

Distinctive Characteristics

Various cap styles and colors to meet differing application needs.

Bright, full-face illumination to distinctively indicate status.

Rear panel threaded mounting or snap-in mounter for front panel mounting.

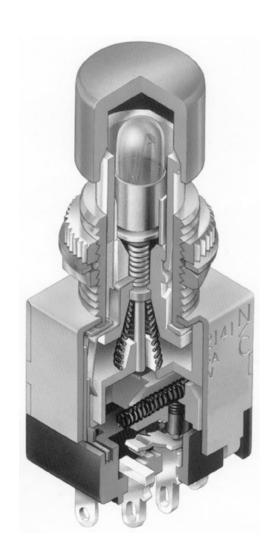
5-amp power rating standard. Dry circuit capability available.

Detent switching mechanism provides positive indication of actuation.

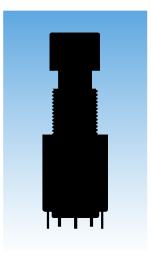
Heavy gauge steel case protects switch components and increases durability.

1,500V dielectric strength between contacts and case is accomplished by clinching the frame away from the terminals.

Solder lug and PC terminals staked into base.



Actual Size





General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 5A @ 125V AC & 3A @ 250V AC or 3A @ 30V DC

Logic or Power Level (gold over silver): 0.4VA maximum @ 28V AC/DC maximum or 5A @ 125V AC

(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Note: See Supplement section to find explanation of dual rating & operating range.

Other Ratings

Contact Resistance: 10 milliohms maximum for silver; 20 milliohms maximum for gold

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 & case for 1 minute minimum

Mechanical Life: 30,000 operations minimum Electrical Life: 10,000 operations minimum

Nominal Operating Force: 12.75N for momentary; 11.77N for alternate action

> Travel: Pretravel: .039" (1.0mm); Overtravel: .157" (4.0mm); Total Travel: .196" (5.0mm)

Materials & Finishes

Plunger: Polyacetal resin

Brass with nickel plating **Bushing:** Housing: Steel with chromate over zinc

Movable Contact:

Stationary Contacts: Silver with silver plating or silver with gold plating

Phenolic resin Base:

Common Terminals: Copper with silver plating

End Terminals: Copper with silver plating or copper with gold plating

Lamp Terminals: Brass with nickel plating

Environmental Data

Operating Temperature Range: -10°C through +50°C (+14°F through +122°F) for spot illuminated

> -20°C through +50°C (-4°F through +122°F) for other illuminated -10°C through +50°C (+14°F through +122°F) for nonilluminated

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 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 19.62N (4.41 lbf) maximum downward force on cap

Soldering Time & Temperature: 4 seconds maximum @ 410°C maximum

Standards & Certifications

UL & C-UL Recognition: All models recognized at 5A @ 125V AC;

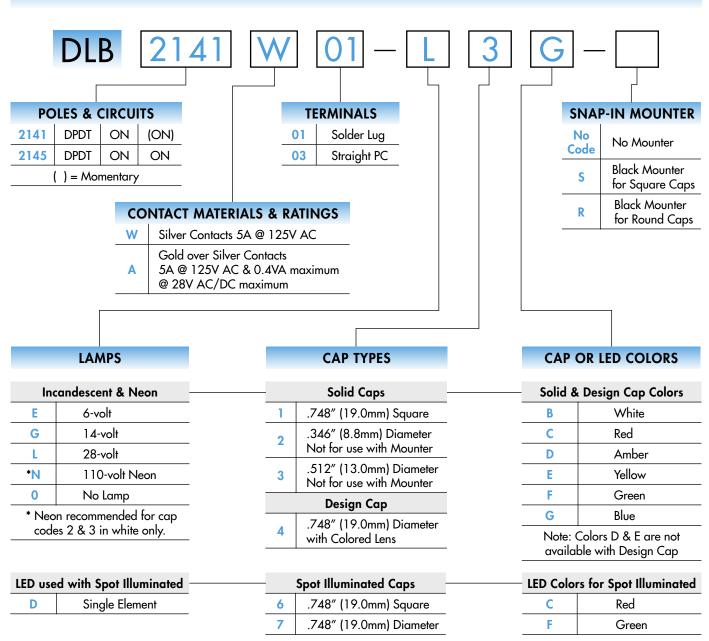
UL File No. WOYR2.E44145 & C-UL File No. WOYR8.E44145;

add "/U" to end of part number to order UL mark on switch & add "/C-UL" to end of part

number to order C-UL mark on switch (equivalent to CSA certification).

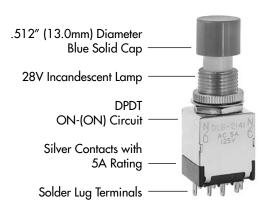






DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

DLB2141W01-L3G



IMPORTANT:



Switches are supplied without UL & C-UL markings unless specified. Specific models & ratings noted on General Specifications page.





POLES & CIRCUITS										
		Plunger Position () = Momentary		Connected Terminals		Throw & Power/Lamp Schematics				
Pole	Model	Normal	Down	Normal	Down	Notes: Terminal numbers are not actually on the switch. Lamp circuit is isolated and requires an external power source.				
DP	DLB2141 DLB2145	ON ON	(ON) ON	2-3 5-6	2-1 5-4	DPDT 2 (COM) 5 • L(+) • O • (-) L				

CONTACT MATERIALS & RATINGS

Silver **Power Level** 3A @ 125V AC & 250V AC

Gold over Silver

Power Level or Logic Level 5A @ 125V AC

or 0.4VA maximum @ 28V AC/DC maximum

Note: This dual rated option is suitable when two or more identical switches are used in logic and in power circuits within the same application. See Supplement for complete explanation of dual rating and operating range.

TERMINALS

Solder Lua

Wiring for Solder Lug Terminals

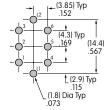
Straight PC



Switch terminal hole of .035" x .079" (0.9mm x 2.0mm) accommodates one solid 20-gauge wire or two solid or stranded 22-gauge wires.

Lamp terminal hole of .035" (0.9mm) diameter accommodates one solid 20-gauge wire.





INCANDESCENT & NEON LAMP CODES & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation. Incandescent & Neon lamps can be used with solid & design caps.

AT604 & AT604N





T-1¾ Midget Groove Base

AT604 Incandescent 6-, 14-, or 28-volt; AT604N Neon 110-volt	E	G	L	* N	
Voltage V	6V AC	14V AC	28V AC	110V AC	
Current I	200mA	80mA	40mA	1.5mA	
Endurance Average Hours	1,000	750	1,000	10,000	
Ambient Temperature Range	−20°C ~ +50°C				

Recommended Resistors: 33K ohms for 110V AC; 100K ohms for 220V AC



No Lamp

Code 0 indicates that no lamp is used with the solid or design caps.





LED CODE & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C. LED circuit is independent of switch operation. LEDs are colored in OFF state. For dimension drawings of lamps see Accessories and Hardware section. 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.

LED for Spot Illuminated Cap

П	Single			
	Element LED			

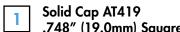
LED is factory assembled in spot illuminated caps.



Color Codes		C Red	F Green
Forward Peak Current	I _{FM}	35mA	30mA
Continuous Forward Current	I _F	25mA	20mA
Forward Voltage	$V_{_{\rm F}}$	1.65V	2.0V
Reverse Peak Voltage	V_{RM}	3V	3V
Current Reduction Rate Above 25°C	ΔI_{F}	0.57mA/°C	0.43mA/°C
Ambient Temperature Range	−10°C ~ +50°C		

CAP TYPES & COLORS

Solid Cap AT417



.748" (19.0mm) Square

For use with Incandescent or Neon

> Colors Available: BCDEFG

Not for use with snap-in mounter



.346" (8.8mm) Diameter



.512" (13.0mm) Diameter

or Neon Colors Available:

BCDEFG

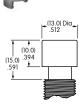
For use with

Incandescent

Not for use with snap-in mounter



Solid Cap AT418





Design Cap AT446 .748" (19.0mm) Diameter

Black Holder with Colored Lens

For use with

Incandescent

or Neon

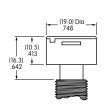
Colors

Available:

BCDEFG

Lens Colors Available: BCFG





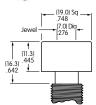
Spot Illuminated AT463 .748" (19.0mm) Square

Black Cap with Clear Lens

LED Colors: CF

LED & Cap assembled at factory; not available separately





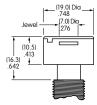
Spot Illuminated AT464 .748" (19.0mm) Diameter

Black Cap with Clear Lens

LED Colors: CF

LED & Cap assembled at factory; not available separately





Material for all Caps: Polycarbonate

Finish: Glossy

Color Codes:





Red





Yellow



Green





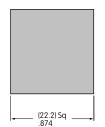
OPTIONAL SNAP-IN MOUNTERS

S

AT517 Mounter for Square Caps AT419 & AT463

Glass fiber reinforced polyamide Black only available (code A)

Panel Cutout



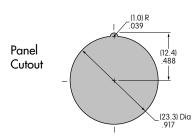


Recommended Panel Thickness: .039" ~ .157" $(1.0mm \sim 4.0mm)$

The standard mounting hardware provided with the switch is used to assemble the square mounter.

AT528 Mounter for Round Caps AT446 & AT464

Glass fiber reinforced polyamide Black only available (codé A)





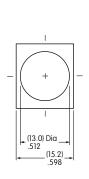
Recommended Panel Thickness: .039" ~ .157" $(1.0mm \sim 4.0mm)$

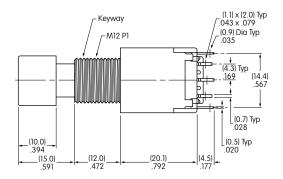
Locking Ring AT506 and Hex Nut AT527 are provided with the round mounter. It is assembled to the switch with this hardware plus the lockwasher and hex nut provided as standard hardware. Not for use with Solid Caps AT417 and AT418.

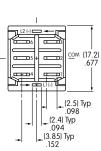
TYPICAL SWITCH DIMENSIONS

Solder Lug • Bushing Mount





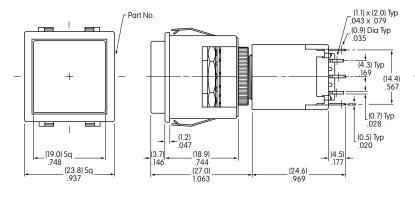




DLB2145W01-G3G

Solder Lug • Square Snap-in Mounter







(17.2) .677

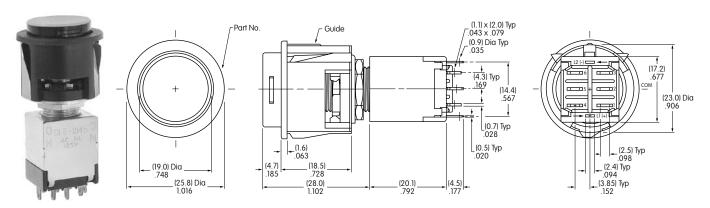
- (2.4) Typ

(22.0) Sq .866



TYPICAL SWITCH DIMENSIONS

Solder Lug • Round Snap-in Mounter



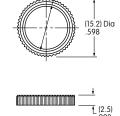
DLB2145W01-E4C-R

STANDARD HARDWARE

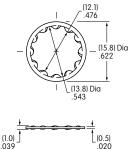
OPTIONAL HARDWARE

AT504M **Knurled Face Nut** Brass with Chrome Plating

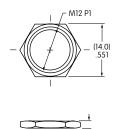
-M12 P1



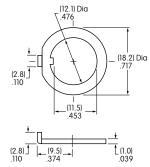
AT508 Lockwasher Steel with Zinc Plating



AT527M Hex Nut Steel with Nickel Plating



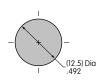
AT506 **Locking Ring** Steel with Zinc Plating



Maximum Effective Panel Thickness & Cutouts

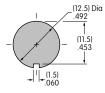
With Standard Hardware

.220" (5.6mm)



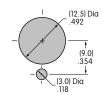
With Standard Hardware & Keyway

.220" (5.6mm)



With Standard Hardware & Locking Ring

.181" (4.6mm)



LEGENDS



Inscriptions can be placed on solid and design caps. Details regarding screen printing or engraving may be obtained from the factory.