LIGHTED SNAP-IN ROUND ROCKER SWITCHES

PANEL CUT-OUT (mm)

2.2

Ø20.2

0.9

AC - NEON

.90

.07

.89

DC - LED

.28
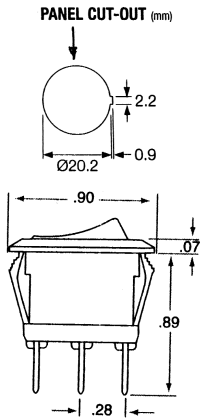
Current Rating:	6A 250VAC, 10A 125VAC
Initial Contact Resistance:	<50Meg Ohms @12VDC
Insulation Resistance:	>100Meg Ohms
Dielectric Strength (Open Contacts):	>1500V for 1 minute
Contact Material:	Silver Plated Brass
Terminal Material:	Copper Alloy
Body Material:	Nylon (UL 94V-2)
Actuator & Bezel:	Nylon (UL 94V-2)
Terminal Type:	.187" Quick Connect
Lamp Voltage:	AC= 110V neon, DC= LED 2V* @20ma

(*resistor needed for other voltages)

Part No.	Type	Action	Lamp / Actuator Color
30-16282	SPST	On-Off	AC Lamp, Red
30-16283	SPST	On-Off	AC Lamp, Amber
30-16285	SPST	On-Off	AC Lamp, Green
30-16222	SPST	On-Off	DC Lamp, Red
30-16223	SPST	On-Off	DC Lamp, Amber
30-16225	SPST	On-Off	DC Lamp, Green
30-16226	SPST	On-Off	DC Lamp, Blue

Panel Cut-out: 20.2mm (.79")   Maximum Panel thickness 3.0 mm

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Round Rocker Switch Cover

No. 30-1600
fits Round Rocker
Switches up to 23mm
(.90") dia.

Using an LED

LED wth DC (Direct Current)

An LED (light emitting diode) requires about two volts to operate and twenty milliamps of current. A current limiting resistor must be used in series with an LED to prevent current over 20 mA from flowing; otherwise, your LED will be damaged. You may simply use Ohm's law to calculate the resistor value. Here is an example, We have a circuit operating at 12 volts DC, and need to know the value of a resistor to use. The LED "wants" two volts to operate ; so subtract 2 from the 12 volts which is of course, ten. Plug the "ten" in at "E" and divide by "I" or .020 amps. The result is 500 ohms for the resistor value

$$R = \frac{E}{I}$$

If you forget to subtract the two volts, the resistor value will be 600 and the LED will not be at maximum brightness. However, it will last much longer! (about double normal life).

Another formula you can use is R=50(V-2). The R is for resistor, the V for voltage. We like this one as it is easy to recall and do in your head.

LED wth AC (Alternating Current)

When using an LED with AC, a diode must be placed in series with the LED. Because AC will only be flowing 1/2 the time, we use a variation on the easy formula shown to the left(bottom). Use R=25(V2.7), which includes the voltage drop across the diode.

So, if you have a circuit using 28 volts AC, multiply 25.3 (or 28V -2.7), times 25 equals 632 ohms. We need to use a standard value resistor, so use 680 ohms for "R".

LED   A.C.

diode   R
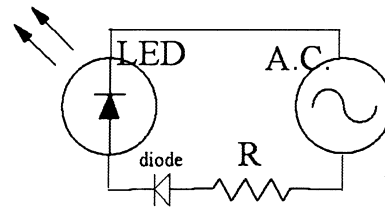
Typical voltages used in electronics and resistor values (rounded to nearest standard resistor).

DC Volts	5V	6V	12V	24V	AC Volts	6V	12V	24V	48V	117V
Resistor (ohms)	150	180	470	1200	Resistor (ohms)	82	220	560	1200	3K