

3mm

Prism® CBI® Circuit Board Indicator

Surface Mount LED, High Intensity, Round Lens

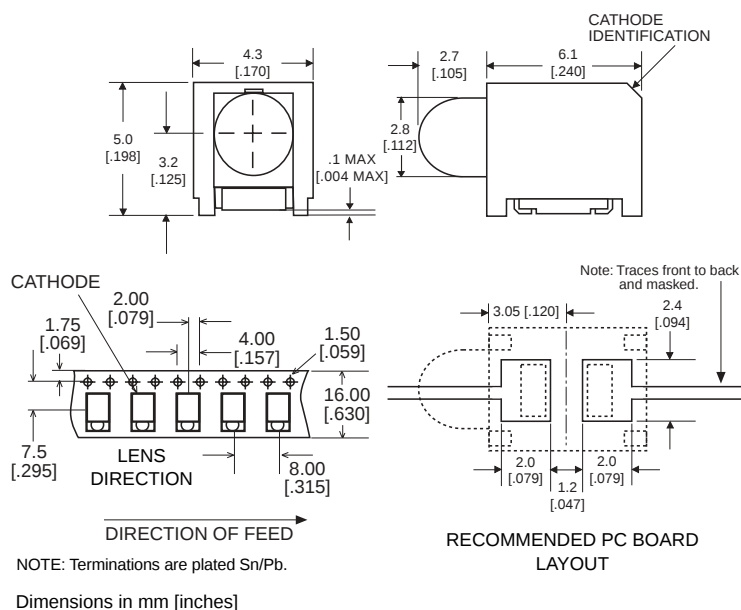
**Dialight**

591-2101-0xx

591-2201-0xx

591-2701-0xx

1



U.S. Patent RE 34,254; foreign patents pending.

## Part

### Number\*

### Type

591-2101-0xx

AlGaAs Red

591-2201-0xx

High Intensity Green

591-2701-0xx

AlInGaP Yellow

**NEW**  
**NEW**

## Features

- Helps to eliminate mixed technology PC board processing.
- Unique patented low part count design.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase solder processes.
- Packaged on 16mm tape, 7" or 13" reels per EIA-481-2.
- Black housing enhances contrast ratio.
- Housing material meets UL94V-0 flammability rating.
- Lens material meets UL94-HB flammability rating.
- Uses LEDs designed specifically for surface mounting.

## \*ORDERING INFORMATION

**591-2x01-0xx**

packaging option

|    |                         |
|----|-------------------------|
| 02 | 20 pieces on tape       |
| 07 | 7" reel, 400 pcs/reel   |
| 13 | 13" reel, 1600 pcs/reel |

**NEW**

591-2101-0xx  
591-2201-0xx  
591-2701-0xx

# Absolute Maximum Ratings, $T_A=25^{\circ}\text{C}$

| Parameter                                                                                      | -2101                                                  | -2201       | -2701      |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|------------|
| Color*                                                                                         | 21                                                     | 22          | 27         |
| Power Dissipation<br>(derate linearly from $25^{\circ}\text{C}$ $\text{mA}/^{\circ}\text{C}$ ) | 100mA<br>.8                                            | 100mA<br>.6 | 60mA<br>.6 |
| Forward DC Current                                                                             | 200mA                                                  | 120mA       | 160mA      |
| Peak Forward Current (10 $\mu$ sec)                                                            | 120mA                                                  | 120mA       | 80mA       |
| Operating Temperature                                                                          | $-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$        |             |            |
| Storage Temperature                                                                            | $-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$        |             |            |
| Soldering Temperatures<br>Convection IR<br>Vapor Phase                                         | 235° Peak, above 185° for 90 sec.,<br>215°C for 3 Min. |             |            |

Solder Adherence per MIL-STD-202E, Method 208C

\*LED colors: 21) AlGaAs Red 22) High Intensity Green, 27) AlInGaP Yellow

U.S. Patent RE 34,254; foreign patents pending.

# Operating Characteristics ( $T_A = 25^{\circ}\text{C}$ )

| Parameter                                     | Part No. | Color | Min | Typ  | Max | Units | Test Cond.          |
|-----------------------------------------------|----------|-------|-----|------|-----|-------|---------------------|
| Forward Voltage<br>$V_F$                      | -2101    | 21    |     | 1.8  | 2.4 | V     | $I_F = 20\text{mA}$ |
|                                               | -2201    | 22    |     | 2.1  | 2.6 |       |                     |
|                                               | -2701    | 27    |     | 2    | 2.4 |       |                     |
| Reverse Voltage<br>$V_R$                      | -2101    | 21    | 3   | 5    |     | V     | $I_R = 10\text{mA}$ |
|                                               | -2201    | 22    | 5   | 5    |     |       |                     |
|                                               | -2701    | 27    | 5   | 5    |     |       |                     |
| Dominant Wavelength<br>$\lambda_{\text{Dom}}$ | -2101    | 21    |     | 638  |     | nm    |                     |
|                                               | -2201    | 22    |     | 569  |     |       |                     |
|                                               | -2701    | 27    |     | 595  |     |       |                     |
| Luminous Intensity<br>$I_V$                   | -2101    | 21    |     | 23.9 |     | mcd   | $I_F = 10\text{mA}$ |
|                                               | -2201    | 22    |     | 9.1  |     |       |                     |
|                                               | -2701    | 27    |     | 33.6 |     |       |                     |
| Viewing Angle<br>( $2\Theta_{1/2}$ )          | -2101    | 21    |     | 40   |     | deg.  |                     |
|                                               | -2201    | 22    |     | 40   |     |       |                     |
|                                               | -2701    | 27    |     | 40   |     |       |                     |

$\Theta_{1/2}$  is the off axis angle at which the luminous intensity is half the axial luminous intensity

\*LED colors: 21) AlGaAs Red 22) High Intensity Green, 27) AlInGaP Yellow

**Dialight**