

# APPLICATIONS / MARKETS













## 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

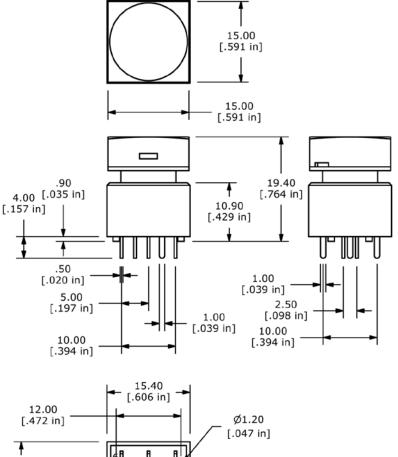
- Single pole or double pole functions
- Multiple color options including RGB color
- Multiple cap color and style options
- · PC pin or solder lug termination
- · Latching or momentary options
- · Gold or silver contact material

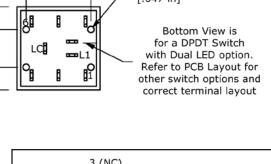
# **PART NUMBER CONFIGURATOR**

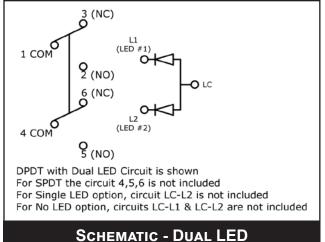
Series	Circuit Options	Mechanical Configuration Options	Termination Options	Contact Material Options	Cap Style	Cap Color	LED #1	LED #2
ULP	12- SPDT 22 - DPDT	Options  EE - Latching OA - Momentary	P1 - PC Pins M1- Solder Lug	Q - Silver R - Gold	SS - Square Sculptured SF - Square Flat RF - Rectangular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

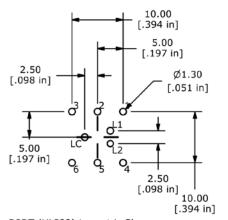
- 2) P1 Termination is not available with Panel Mount cap Style
- 3) OP1 Cap Color (black opaque) is not available with LEDs
- 4) When ordering RGB LED option, no designation is required for LED#2

Specifications subject to change without notice



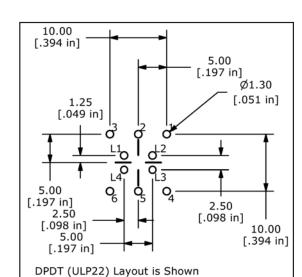






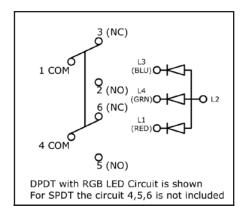
DPDT (ULP22) Layout is Shown For SPDT (ULP11) holes 4, 5, & 6 are not required. For Single LED option, hole L2 is not required For No LED option, holes L1, L2, & LC are not required

### **PCB LAYOUT - DUAL LED**



For SPDT (ULP11) holes 4, 5, & 6 are not required.

## **PCB LAYOUT - RGB LED**



SCHEMATIC - RGB LED

ANTI-VANDAL SWITCHES

DETECTOR SWITCHES

DIP

**KEYLOCK SWITCHES** 

NAVIGATION SWITCHES

PUSHBUTTON SWITCHES ROCKER SWITCHES

ROTARY SWITCHES

SLIDE SWITCHES

SWITCHES

TACTILE SWITCHES

TOGGLE SWITCHES

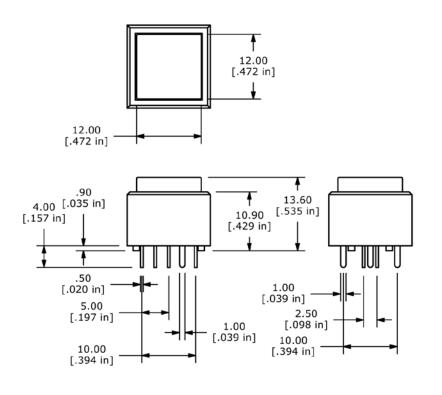
15.40

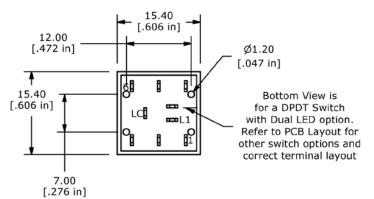
[.606 in]

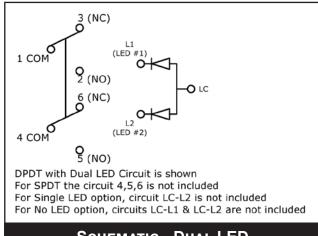
7.00

[.276 in]

# **ACTUATOR OPTIONS -**SQUARE FLAT



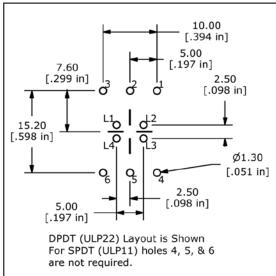




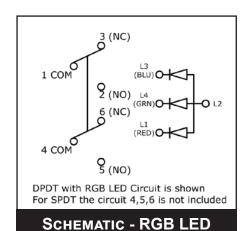
#### 10.00 [.394 in] 5.00 [.197 in] 2.50 Ø1.30 [.098 in] [.051 in] 5.00 [.197 in] o<sub>6</sub> 2.50 [.098 in] 10.00 [.394 in] DPDT (ULP22) Layout is Shown

### **PCB LAYOUT - DUAL LED**

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

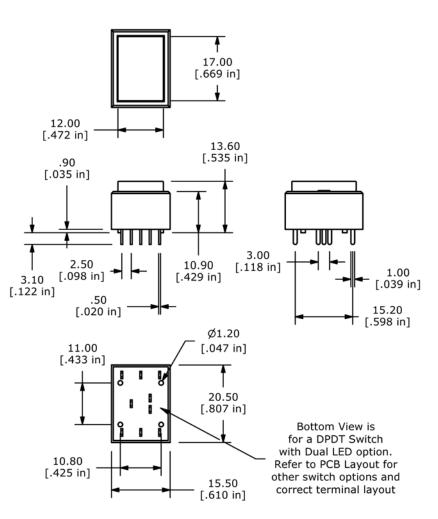


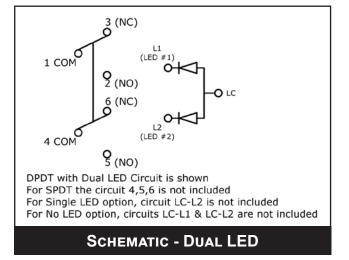
## **PCB LAYOUT - RGB LED**

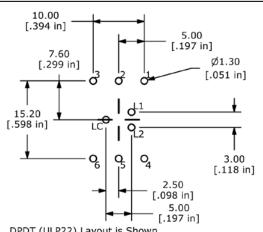






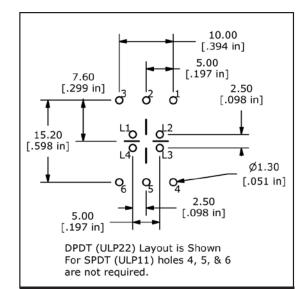




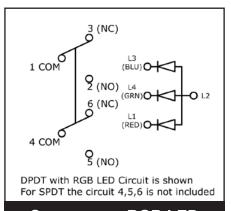


DPDT (ULP22) Layout is Shown For SPDT (ULP11) holes 4, 5, & 6 are not required. For Single LED option, hole L2 is not required For No LED option, holes L1, L2, & LC are not required

#### PCB LAYOUT - DUAL LED

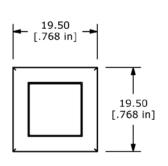


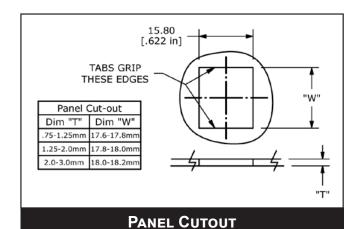
### PCB LAYOUT - RGB LED

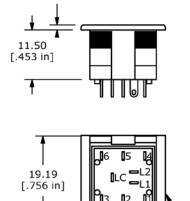


SCHEMATIC - RGB LED

**ACTUATOR OPTIONS -**PANEL MOUNT





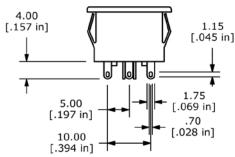


1.20

[.047 in]

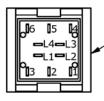
15.40

[.606 in]

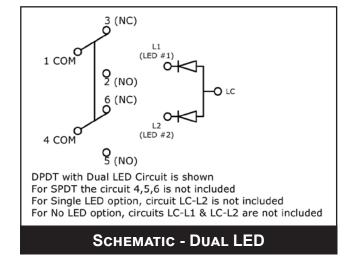


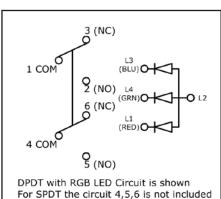


Bottom View of a DPDT Switch with Dual LED option. Refer to Schematic for one LED, zero LED, and SPST options and correct terminal layout.

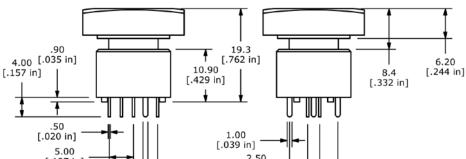


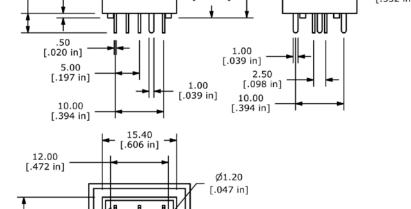
Bottom View of a DPDT Switch with RGB LED option. Refer to Schematic for SPST option and correct terminal layout.

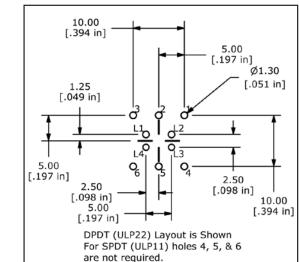




SCHEMATIC - RGB LED

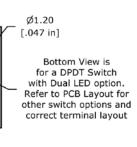




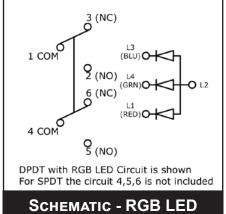


For SPDT (ULP11) holes 4, 5, & 6 are not required. For Single LED option, hole L2 is not required For No LED option, holes L1, L2, & LC are not required

**PCB LAYOUT - DUAL LED** 



**PCB LAYOUT - RGB LED** 



3 (NC) 1 COM (LED #1) Q (NO) 6 (NC) L2 (LED #2) 4 COM **Q** (NO) DPDT with Dual LED Circuit is shown For SPDT the circuit 4,5,6 is 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**

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DIP

**KEYLOCK SWITCHES** 

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SLIDE SWITCHES

SWITCHES TACTILE SWITCHES

TOGGLE SWITCHES

15.40

[.606 in]

7.00

[.276 in]

ROCKER SWITCHES

# **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

# E-Switch:

ULP12OAP1RSS1RGB ULP12OAP1RFCL1BLUBLU ULP12OAP1RSSCL1GRNNIL ULP12OAP1RSSCL1REDNIL ULP22EEM1RPMCL1REDGRN ULP22OAM1QPMCL1BLURED ULP22OAM1RPMCL1REDBLU ULP12EEP1QSSCL1REDGRN ULP12EEP1QSSCL1REDNIL ULP12EEP1RSSCL1BLUGRN ULP12OAP1QFCL1REDGRN ULP12OAP1QSFCL1BLUBLU ULP12OAP1QSFCL1REDGRN ULP12OAP1QSSCL1GRNNIL ULP12OAP1QSSCL1REDNIL ULP12OAP1RFCL1NILNIL ULP12OAP1RSSCL1BLUNIL ULP12OAP1RSSCL1BLURED ULP12OAP1RSSCL1REDGRN ULP22EEP1QSSCL1GRNRED ULP22EEP1QSSCL1GRNNIL ULP22EEP1RSSCL1GRNRED ULP22OAP1QFCL1REDGRN ULP22OAP1QFSCL1GRNRED ULP22OAP1QFSCL1GRNRED ULP22OAP1QFSCL1GRNRED ULP22OAP1QFSCL1GRNRED ULP12OAP1RSSCL1GRNGB ULP12OAM1RPMCL1REDGRN ULP12OAM1RPMCL1REDGRN ULP12OAM1RPMCL1BLURED ULP12OAM1QPMCL1BLURED ULP12OAM1QPMCL1REDGRN ULP12EEP1QSSCL1GRNNIL ULP12EEP1QSFCL1YELRED ULP12OAP1QSSCL1YELYEL ULP12OAP1QSSCL1YELNIL ULP12OAM1QPMCL1REDYEL ULP12OAP1RSSCL1YELNIL ULP12OAP1QSFCL1BLUNIL ULP12OAP1Q