



## Features

- Carbon element
- Red, orange, green, amber and white LED colors
- Center detent option
- Assortment of resistance tapers
- Various travel lengths
- Various lever sizes



## PTL Series Slide Potentiometer w/LED

### Electrical Characteristics

Standard Resistance Range  
 ..... 1K ohms to 1 megohm  
 Standard Resistance Tolerance...  $\pm 20\%$   
 End Resistance  
 20 mm Travel..... 10 ohms max.  
 30 mm Travel..... 20 ohms max.  
 45 mm Travel..... 20 ohms max.  
 60 mm Travel..... 30 ohms max.  
 Insulation Resistance @ 250 VDC  
 ..... 100 megohms min.  
 Dielectric Withstanding Voltage  
 ..... 300 VAC  
 Standard Taper ..... Linear, Audio  
 Power Rating - Linear  
 20 mm Travel..... 0.05 watt  
 30 mm Travel..... 0.1 watt  
 45 mm Travel..... 0.125 watt  
 60 mm Travel..... 0.2 watt  
 Power Rating - Audio  
 20 mm Travel..... 0.025 watt  
 30 mm Travel..... 0.05 watt  
 45 mm Travel..... 0.06 watt  
 60 mm Travel..... 0.1 watt  
 Slider Noise ..... 200 mV max.

### Environmental Characteristics

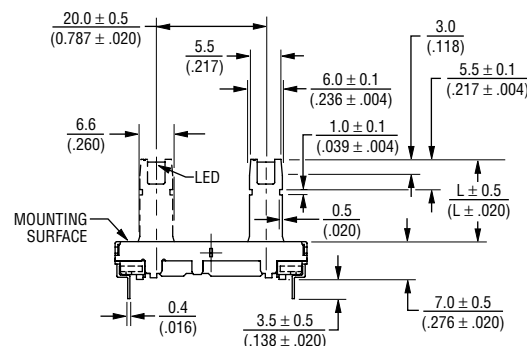
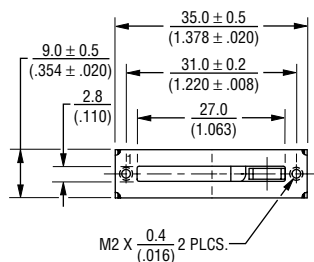
Operational Life ..... 15,000 cycles  
 TR Shift .....  $\pm 15\%$   
 Operating Temperature Range  
 .....  $-10^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$   
 Resistance to Solder Heat.....  $\pm 5\%$

### Mechanical Characteristics

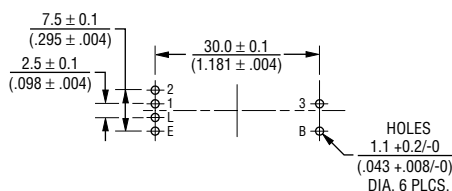
Mechanical Travel..... Length  $\pm 0.5$  mm  
 Operating Force ..... 30 gf to 250 gf  
 Center Detent Force..... 20 gf to 200 gf  
 Stop Strength ..... 5 kgf min.  
 Shaft Axial Force ..... 5 kgf min.  
 Shaft Wobble..  $2(2 \times L/20)$  mm p-p max.  
 Soldering Condition  
 Manual .....  $300^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 3 sec.  
 Wave .....  $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 5 sec.  
 Wash ..... Not recommended

### Product Dimensions

#### 20 mm Length of Travel

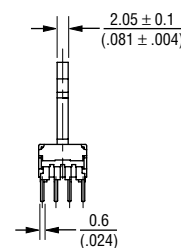


#### Mounting Hole Detail



| Lever Length   |
|----------------|
| 10.0<br>(.394) |
| 15.0<br>(.591) |
| 19.0<br>(.748) |

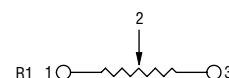
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



### Standard Resistance Table

| Resistance (Ohms) | Resistance Code |
|-------------------|-----------------|
| 1,000             | 102             |
| 2,000             | 202             |
| 5,000             | 502             |
| 10,000            | 103             |
| 20,000            | 203             |
| 50,000            | 503             |
| 100,000           | 104             |
| 200,000           | 204             |
| 500,000           | 504             |
| 1,000,000         | 105             |

### Schematic



## Applications

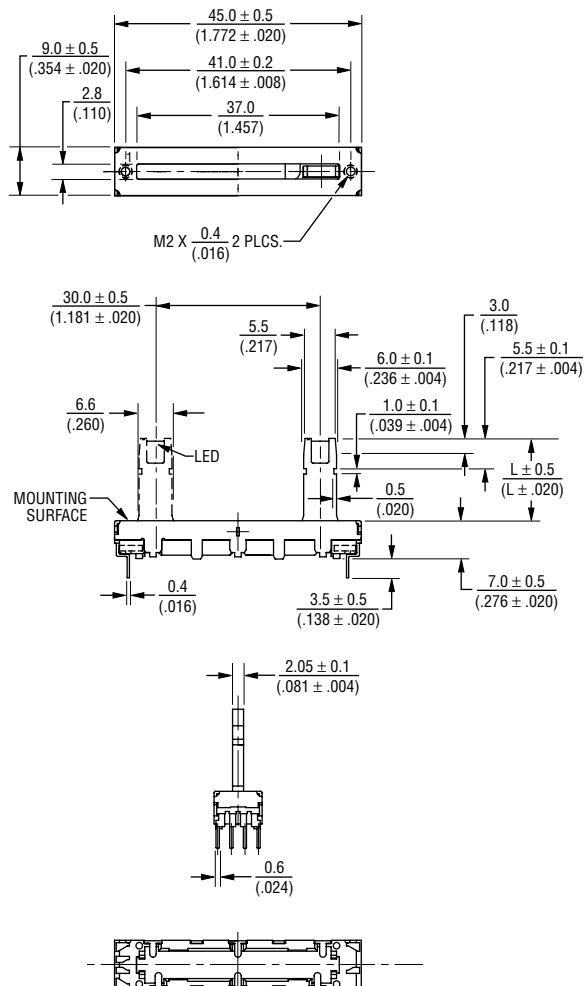
- Mixing consoles
- Drum machines
- Keyboards and synthesizers
- Equalizers

# PTL Series Slide Potentiometer w/LED

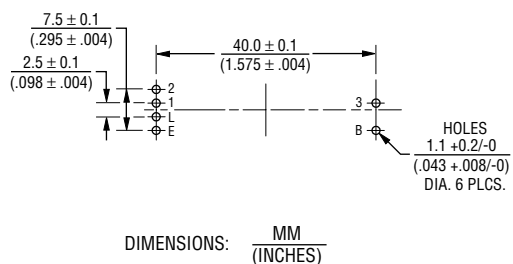
**BOURNS®**

## Product Dimensions

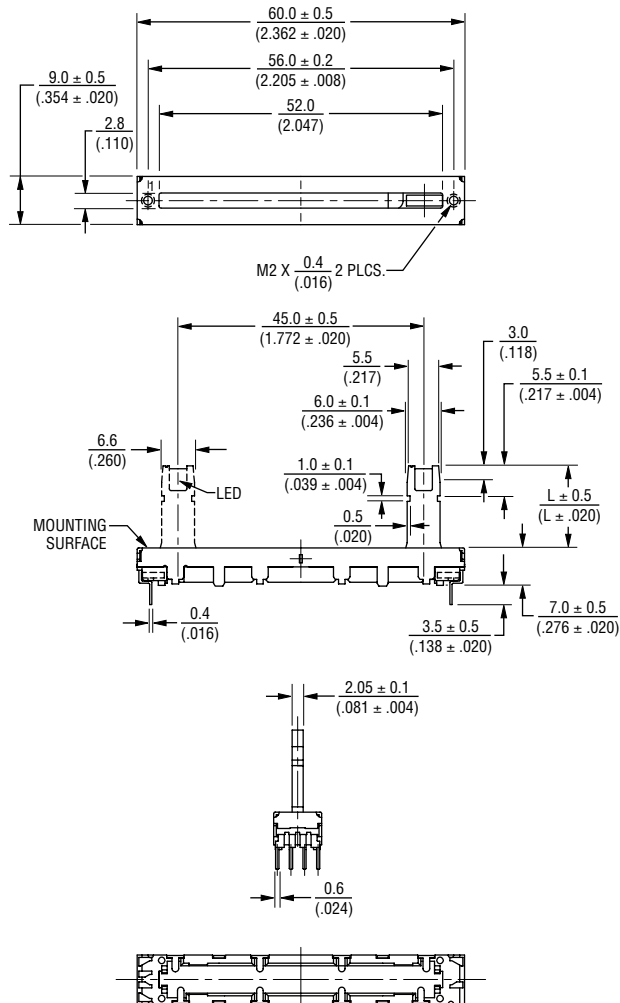
### 30 mm Length of Travel



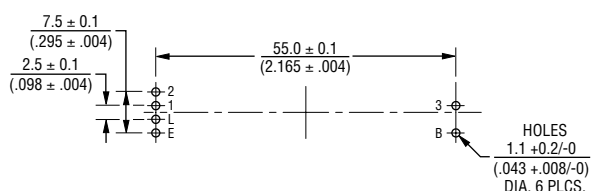
### Mounting Hole Detail



### 45 mm Length of Travel



### Mounting Hole Detail

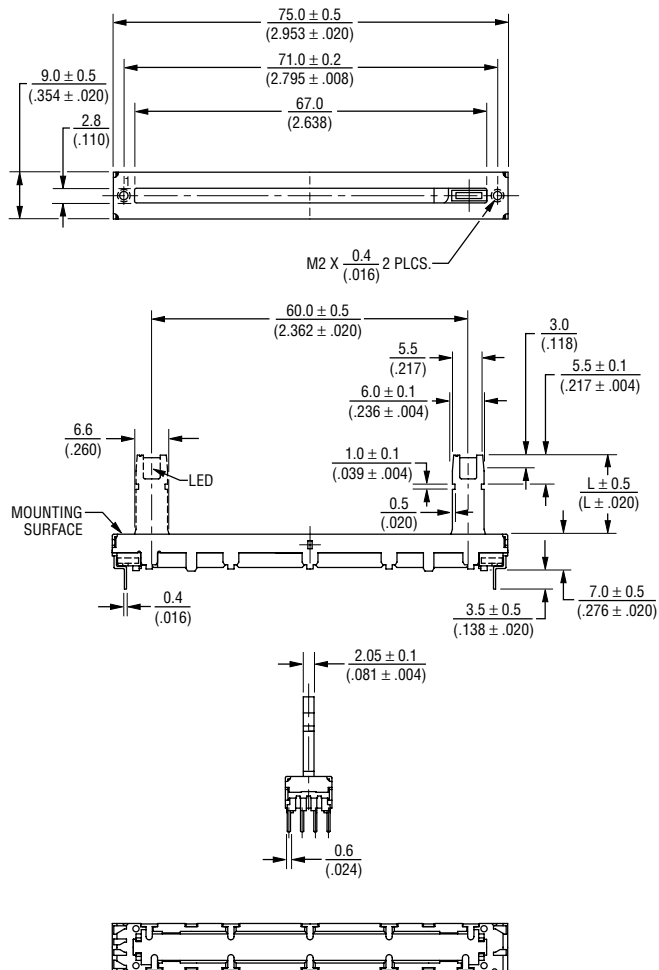


# PTL Series Slide Potentiometer w/LED

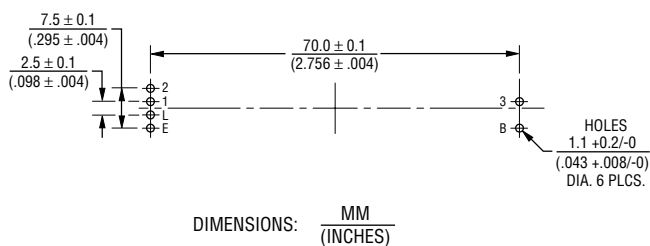
**BOURNS®**

## Product Dimensions

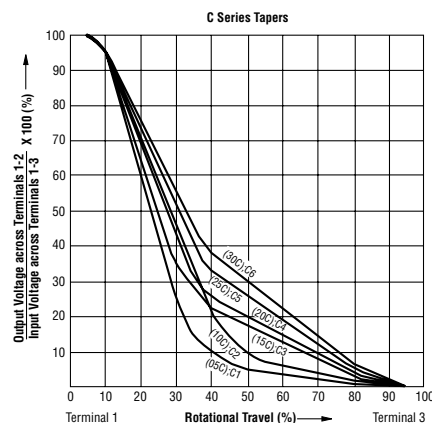
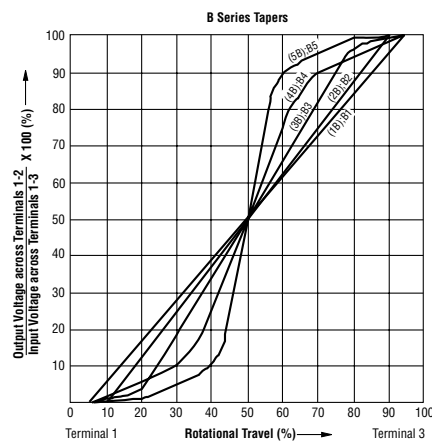
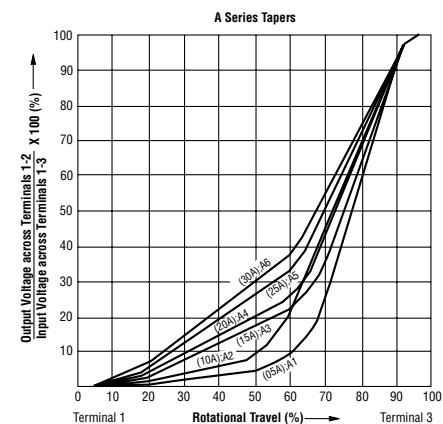
### 60 mm Length of Travel



### Mounting Hole Detail



## Tapers



Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# PTL Series Slide Potentiometer w/LED

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## LED Characteristics

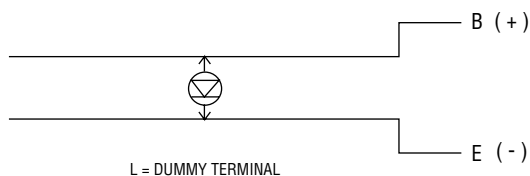
| Emitter Color | Item                     | Symbol          | Test Conditions       | Min. | Typ.  | Max. | Unit |
|---------------|--------------------------|-----------------|-----------------------|------|-------|------|------|
| Red           | Forward Voltage          | $V_F$           | $I_F = 20 \text{ mA}$ |      | 2.1   | 2.5  | V    |
|               | Luminous Intensity       | $I_V$           |                       | 0.3  | 0.6   |      | mcd  |
|               | Peak Emission Wavelength | $\lambda_p$     |                       |      | 660   |      | nm   |
|               | Dominant Wavelength      | $\lambda_d$     |                       |      | 643   |      | nm   |
|               | Spectral Line Half Width | $\Delta\lambda$ |                       |      | 20    |      | nm   |
| Orange        | Forward Voltage          | $V_F$           | $I_F = 20 \text{ mA}$ |      | 2.2   | 2.5  | V    |
|               | Luminous Intensity       | $I_V$           |                       | 1.5  | 3.0   |      | mcd  |
|               | Peak Emission Wavelength | $\lambda_p$     |                       |      | 610   |      | nm   |
|               | Dominant Wavelength      | $\lambda_d$     |                       |      | 605   |      | nm   |
|               | Spectral Line Half Width | $\Delta\lambda$ |                       |      | 35    |      | nm   |
| Green         | Forward Voltage          | $V_F$           | $I_F = 20 \text{ mA}$ |      | 2.1   | 2.5  | V    |
|               | Luminous Intensity       | $I_V$           |                       | 0.6  | 1.2   |      | mcd  |
|               | Peak Emission Wavelength | $\lambda_p$     |                       |      | 530   |      | nm   |
|               | Dominant Wavelength      | $\lambda_d$     |                       |      | 35    |      | nm   |
|               | Spectral Line Half Width | $\Delta\lambda$ |                       |      | 160   |      | nm   |
| Amber         | Forward Voltage          | $V_F$           | $I_F = 20 \text{ mA}$ |      | 2.1   | 2.6  | V    |
|               | Luminous Intensity       | $I_V$           |                       |      | 5.0   |      | mcd  |
|               | Peak Emission Wavelength | $\lambda_p$     |                       |      | 585   |      | nm   |
|               | Dominant Wavelength      | $\lambda_d$     |                       | 582  | –     | 595  | nm   |
|               | Spectral Line Half Width | $\Delta\lambda$ |                       |      | 35    |      | nm   |
| White         | Forward Voltage          | $V_F$           | $I_F = 20 \text{ mA}$ |      | 3.5   | 4    | V    |
|               | Luminous Intensity       | $I_V$           |                       |      | 300.0 |      | mcd  |
|               | Peak Emission Wavelength | $\lambda_p$     |                       |      | 520   |      | nm   |
|               | Dominant Wavelength      | $\lambda_d$     |                       | 460  | –     | 470  | nm   |
|               | Spectral Line Half Width | $\Delta\lambda$ |                       |      | 35    |      | nm   |

## How To Order

### PTL 30 - 10 R 0 - 103 B2

Model Number \_\_\_\_\_  
 Designator \_\_\_\_\_  
 PTL = Slide Potentiometer w/LED  
 Length of Travel \_\_\_\_\_  
 20 = 20 mm 45 = 45 mm  
 30 = 30 mm 60 = 60 mm  
 Lever Length \_\_\_\_\_  
 10 = 10 mm  
 15 = 15 mm  
 19 = 19 mm  
 LED Color \_\_\_\_\_  
 R = Red A = Amber  
 O = Orange W = White  
 G = Green  
 Detent Option \_\_\_\_\_  
 0 = No Detent  
 1 = Center Detent  
 Resistance Code \_\_\_\_\_  
 (See Standard Resistance Table)  
 Resistance Taper (See Taper Charts) \_\_\_\_\_  
 Taper Series followed by Curve Number

## Circuit



REV. 09/11

Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

# Mouser Electronics

Authorized Distributor

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