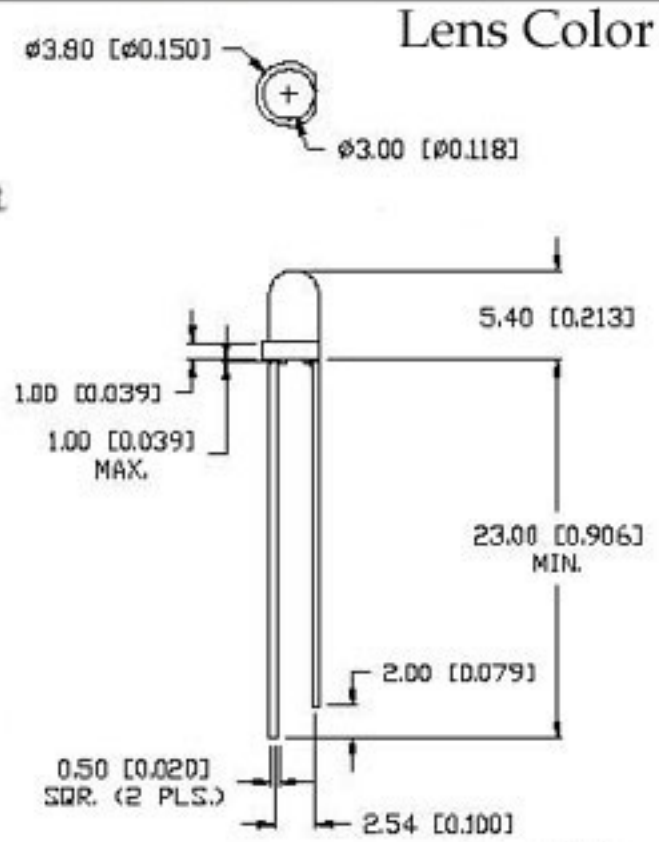
# Infrared Emitting Diod

JUNYE

红外线发射管

Module No : JY9415-B3

Lens Color : Blue




## 1. General Description:

JY9415-B3 is a high output power GaAlAs infrared light emitting diode, mounted in a clear epoxy end looking package. It emits narrow band of radiation peaking at 940nm.

## 2. Features

- Ultra narrow beam angle
- Good linearity
- Capable of pulse operation
- High output power
- Low cost

## 3. Absolute Maximum Ratings

(Ta=25°C)

| Parameter | Symbol | Ratings | Unit |
|---|---|---|---|
| Forward Current | $I_F$ | 100 | mA |
| Pulse Forward current *1 | $I_{FP}$ | 1 | A |
| Reverse Voltage | $V_R$ | 5 | V |
| Power Dissipation | $P_D$ | 100 | mW |
| Operating Temperature | $T_{opr}$ | -25 ~ +70 | °C |
| Storage Temperature | $T_{stg}$ | -25 ~ +80 | °C |
| Soldering Temperature *2 | $T_{sol}$ | 260 | °C |

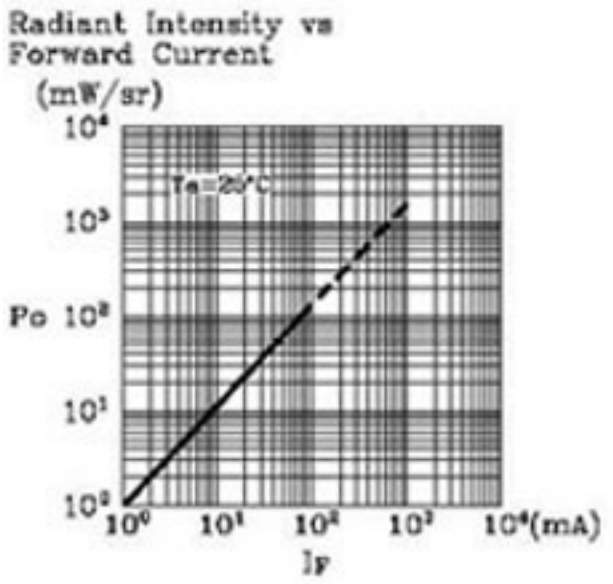
*1 Pulse width ≤ 100μsec. Duty ratio = 0.01
*2 At the position of 2mm from the bottom of the package within 5 seconds.

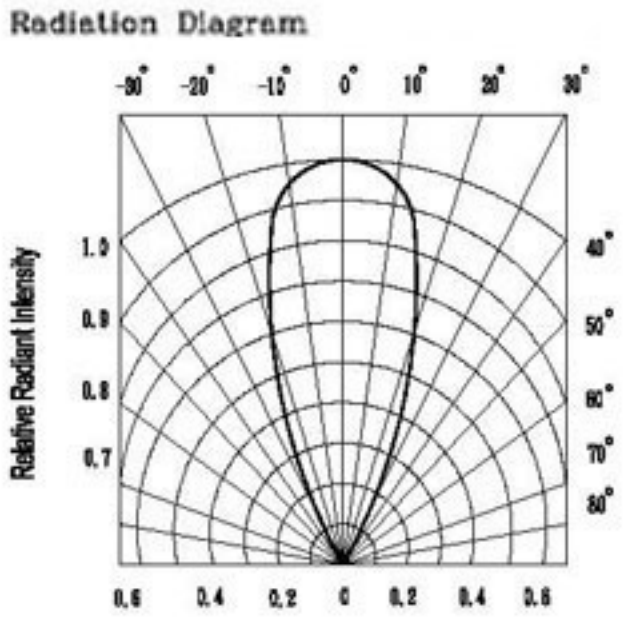


## 4. Electro-optical Characteristics

(Ta=25°C)

| Parameter | Symbol | Testing Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=100mA | | 1.2 | 1.5 | V |
| Reverse Current | $I_R$ | $V_R$=5V | | | 10 | μA |
| Radiant Intensity | Po | $I_F$=100mA | 50 | 130 | | mW/sr |
| Terminal Capacitance | $C_t$ | f=1MHz | | 25 | | pF |
| Half Power Beam Angle | Δθ | | | ±25 | | deg. |
| Peak Emission Wavelength | λp | $I_F$=100mA | | 940 | | nm |
| Spectral Bandwidth at 50% | Δλ | $I_F$=100mA | | 45 | | nm |



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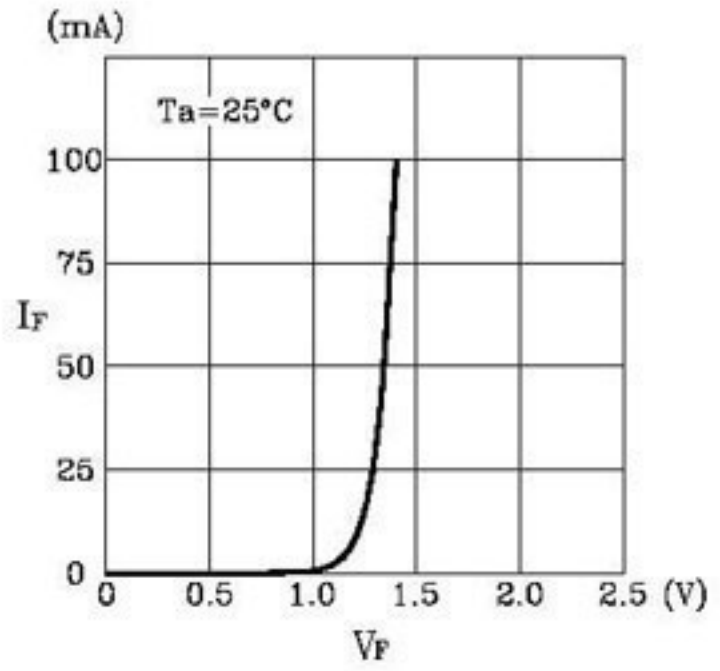
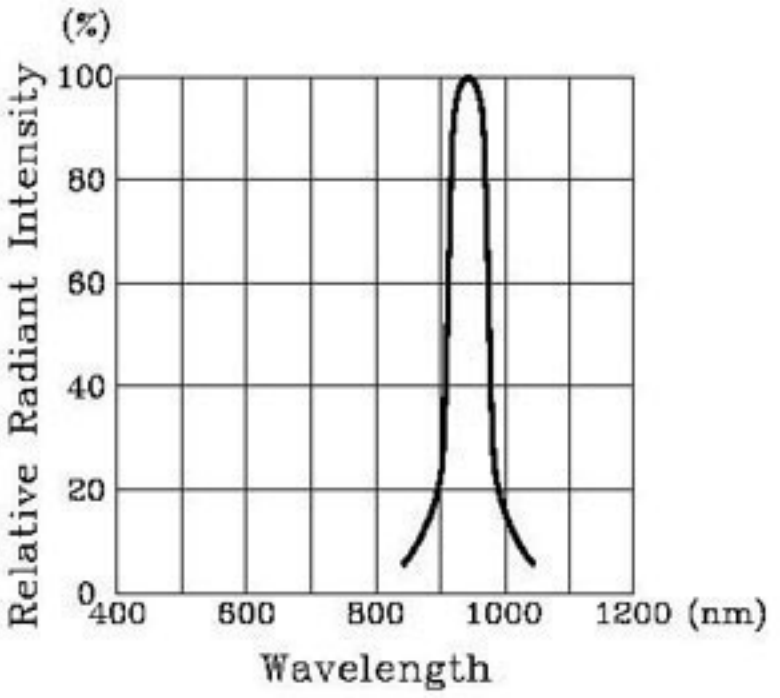
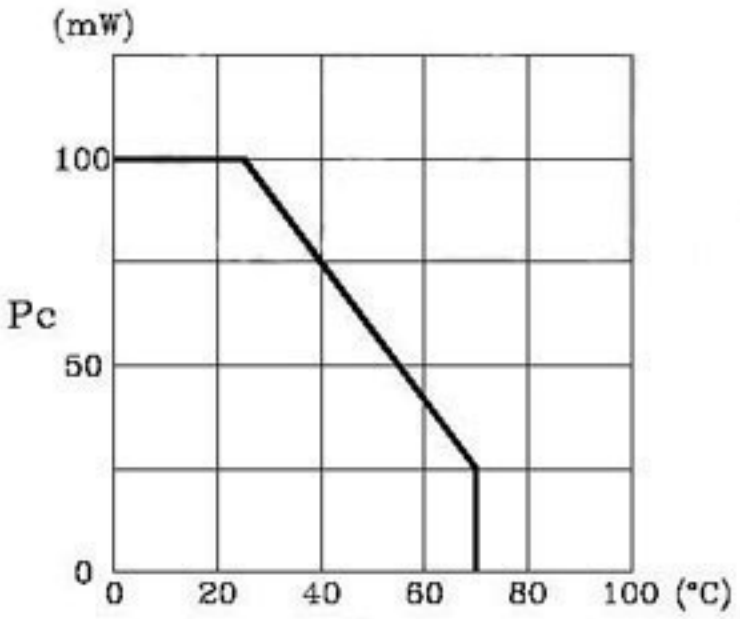
Forward Current vs
Forward Voltage



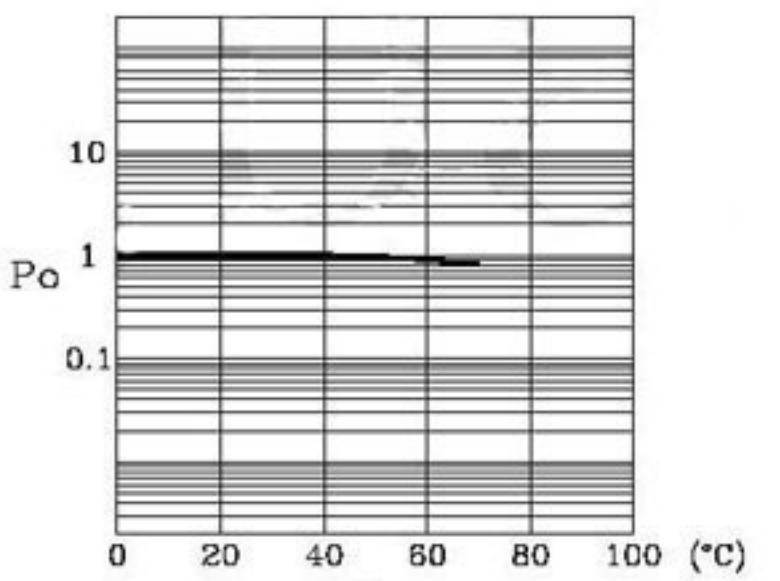

Spectral Distribution



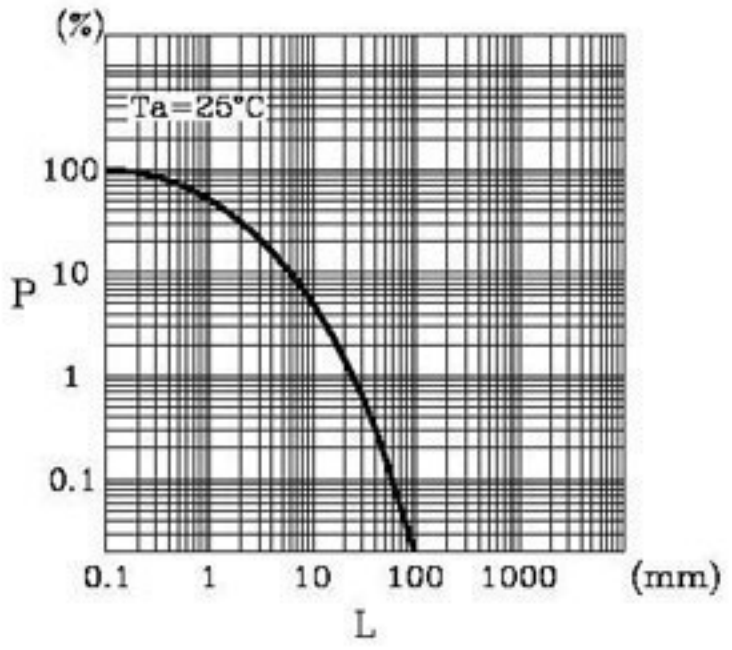

Power Dissipation vs
Ambient Temperature




Relative Output power vs
Ambient Temperature




Relative Power vs
Distance to Detector




Distance to Detector Test Conditions