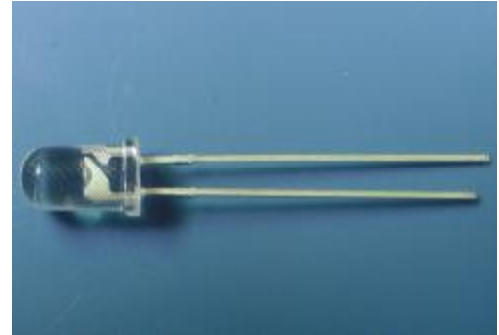




HL-503IR4C-L5-2.2

Features

- Mechanically and spectrally matchend to the phototransistor.
- Rohs compliant.

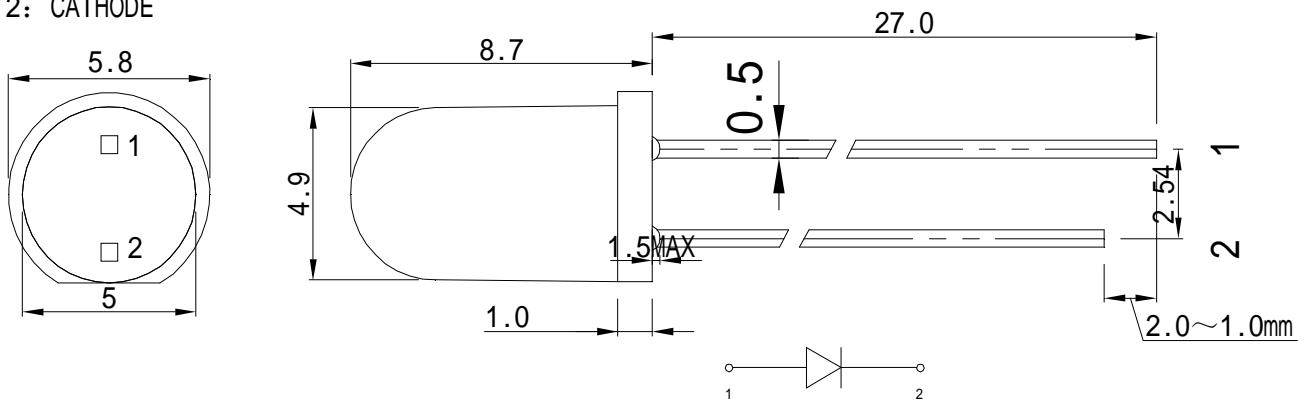


Package Dimensions

Description

This devices are made with PIN GaAs.

- 1: ANODE
2: CATHODE



| Tolerance Grade | Dimension Tolerance (UNIT:mm) | | | |
|-----------------|-------------------------------|-------------|------|--------|
| | 0.5~3 | 3~6 | 6~30 | 30~120 |
| | ±0.1 | ±0.2 | ±0.3 | ±0.5 |
| Chip | | Lens Color | | |
| Material | Emitting Color | Water Clear | | |
| GaAs | / | | | |

Selection Guide

| Part No | Radiant Intensity(mW/sr) $I_F = 50\text{mA}$ | | Viewing Angle |
|-------------------|---|-----|----------------|
| | Min | Typ | 2 θ 1/2 |
| HL-503IR4C-L5-2.2 | -- | 80 | 30 |

Note:

1. 2 θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Tolerance of measurement of luminous intensity $\pm 15\%$.

Electrical / Optical Characteristics at TA=25°C

| Item | Symbol | Min | Typ | Units | Test Conditions |
|--------------------------|------------------------|-----|-----|---------------|---------------------|
| Forward Voltage | V_F | | 1.5 | V | $I_F = 50\text{mA}$ |
| Reverse Current | I_R | -- | 10 | μA | |
| Peak Spectral Wavelength | λ_D | -- | 850 | nm | |
| Spectral Bandwidth | $\Delta \lambda_{1/2}$ | -- | 50 | nm | |
| | | | | | |

Note:

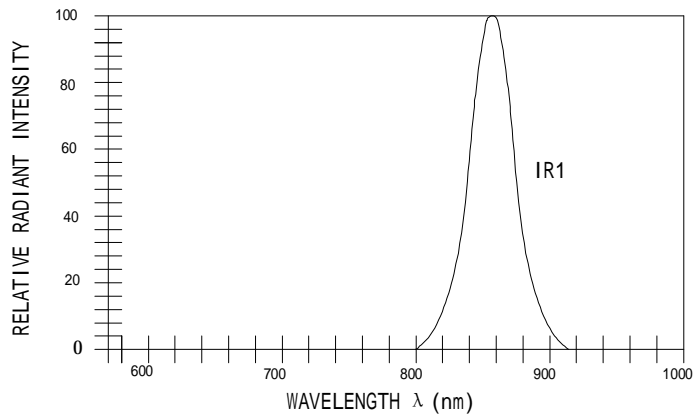
1. Tolerance of measurement of forward voltage $\pm 0.1\text{V}$.
2. Tolerance of measurement of peak Wavelength $\pm 2.0\text{nm}$.

Absolute Maximum ratings at Ta=25°C

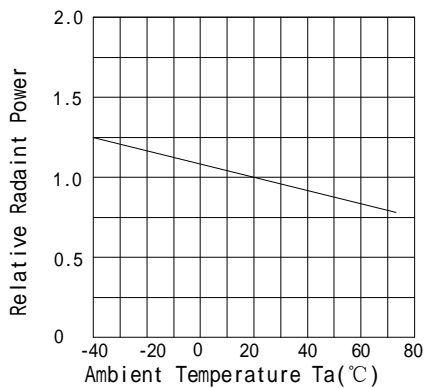
| Parameter | Symbol | IR1 | Units |
|-------------------------|----------|--------------|-------|
| Power Dissipation | P_t | 100 | mW |
| DC Forward Current | I_F | 50 | mA |
| Peak Forward Current[1] | i_{FS} | 300 | mA |
| Operating Temperature | | -30°C ~ 80°C | |
| Storage Temperature | | -30°C ~ 80°C | |

Note:

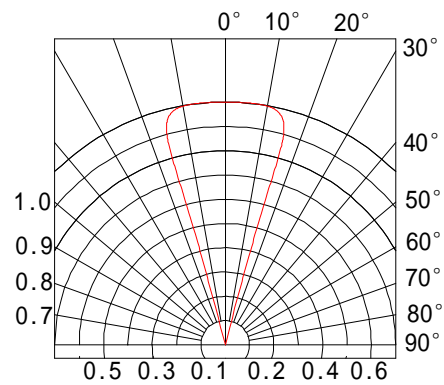
1. IFP Conditions: Pulse Width $\leq 10\text{msec}$
2. Tsol Conditions: 3mm from the base of the epoxy bulb



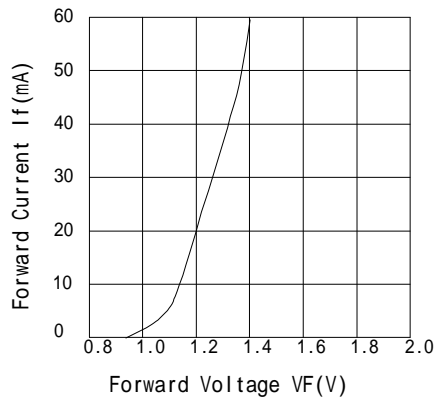
Forward Current vs. Forward Voltage



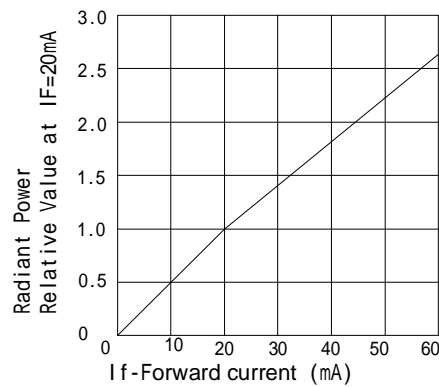
Radint Power Vs. Ambient Temperature



Spatial Distribution



Forward Current Vs. Forward Voltage



Radint Power Vs Forward Current

Remarks:

If special sorting is required (e.g. binning based on forward voltage or radiant intensity/luminous flux), the typical accuracy of the sorting process is as follows:

1. Radiant intensity/Luminous Flux: ±15%.
2. Forward Voltage: ±0.1V.

Note: Accuracy may depend on the sorting parameters.

Soldering:

1. Manual Of Soldering

The temperature of the iron tip should not be higher than 300°C and Soldering within 3 seconds per solder-land is to be observed.

2. DIP soldering (Wave Soldering):

Preheating: 120°C~150°C, within 120~180 sec.

Operation heating: 245°C ± 5°C within 5 sec. 260°C (Max)

Gradual Cooling (Avoid quenching).

