

LL-304YD2E

DATA SHEET

QC:

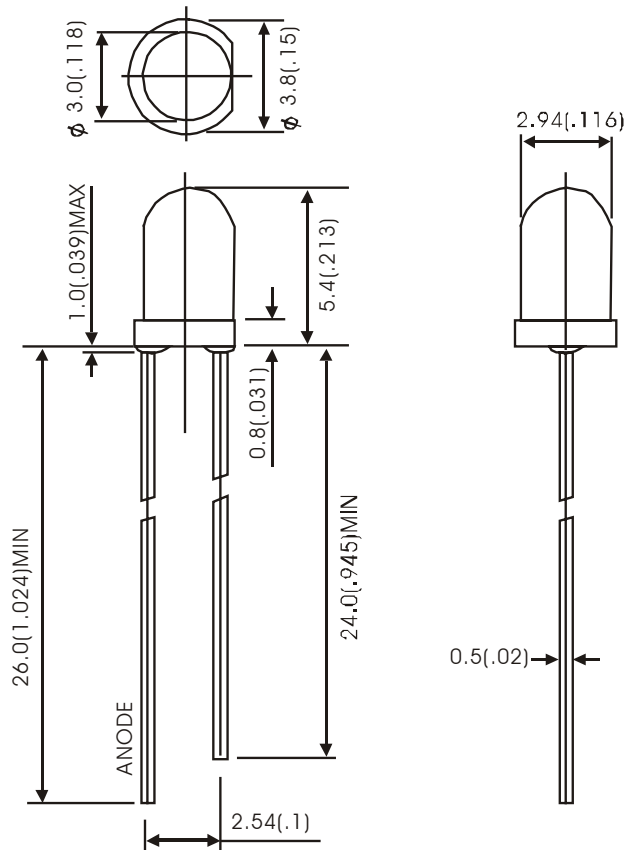
ENG:

Prepared By:

## Features

- ◆ High intensity
- ◆ Normal 3mm diameter package
- ◆ Wide viewing angle
- ◆ General purpose leads
- ◆ Reliable and rugged

## Package Dimension:



| Part NO.   | Chip Material | Lens Color      | Source Color |
|------------|---------------|-----------------|--------------|
| LL-304YD2E | GaAsP         | Yellow Diffused | Yellow       |

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(.010)$  mm unless otherwise noted.
3. Protruded resin under flange is  $1.0\text{mm}(.04)$  max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice

**Absolute Maximum Ratings at Ta=25°C**

| Parameter  | MAX.                | Unit  |
|--|---------------------|-------|
| Power Dissipation  | 100                 | mW    |
| Peak Forward Current<br>(1/10 Duty Cycle, 0.1ms Pulse Width) | 100                 | mA    |
| Continuous Forward Current                                   | 35                  | mA    |
| Derating Linear From 50°C                                    | 0.4                 | mA/°C |
| Reverse Voltage  | 5                   | V     |
| Operating Temperature Range                                  | -40°C to +80°C      |       |
| Storage Temperature Range                                    | -40°C to +80°C      |       |
| Lead Soldering Temperature<br>[4mm(.157") From Body]         | 260°C for 5 Seconds |       |

**Electrical Optical Characteristics at Ta=25°C**

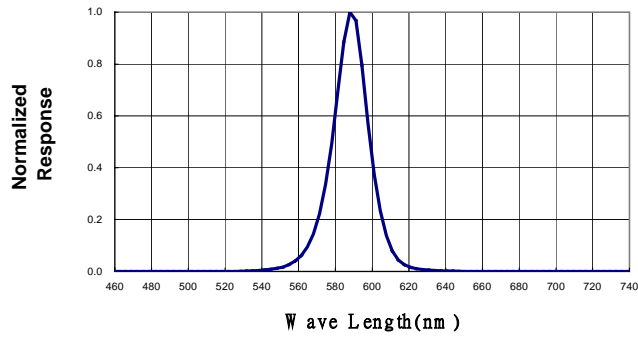
| Parameter                | Symbol            | Min. | Typ. | Max. | Unit | Test Condition                |
|--------------------------|-------------------|------|------|------|------|-------------------------------|
| Luminous Intensity       | I <sub>v</sub>    | 10   | 12   | ---  | mcd  | I <sub>F</sub> =20mA (Note 1) |
| Viewing Angle            | 2θ <sub>1/2</sub> | 35   | 40   | 45   | Deg  | (Note 2)                      |
| Peak Emission Wavelength | λ <sub>p</sub>    | 587  | 592  | 597  | nm   | I <sub>F</sub> =20mA          |
| Dominant Wavelength      | λ <sub>d</sub>    | 583  | 589  | 596  | nm   | I <sub>F</sub> =20mA (Note 3) |
| Spectral Line Half-Width | Δλ                | 17   | 22   | 27   | nm   | I <sub>F</sub> =20mA          |
| Forward Voltage          | V <sub>F</sub>    | 1.7  | 2.0  | 2.8  | V    | I <sub>F</sub> =20mA          |
| Reverse Current          | I <sub>R</sub>    | ---  | ---  | 100  | μA   | V <sub>R</sub> =5V            |

**Note:**

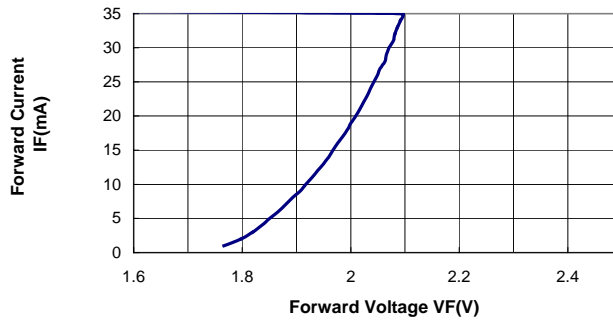
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- θ<sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength (λ<sub>d</sub>) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Typical Electrical / Optical Characteristics Curves  
(25°C Ambient Temperature Unless Otherwise Noted)

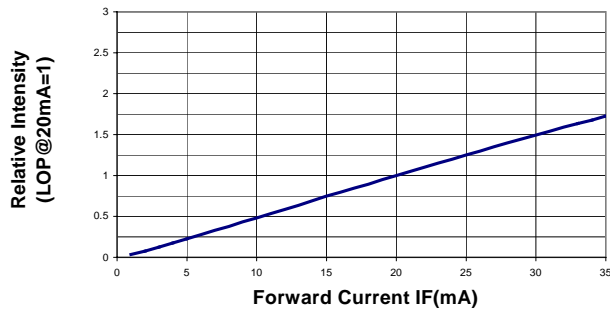
**Spectral Radiance (Peak @ 592 nm)**



**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**



**Beam Pattern**

