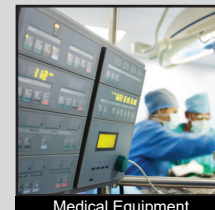
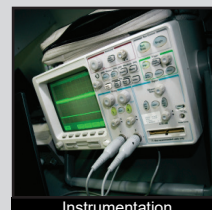
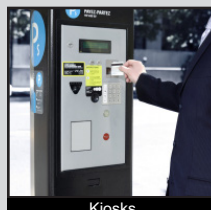
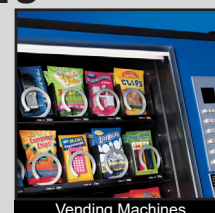
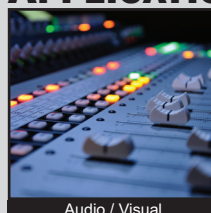


# ULP SERIES PUSHBUTTON SWITCH

ANTI-VANDAL SWITCHES  
DETECTOR SWITCHES  
DIP SWITCHES  
KEYLOCK SWITCHES  
NAVIGATION SWITCHES  
PUSHBUTTON SWITCHES  
ROCKER SWITCHES  
ROTARY SWITCHES  
SLIDE SWITCHES  
SNAP ACTION SWITCHES  
TACTILE SWITCHES  
TOGGLE SWITCHES  
CAP OPTIONS



## APPLICATIONS / MARKETS



RoHS

## SPECIFICATIONS

**Electrical Rating:** Silver: .5A @ 25VDC  
Gold: 0.1A Max @ 28VDC  
**Electrical Life:** 200,000 Cycles  
**Contact Resistance:** Silver: 50mΩ Max. initial  
Gold: 100mΩ Max. initial  
**Insulation Resistance:** 100 MΩ Min. @ 500VDC  
**Dielectric Strength:** 1,000VAC  
**Operating/Storage Temperature:** -40°C to 85°C  
**Travel:** 2.20mm  
**Contact Arrangement:** SPDT, DPDT  
**Actuation Force:** SPDT: 200gf; DPDT: 300 gf  
**Panel Thickness:** 0.75-3.0mm (panel mount version only)

## FEATURES & BENEFITS

- Single pole or double pole functions
- Multiple color options including RGB color
- Multiple cap color and style options
- PC pin or solder lug termination
- Latching or momentary options
- Gold or silver contact material

## PART NUMBER CONFIGURATOR

Series	Circuit Options	Mechanical Configuration Options	Termination Options	Contact Material Options	Cap Style Options	Cap Color Options	LED #1 Options	LED #2 Options
<input type="text"/> <input type="text"/> <input type="text"/> ULP	<input type="text"/> <input type="text"/> 12 - SPDT 22 - DPDT	<input type="text"/> <input type="text"/> EE - Latching OA - Momentary	<input type="text"/> <input type="text"/> P1 - PC Pins M1 - Solder Lug	<input type="text"/> Q - Silver R - Gold	<input type="text"/> <input type="text"/> SS - Square Sculptured SF - Square Flat RF - Rectangular Flat PM - Panel Mount LS - Large Sculptured	<input type="text"/> <input type="text"/> <input type="text"/> CL1 - Clear Lens / White Diffuser OP1 - Black Opaque	<input type="text"/> <input type="text"/> <input type="text"/> NIL - No LED BLU - Blue GRN - Green RED - Red YEL - Yellow RGB - Red-Green-Blue	<input type="text"/> <input type="text"/> <input type="text"/> NIL - No LED BLU - Blue GRN - Green RED - Red YEL - Yellow

### NOTES:

- 1) M1 Termination is only available with Panel Mount Cap Style
- 2) P1 Termination is not available with Panel Mount cap Style
- 3) OP1 Cap Color (black opaque) is not available with LEDs
- 4) When ordering RGB LED option, no designation is required for LED#2

Specifications subject to change without notice 6.27.2019



E-SWITCH®

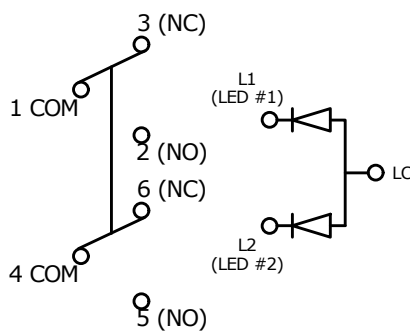
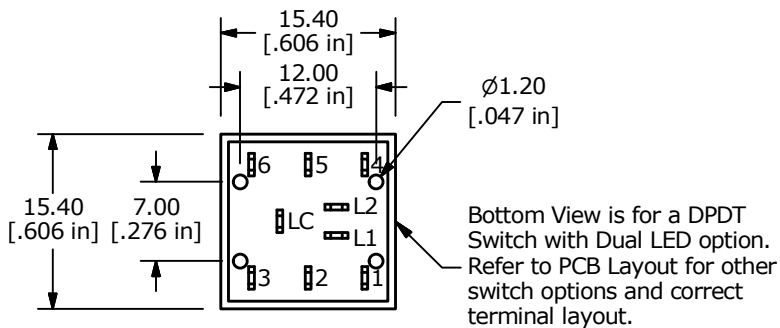
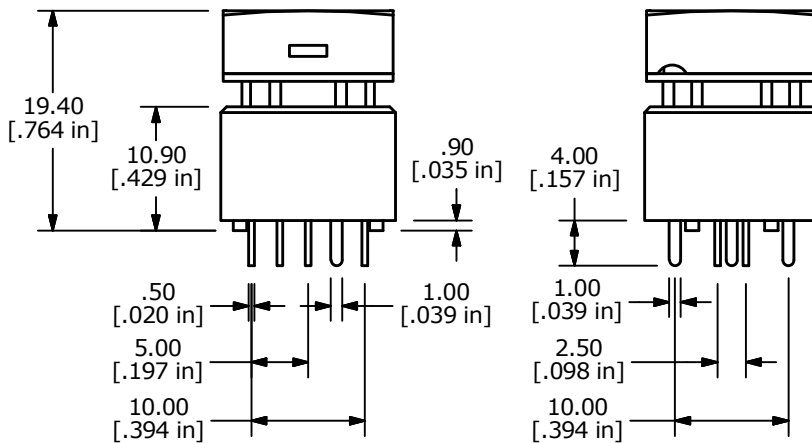
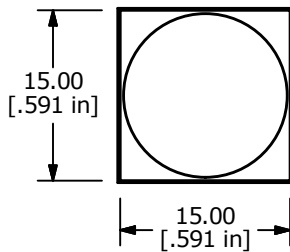
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1

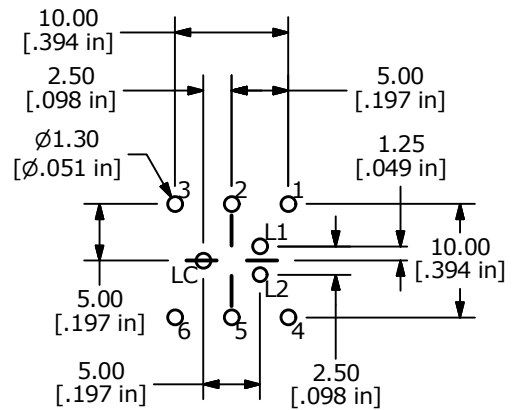
# ULP SERIES PUSHBUTTON SWITCH

## ACTUATOR OPTIONS - SQUARE SCULPTURED



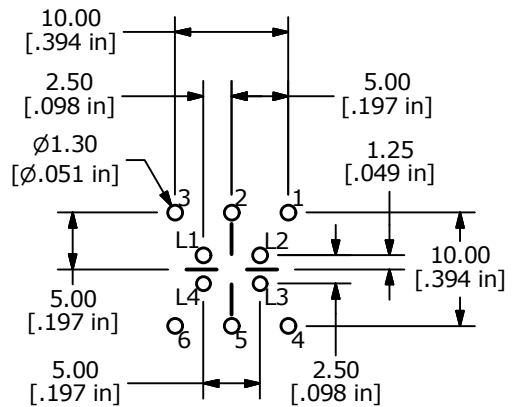
DPDT with Dual LED Circuit is shown  
For SPDT the circuits 4, 5, & 6 are not included  
For Single LED option, circuit LC-L2 is not included  
For No LED option, circuits LC-L1 & LC-L2 are not included

### SCHEMATIC - DUAL LED



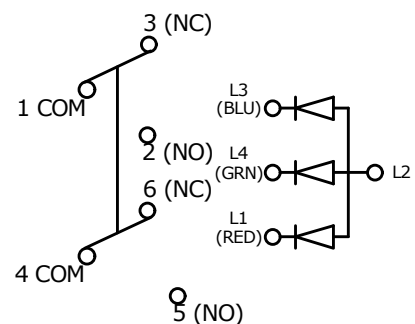
DPDT (ULP22) Layout is Shown  
For SPDT (ULP11) holes 4, 5, & 6 are not required.  
For Single LED option, hole L2 is not required  
For No LED option, holes L1, L2, & LC are not required

### PCB LAYOUT - DUAL LED



DPDT (ULP22) Layout is Shown  
For SPDT (ULP11) holes 4, 5, & 6 are not required.

### PCB LAYOUT - RGB LED



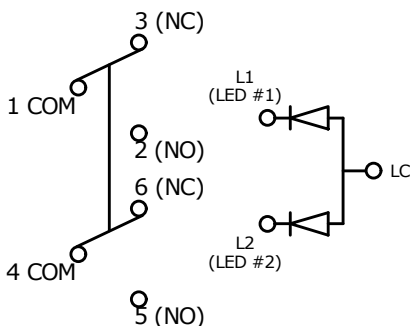
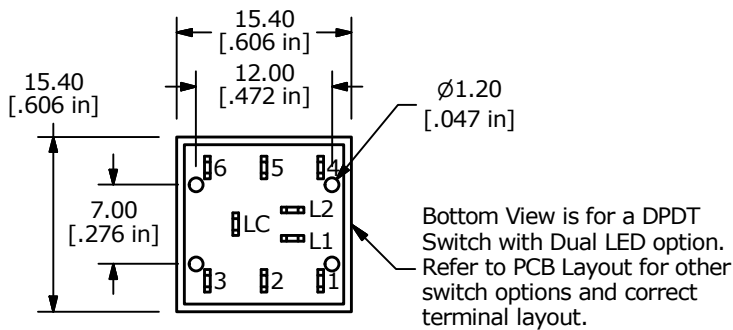
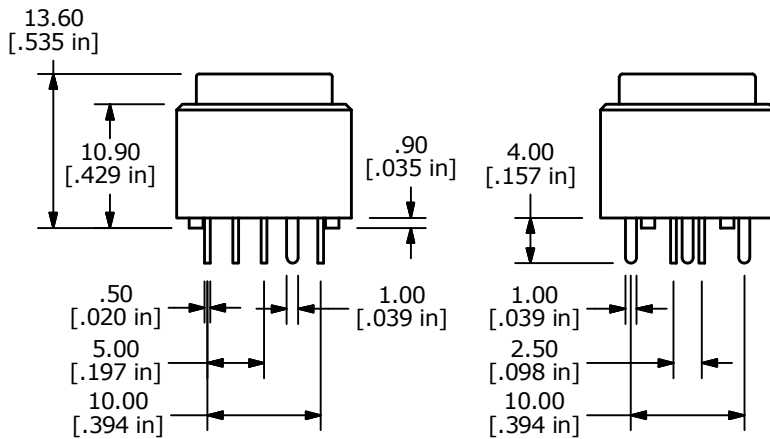
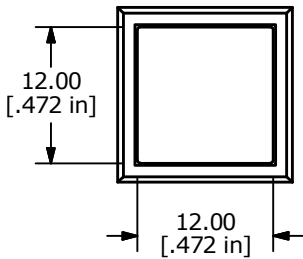
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### SCHEMATIC - RGB LED



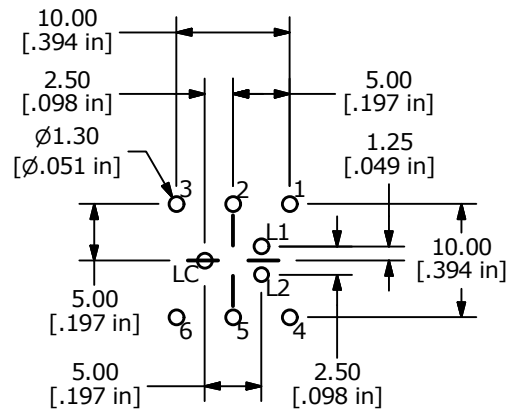
# ULP SERIES PUSHBUTTON SWITCH

## ACTUATOR OPTIONS - SQUARE FLAT

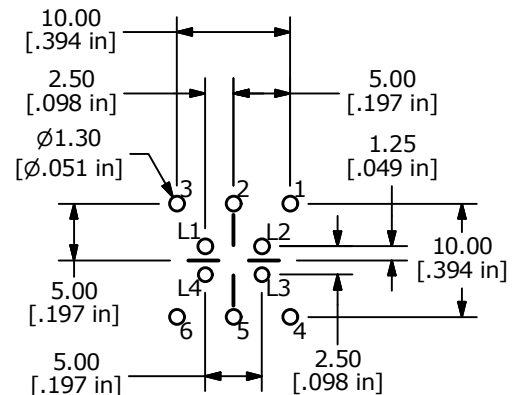


DPDT with Dual LED Circuit is shown  
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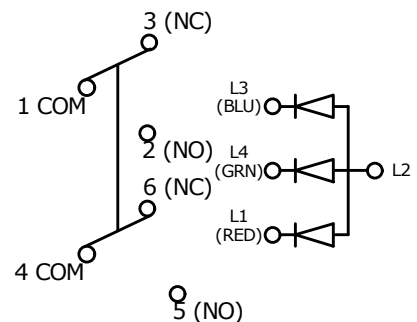
**SCHEMATIC - DUAL LED**



**PCB LAYOUT - DUAL LED**



**PCB LAYOUT - RGB LED**



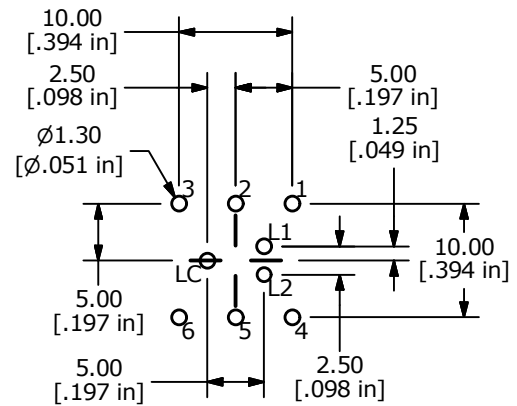
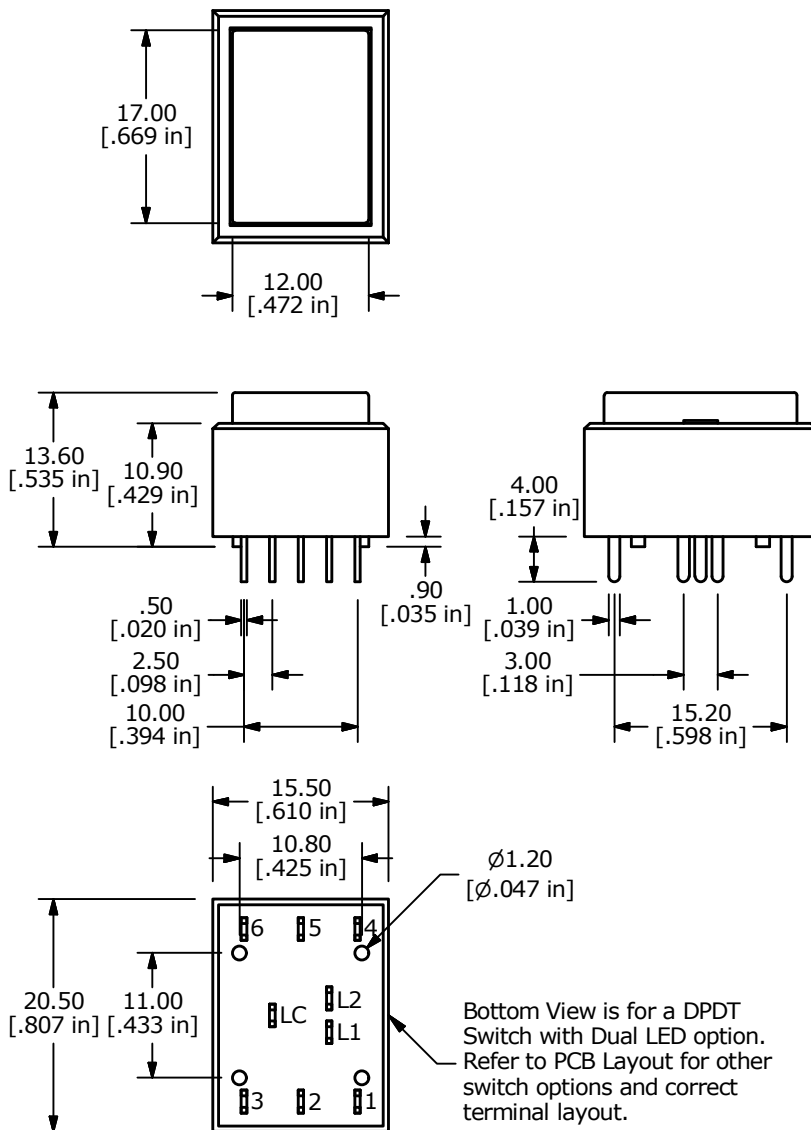
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**SCHEMATIC - RGB LED**



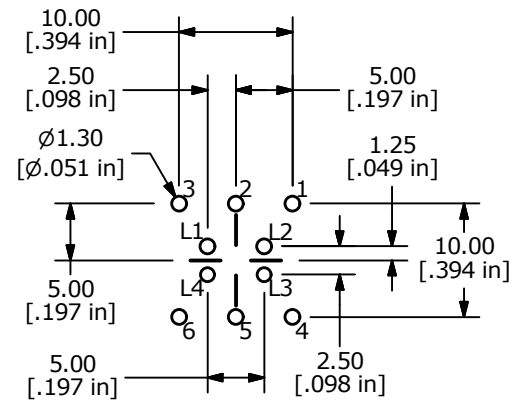
# ULP SERIES PUSHBUTTON SWITCH

## ACTUATOR OPTIONS - RECTANGULAR FLAT



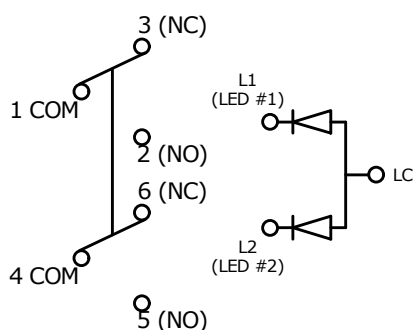
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### PCB LAYOUT - DUAL LED



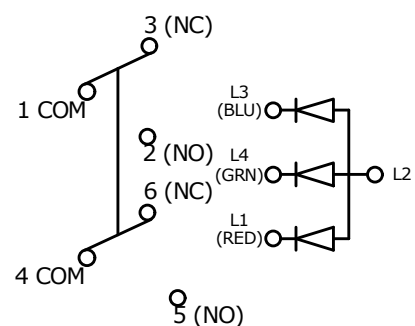
DPDT (ULP22) Layout is Shown  
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### PCB LAYOUT - RGB LED



DPDT with Dual LED Circuit is shown  
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 For Single LED option, circuit LC-L2 is not included  
 For No LED option, circuits LC-L1 & LC-L2 are not included

### SCHEMATIC - DUAL LED



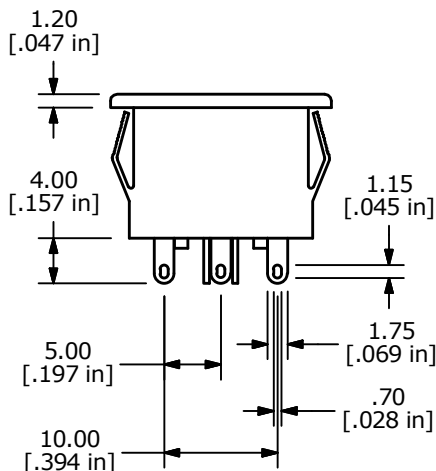
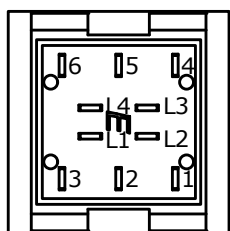
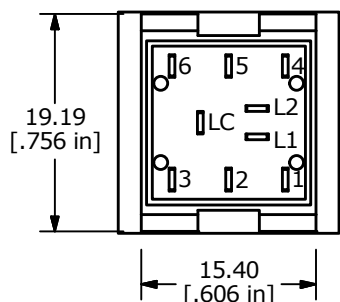
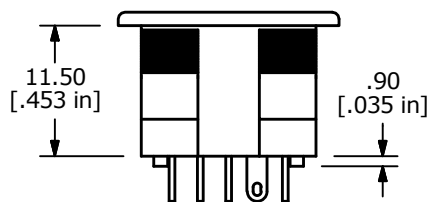
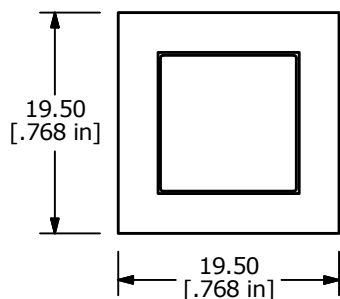
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### SCHEMATIC - RGB LED



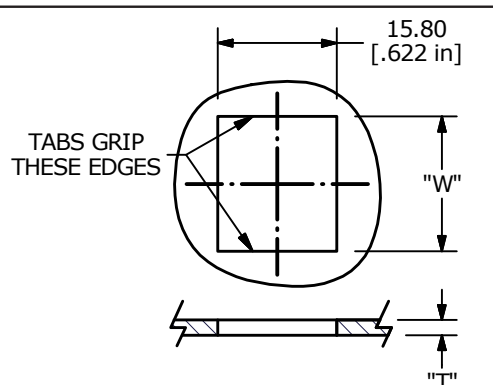
# ULP SERIES PUSHBUTTON SWITCH

## ACTUATOR OPTIONS - PANEL MOUNT



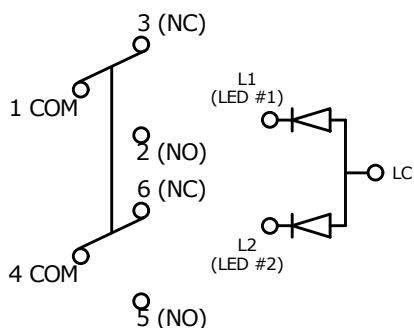
Bottom View of a DPDT Switch with Dual LED option. Refer to Schematic for one LED, zero LED, and SPST options for correct terminal layout.

Bottom View of a DPDT Switch with RGB LED option. Refer to Schematic for SPST option and correct terminal layout.



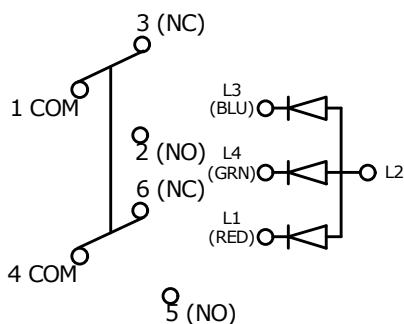
Panel Cut-out	
Dim "T"	Dim "W"
.75-1.25mm	17.6-17.8mm
1.25-2.0mm	17.8-18.0mm
2.0-3.0mm	18.0-18.2mm

### RECOMMENDED PANEL CUTOUT



DPDT with Dual LED Circuit is shown  
For SPDT the circuits 4, 5, & 6 are not included  
For Single LED option, circuit LC-L2 is not included  
For No LED option, circuits LC-L1 & LC-L2 are not included

### SCHEMATIC - DUAL LED



DPDT with RGB LED Circuit is shown  
For SPDT the circuits 4, 5, & 6 are not included

### SCHEMATIC - RGB LED



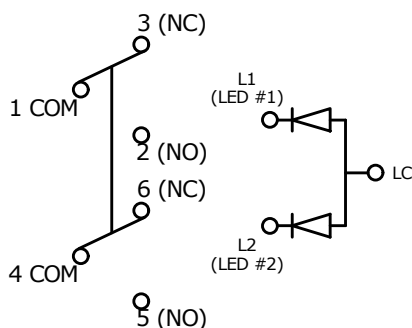
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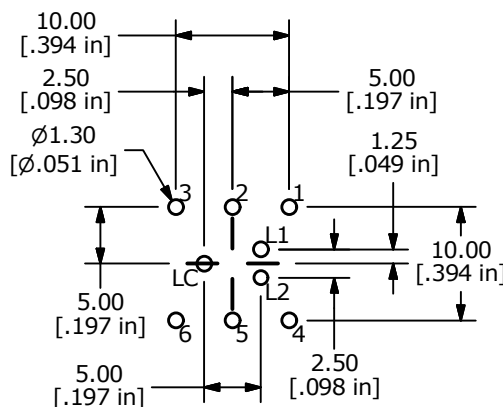
5

ANTI-VANDAL SWITCHES	DETECTOR SWITCHES	KEYLOCK SWITCHES	NAVIGATION SWITCHES	PUSHBUTTON SWITCHES	ROCKER SWITCHES	ROTARY SWITCHES	SLIDE SWITCHES	SNAP ACTION SWITCHES	TACTILE SWITCHES	TOGGLE SWITCHES	CAP OPTIONS
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[illegible]

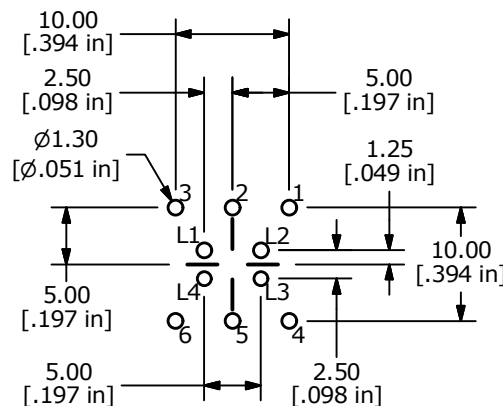
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## SCHEMATIC - DUAL LED



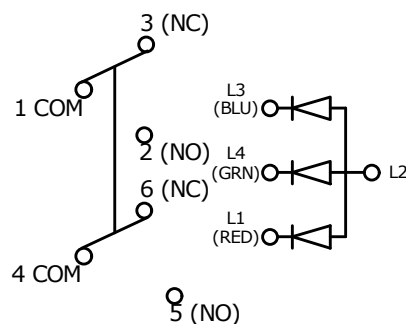
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## PCB LAYOUT - DUAL LED



DPDT (ULP22) Layout is Shown  
For SPDT (ULP11) holes 4, 5, & 6 are not required.

## PCB LAYOUT - RGB LED



DPDT with RGB LED Circuit is shown  
For SPDT the circuits 4, 5, & 6 are not included

## SCHEMATIC - RGB LED

