

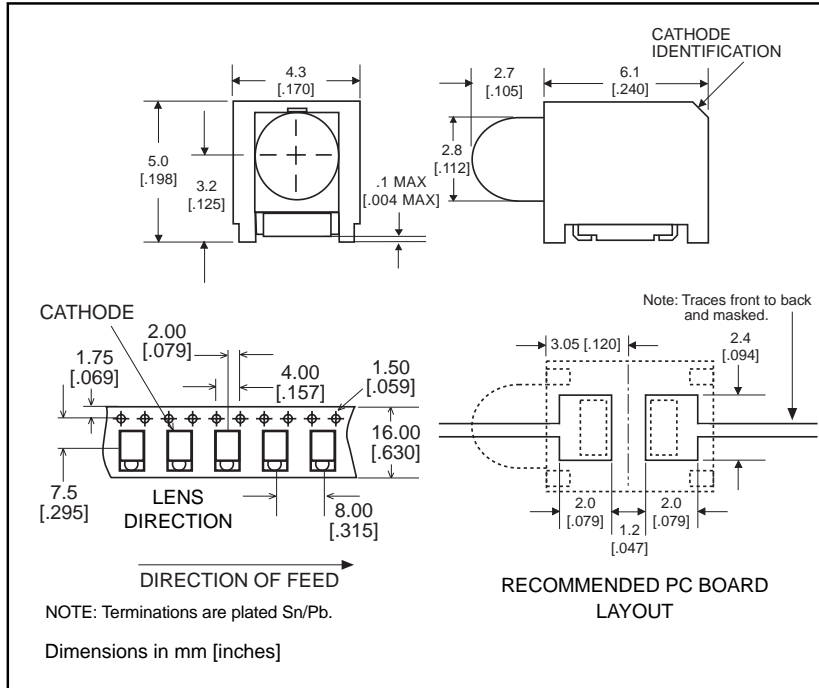
3mm

# Prism® CBI® Circuit Board Indicator Surface Mount LED, Round Lens

# Dialight

591-2001-0xx  
591-2301-0xx  
591-2401-0xx

1



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

### Part Number\*

### Type

|              |                         |
|--------------|-------------------------|
| 591-2001-0xx | High Efficiency Red     |
| 591-2301-0xx | High Performance Green  |
| 591-2401-0xx | High Performance Yellow |

### 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                                     |                         |
|---|-------------------------|
| <b>591-2x01-0xx</b>                                       |                         |
| packaging option <span style="font-size: small;">↑</span> |                         |
| 02  | 20 pieces on tape       |
| 07  | 7" reel, 400 pcs/reel   |
| 13  | 13" reel, 1600 pcs/reel |

**NEW**

591-2001-0xx  
 591-2301-0xx  
 591-2401-0xx

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

| Parameter  | -2001  | -2301       | -2401       |
|--|--|-------------|-------------|
| Color*   | 20   | 21          | 24          |
| Power Dissipation<br>(derate linearly from 25°C mA/°C) | 100mA<br>.4  | 100mA<br>.4 | 60mA<br>.25 |
| Forward DC Current                                     | 30mA   | 30mA        | 20mA        |
| Peak Forward Current (10µ sec)                         | 120mA  | 120mA       | 80mA        |
| Operating Temperature                                  | -55°C to +100°C  |             |             |
| Storage Temperature                                    | -55°C to +100°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: 20) High Efficiency Red 21) High Efficiency Green,  
 24) High Performance 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>$V_F$                      | -2001    | 20     |     | 2   | 2.6 | V     | $I_F = 10\text{mA}$     |
|   | -2301    | 21     |     | 2   | 2.6 |       |                         |
|   | -2401    | 24     |     | 2   | 2.6 |       |                         |
| Reverse Voltage<br>$V_R$                      | -2001    | 20     | 5   |     |     | V     | $I_R = 10\ \mu\text{A}$ |
|   | -2301    | 21     | 5   |     |     |       |                         |
|   | -2401    | 24     | 5   |     |     |       |                         |
| Dominant Wavelength<br>$\lambda_{\text{Dom}}$ | -2001    | 20     |     | 628 |     | nm    |                         |
|   | -2301    | 21     |     | 570 |     |       |                         |
|   | -2401    | 24     |     | 590 |     |       |                         |
| Luminous Intensity<br>$I_V$                   | -2001    | 20     |     | 5   |     | mcd   | $I_F = 10\text{mA}$     |
|   | -2301    | 21     |     | 4   |     |       |                         |
|   | -2401    | 24     |     | 5   |     |       |                         |
| Viewing Angle<br>( $2\theta_{1/2}$ )          | -2001    | 20     |     | 40  |     | deg.  |                         |
|   | -2301    | 21     |     | 40  |     |       |                         |
|   | -2401    | 24     |     | 40  |     |       |                         |

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

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