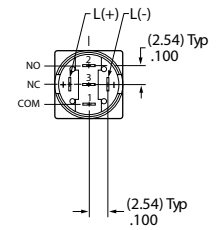
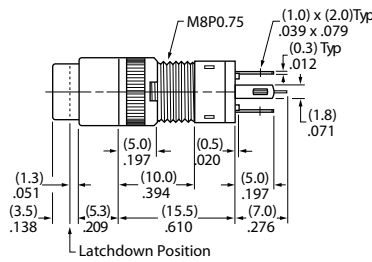
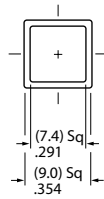


Illuminated Subminiature Pushbutton Switches

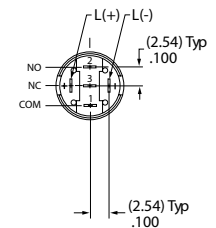
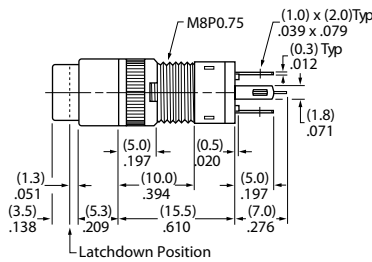
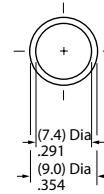
HB Series



HB15SKW01-5C-CB



HB16CKW01-5C-CB



CUTAWAY

POLE & CIRCUITS		Plunger Position		Connected Terminals		Throw & Switch/Lamp Schematics
Pole	Model	Normal	Down	Normal	Down	
SP	HB15 HB16*	ON ON	(ON) ON	1-3	1-2	Notes: Switch is marked with NO, NC, C, L. LED circuit is isolated and requires an external power source.

When in latchdown position for the alternate circuit, cap positions above the housing are: 1.5mm for snap-in models & 7.0mm for PCB models.



How to order:



- 1** **POLE:**
1 SPDT
- 2** **CIRCUITS:**
5 ON-(ON)
6 ON-ON (Alternate Action with Latchdown)
- 3** **SHAPES:**
S Square
C Round
- 4** **HOUSING:**
K Black
- 5** **CONTACTS & TERMINALS:**
W01 Silver Contacts and Solder Lug Terminals 0.1A @ 30V AC/DC
- 6** **LED:**
No code Without LED (Non-Illuminated)
5C Bright LED Red
5D Bright LED Amber
5F Bright LED Green
6B Super Bright LED White
6F Super Bright LED Green
6G Super Bright LED Blue

- 7** **CAP TYPES & COLORS:**

For Non-Illumination:
 A Black (Square Only)
 B White
 C Red
 E Yellow
 F Green
 G Blue

For Bright LED (Lens/Diffuser):
 AB Black Cap/White Window for Spot Illuminated (Square Only)
 CB Red/White
 DB Amber/White
 FB Green/White
 JB Clear/White

For Super Bright LED (Lens/Diffuser):
 JB Clear/White

General Specifications:

ELECTRICAL CAPACITY (Resistive Load)

» Power Level (code W): 0.1A max. @ 30V AC/DC

OTHER RATINGS:

- » Contact Resistance: 50mΩ max.
- » Insulation Resistance: 100MΩ min. @ 500VDC
- » Mechanical Life: 100,000 operations min.
- » Electrical Life: 50,000 operations min.
- » Nominal Operating Force: 3.43N
- » Contact Timing: Nonshorting (Break-before-make)
- » Travel: Pretravel: 2.2mm; Overtravel: 0.8mm; Total: 3.0mm

MATERIALS

- » Movable Contacts & Stationary Contacts: Phosphor bronze with silver plating
- » Terminals: Phosphor bronze with silver plating
- » Lamp Terminals: Phosphor bronze with silver plating

ENVIRONMENTAL DATA

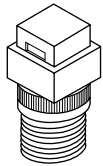
» Operating Temperature: -25°C through +50°C

SOLDERING

» Manual Soldering: 4 seconds max. @ 390°C max.

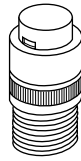
SHAPES & PANEL CUTOUT

S 9mm, Square

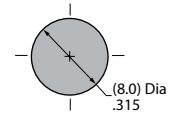


The bezel is an integral part of the switch body.

C 9mm Round



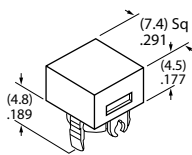
Recommended Panel Thickness: 0.5 ~ 5.0 mm. Socket wrench AT110 may be used for mounting. Overtightening the mounting nut AT073 may damage the switch housing.



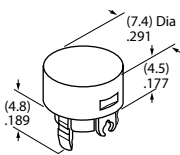
CAPS FOR NON-ILLUMINATED SWITCHES

CAPS FOR BRIGHT LEDs

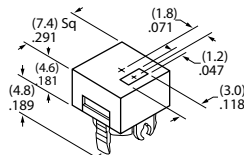
AT4035



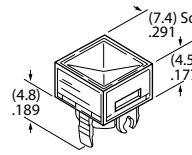
AT4036



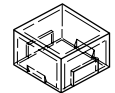
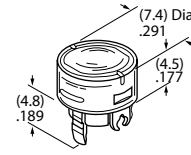
AT4052 Spot Illuminated



AT4166



AT4167



Transparent Colored Lens



Translucent White Diffuser

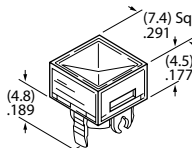


Colored LED

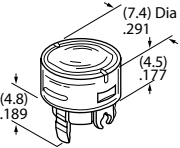
CAPS FOR BRIGHT & SUPER BRIGHT LEDs

TERMINALS

AT4031

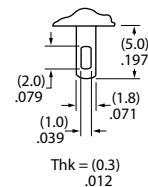


AT4032



W01 Solder Lug

The 1.0x2.0mm oblong hole accommodates one solid or one stranded 20-gauge wire or two 22-gauge wires. Solder lug terminals are spaced 2.54x5.08mm. This enables PCB mounting which can be accomplished by elongating PC board hole to 2.03mm.



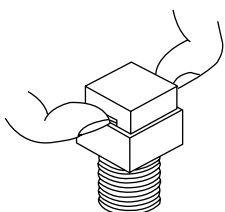
LED COLORS & SPECIFICATIONS

Bright AT633		Bright			Super Bright			Unit	
		5C Red	5D Amber	5F Green	6B White	6F Green	6G Blue		
Super Bright	Forward Peak Current	I_{FM}	30	30	25	30	30	30	mA
AT624G (Blue)	Continuous Forward Current	I_F	20	20	20	20	20	20	mA
AT629B (White)	Forward Voltage	V_F	1.85	2.0	2.2	3.6	3.5	3.6	V
AT630F (Green)	Reverse Peak Voltage	V_{RM}	5	5	5	5	5	5	V
T-1 Bi-pin	Current Reduction Rate Above 25°C	ΔI_F	0.40	0.42	0.38	0.50	0.50	0.50	mA/°C
	Ambient Temperature Range		-25 ~ +50						°C

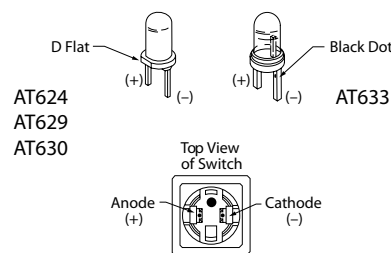
The electrical specifications shown are determined at a basic temperature of 25°C. LED circuit is isolated and requires external power source. Single element LED is colored in OFF state. If the source voltage exceeds the rated voltage, a ballast resistor is required.

ASSEMBLY INSTRUCTIONS

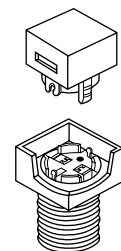
Cap Removal



LED Polarity & Orientation in Lamp Socket



Cap Replacement



AT111 Lamping Tool



Lamping Tool AT111 may be used to remove and replace LED.

AT110 Socket Wrench



Socket Wrench AT110 may be used to tighten the mounting nut.