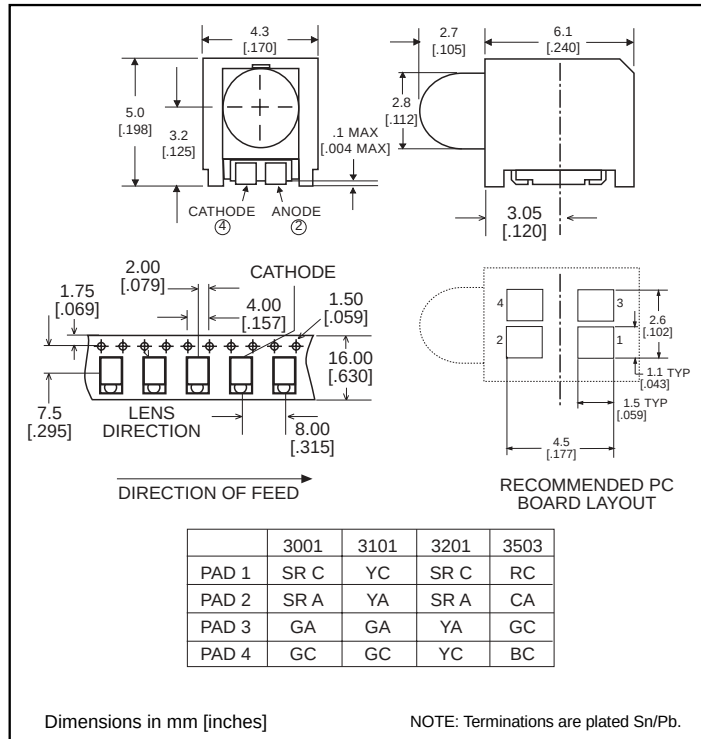


# 3mm Prism® CBI® Circuit Board Indicator Surface Mount LED, Round Lens

# Dialight

## 591-3x0x-0xx

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

### Part Number\* Type

591-3001-0xx Super Red/Green Bi-Color

591-3101-0xx Yellow/Green Bi-Color

591-3201-0xx Super Red/Yellow Bi-Color

591-3503-0xx Red/Blue/Green Tri-Color

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

591-3x01-0xx

packaging option

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

NEW

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

| Parameter                     | -3001                                                  | -3101 | -3201 | -3503                                    |
|-------------------------------|--------------------------------------------------------|-------|-------|------------------------------------------|
| Color*                        | 30                                                     | 31    | 32    | 35                                       |
| Power Dissipation             | 100mW                                                  | 100mW | 100mW | 150mW Total                              |
| Forward DC Current            | 30mA                                                   | 30mA  | 30mA  | 20mA single chip on<br>30mA all chips on |
| Peak Forward Current (10μsec) | 500mA                                                  | 500mA | 500mA |                                          |
| Operating Temperature         | -55°C to +100°C                                        |       |       |                                          |
| Storage Temperature           | -55°C to +100°C                                        |       |       |                                          |
| Soldering Temperatures        | 235° Peak, above 185° for 90 sec.,<br>215°C for 3 Min. |       |       |                                          |
| Convection IR                 |                                                        |       |       |                                          |
| Vapor Phase                   |                                                        |       |       |                                          |

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

\* LED colors: 30) Super Red/Green Bi-Color 31) Yellow/Green Bi-Color 32) Super Red/Yellow Bi-Color 35) Red/Blue/Green Tri-Color

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

| Parameter                                     | Part No. | Color | Min   | Typ         | Max         | Units | Test Cond.                    |
|-----------------------------------------------|----------|-------|-------|-------------|-------------|-------|-------------------------------|
| Forward Voltage<br>$V_F$                      | -3001    | 30    |       | 2/2         | 2.6/2.6     | V     | $I_F=10\text{ mA}$            |
|                                               | -3101    | 31    |       | 2/2         | 2.6/2.6     |       |                               |
|                                               | -3201    | 32    |       | 2/2         | 2.6/2.6     |       |                               |
|                                               | -3503    | 35    |       | 2/3.8/2     | 2.6/4.5/2.6 |       |                               |
| Reverse Voltage<br>$V_R$                      | -3001    | 30    | 5/5   |             |             | V     | $I_R = 10\text{ }\mu\text{A}$ |
|                                               | -3101    | 31    | 5/5   |             |             |       |                               |
|                                               | -3201    | 32    | 5/5   |             |             |       |                               |
|                                               | -3503    | 35    | 5/1/5 |             |             |       |                               |
| Dominant Wavelength<br>$\lambda_{\text{Dom}}$ | -3001    | 30    |       | 628/570     |             | nm    |                               |
|                                               | -3101    | 31    |       | 586/570     |             |       |                               |
|                                               | -3201    | 32    |       | 628/586     |             |       |                               |
|                                               | -3503    | 35    |       | 645/466/570 |             |       |                               |
| Luminous Intensity<br>$I_V$                   | -3001    | 30    |       | 6.5/8       |             | mcd   | $I_F = 20\text{ mA}$          |
|                                               | -3101    | 31    |       | 6.5/8       |             |       |                               |
|                                               | -3201    | 32    |       | 6.5/6.5     |             |       |                               |
|                                               | -3503    | 35    |       | 10/5/16     |             |       |                               |
| Viewing Angle<br>( $2\Theta_{1/2}$ )          | -3001    | 30    |       | 40/40       |             | deg.  |                               |
|                                               | -3101    | 31    |       | 40/40       |             |       |                               |
|                                               | -3201    | 32    |       | 40/40       |             |       |                               |
|                                               | -3503    | 35    |       | 40/40/40    |             |       |                               |

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

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