



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

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/s²) 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.

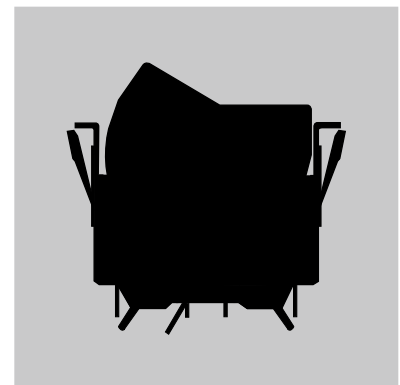
Front panel relamping.

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
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Programmable Illuminated PB
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Rotaries
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Supplement

TYPICAL SWITCH ORDERING EXAMPLE

LW31

2

2

H

4

C

F

A

Pole

2	DPDT
----------	------

Circuits

	Up	Center	Down
2	ON	NONE	ON
3	ON	OFF	ON
5	ON	NONE	(ON)
8	(ON)	OFF	(ON)
9	ON	OFF	(ON)

() = Momentary

Lamps

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

Bezel

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

Rocker Caps

1	White without filters or lamp covers
2	White with filters
3	White with lamp covers
4	Clear with filters

Lamp Cover/Filter Colors For Up Position

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

Lamp Cover/Filter Colors For Down Position

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

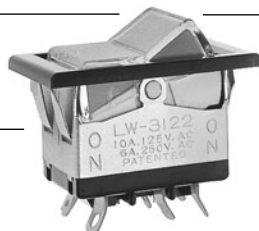
Note: Wire harness & cable assemblies offered only in Americas

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 LW3123 LW3125 LW3128 LW3129	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (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

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.

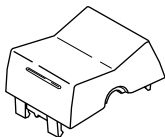
For neon, if the source voltage is greater than rated voltage, a ballast resistor is required. The ballast resistor calculation and more lamp detail are shown in the Supplement section. Neon not for use with green lamp cover or blue and green filters.

Incandescent & Neon Lamps for Solid & Design Caps

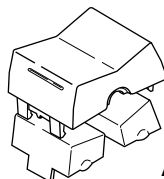
AT602 Incandescent	AT602N Neon	Voltage	V	E	F	H	K	L	N	
				6V AC	12V AC	18V AC	24V AC	28V AC	110V AC	
Current	I	80mA	50mA	35mA	25mA	22mA	1.5mA			
MSCP		.159	.215	.398	.215	.247	NA			
Endurance	Hours	2,000 Average						15,000 Average		
Ambient Temperature Range		-20°C ~ +50°C						-20°C ~ +50°C		
Recommended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

ROCKER CAPS, LAMP COVER & FILTER

1 AT420B
White Rocker
without Filters
or Lamp Covers

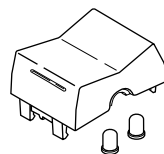


2 AT420B
White Rocker
with Filters



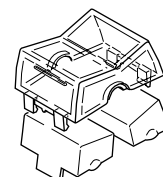
AT421

3 AT420B
White Rocker
with Lamp Covers



AT416

4 AT420J
Clear Rocker
with Filters



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

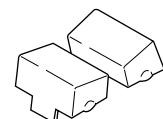
- C** Red
- D** Amber
- F** Green



Material: Silicon Rubber

- B** White
- C** Red
- D** Amber
- E** Yellow
- F** Green
- G** Blue

AT421 Filter



Material: Polycarbonate

Toggles

Rockers **B**

Pushbuttons

Programmable Illuminated PB

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

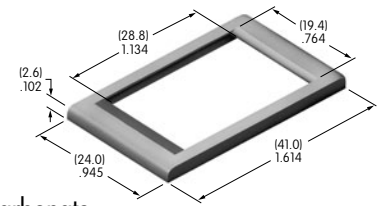
Accessories

Supplement

BEZEL & BEZEL COLORS

AT206 Bezel & Color Codes

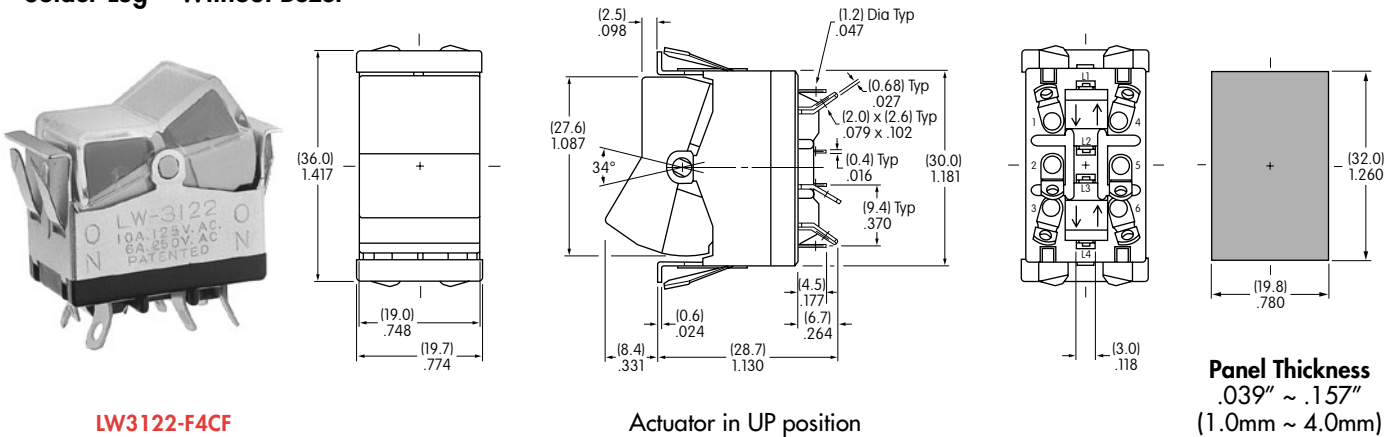
No Code	No Bezel	B	White	D	Amber	F	Green	H	Gray
A	Black	C	Red	E	Yellow	G	Blue		



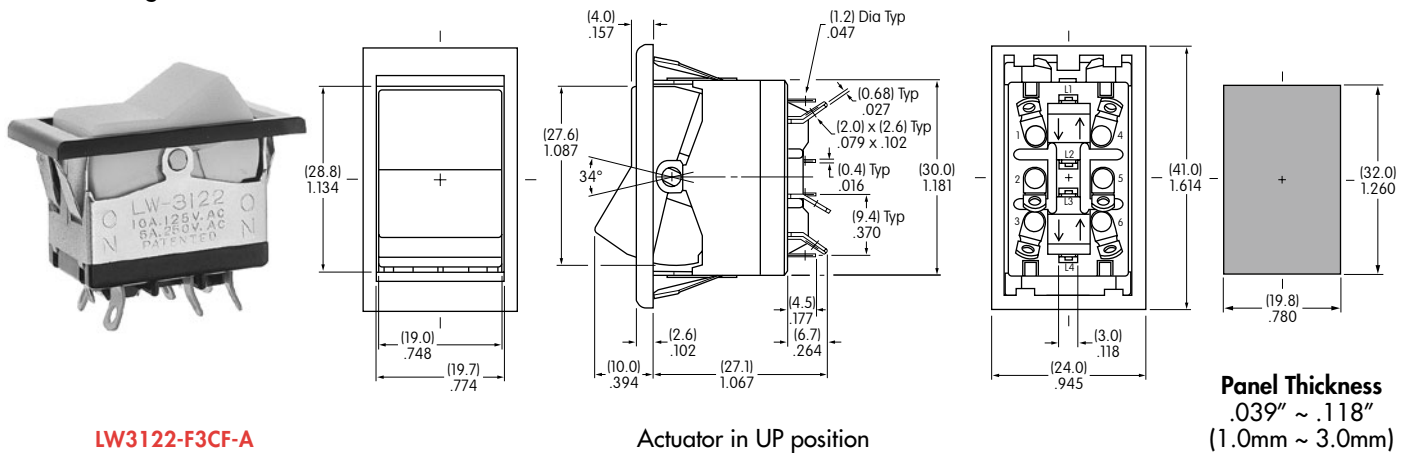
Material: Polycarbonate

TYPICAL SWITCH DIMENSIONS

Solder Lug • Without Bezel



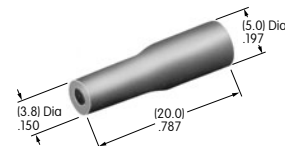
Solder Lug • With Bezel



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.