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|------------------------------|-----------------|
| L-1002HD BRIGHT RED | L-1002GD GREEN |
| L-1002ID HIGH EFFICIENCY RED | L-1002YD YELLOW |

Features

- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LONG LIFE-SOLID STATE RELIABILITY.

Description

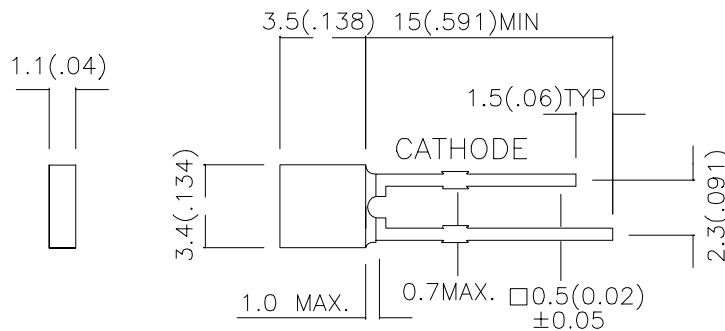
The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subject to change without notice.

Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) @ 10 mA | | Viewing Angle |
|----------|---------------------------------|-----------------|---------------------|------|------------------|
| | | | Min. | Typ. | 2θ1/2 |
| L-1002HD | BRIGHT RED (GaP) | RED DIFFUSED | 0.3 | 0.7 | 110° |
| L-1002ID | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED | 1.2 | 3 | 110° |
| L-1002GD | GREEN (GaP) | GREEN DIFFUSED | 0.5 | 2.5 | 110° |
| L-1002YD | YELLOW (GaAsP/GaP) | YELLOW DIFFUSED | 0.5 | 2.5 | 110° |

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

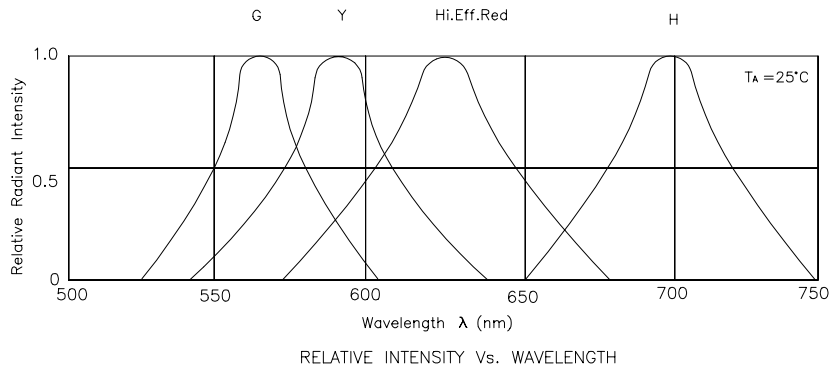
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-------------------|-------------------------|--|---------------------------|--------------------------|-------|-----------------|
| λ _{peak} | Peak Wavelength | Bright Red High Efficiency Red Green Yellow | 700 627 565 590 | | nm | IF=20mA |
| λ _D | Dominate Wavelength | Bright Red High Efficiency Red Green Yellow | 660 625 568 588 | | nm | IF=20mA |
| Δλ _{1/2} | Spectral Line Halfwidth | Bright Red High Efficiency Red Green Yellow | 45 45 30 35 | | nm | IF=20mA |
| C | Capacitance | Bright Red High Efficiency Red Green Yellow | 40 15 15 20 | | pF | VF=0V;f=1MHz |
| V _F | Forward Voltage | Bright Red High Efficiency Red Green Yellow | 2.25 2.0 2.2 2.1 | 2.5 2.5 2.5 2.5 | V | IF=20mA |
| I _R | Reverse Current | All | | 10 | uA | VR = 5V |

Absolute Maximum Ratings at T_A=25°C

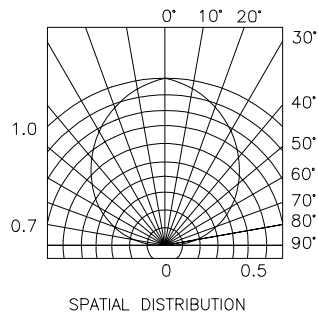
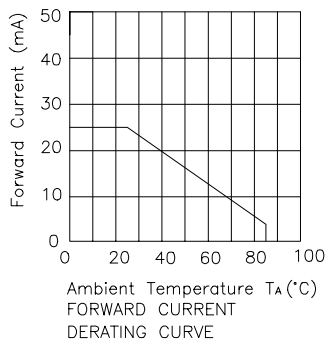
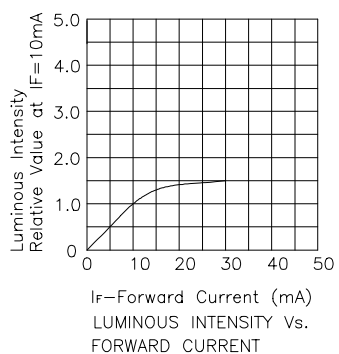
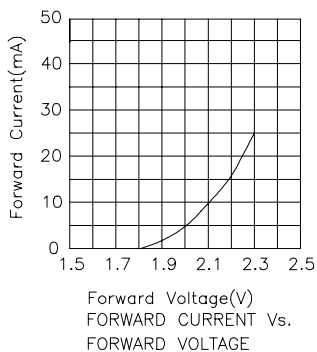
| Parameter | Bright Red | High Efficiency Red | Green | Yellow | Units |
|-------------------------------|---------------------|---------------------|-------|--------|-------|
| Power dissipation | 120 | 105 | 105 | 105 | mW |
| DC Forward Current | 25 | 30 | 25 | 30 | mA |
| Peak Forward Current [1] | 120 | 160 | 140 | 140 | mA |
| Reverse Voltage | 5 | 5 | 5 | 5 | V |
| Operating/Storage Temperature | -40°C To +85°C | | | | |
| Lead Solder Temperature [2] | 260°C For 5 Seconds | | | | |

Notes:

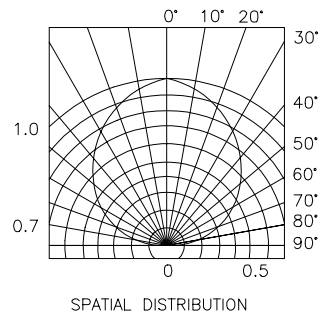
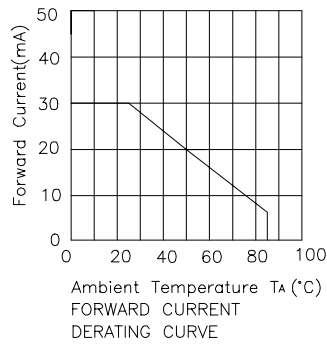
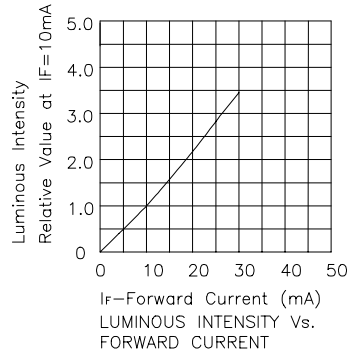
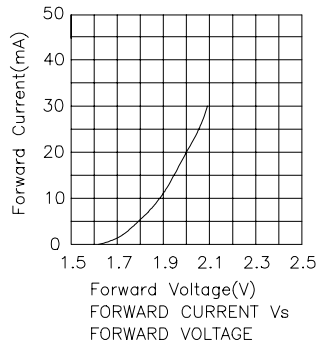
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



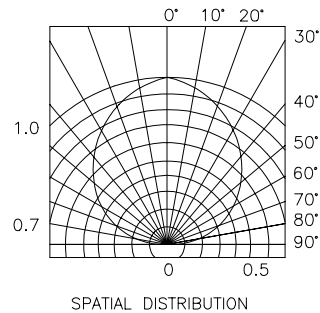
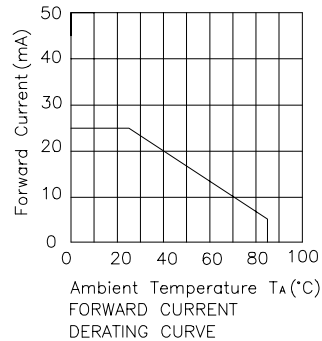
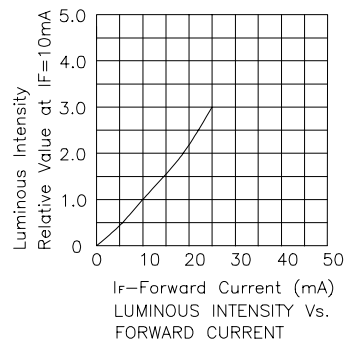
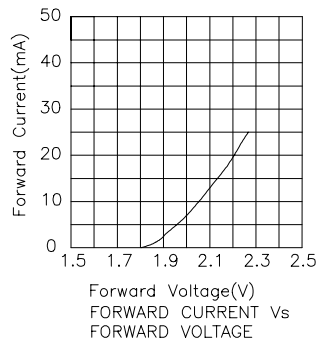
Bright Red L-1002HD



High Efficiency Red L-1002ID



Green L-1002GD



Yellow L-1002YD

