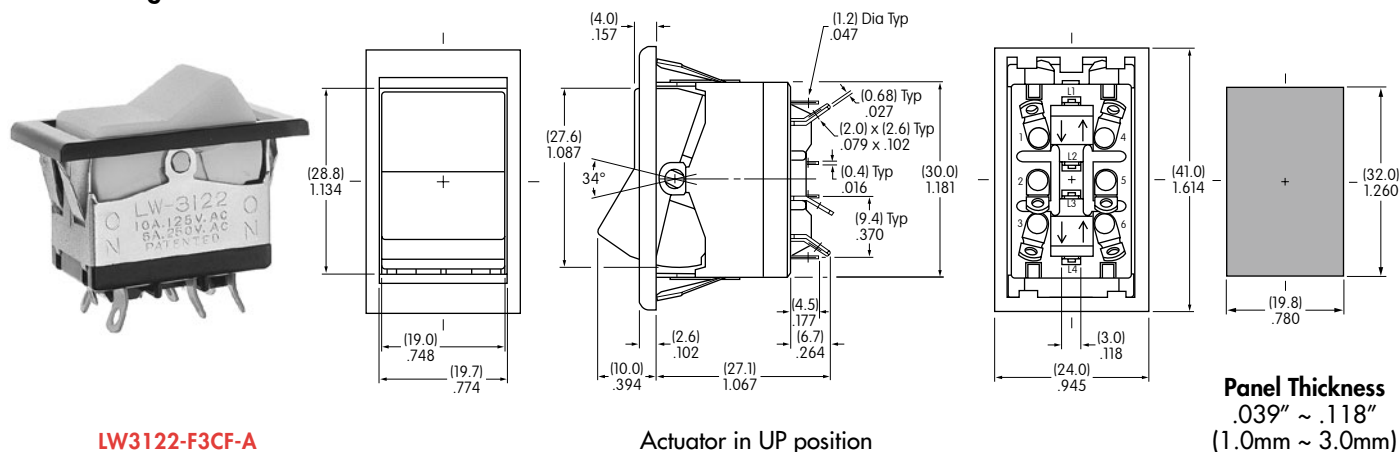


### TYPICAL SWITCH DIMENSIONS

#### Solder Lug • Without Bezel



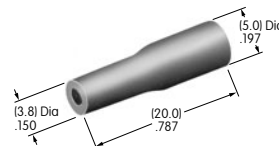
#### Solder Lug • With Bezel



### OPTIONAL ACCESSORY

#### AT107 Lamp Extractor

Lamps can be changed without removing the switch from the panel.  
AT107 assists in removing lamps from the switch.



### LEGENDS

Inscriptions can be placed on the rocker or filter.  
Details regarding screen printing may be obtained from the factory.