



Module No.: DIR6100C



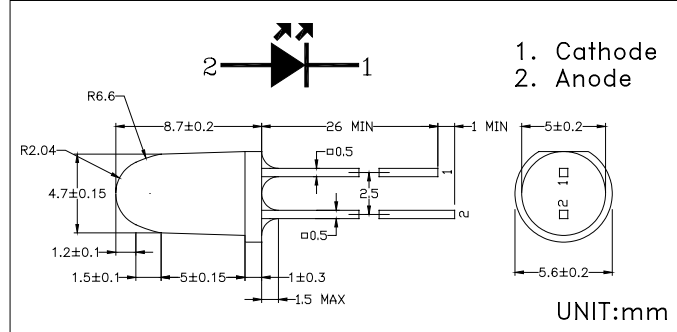
1. General Description:

DIR6100C 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

Dimensions



3. Absolute Maximum Ratings

($T_a=25^\circ\text{C}$)

| 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 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -25 ~ +80 | $^\circ\text{C}$ |
| Soldering Temperature *2 | T_{sol} | 260 | $^\circ\text{C}$ |

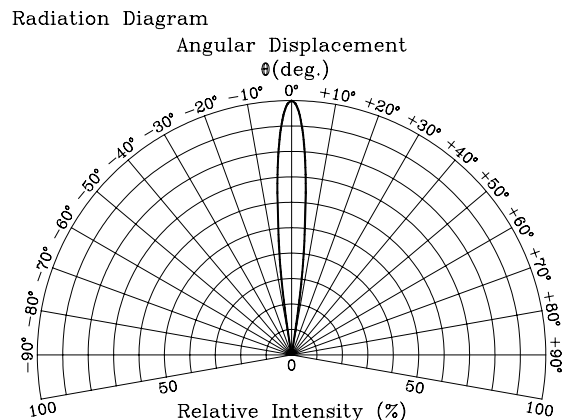
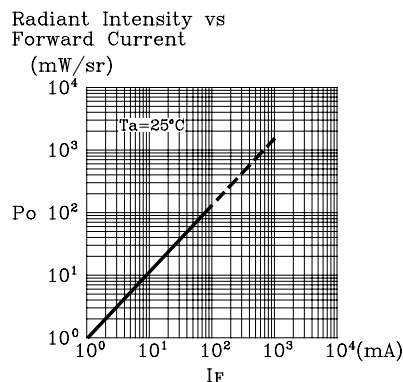
*1 Pulse width $\leq 100\mu\text{sec}$. Duty ratio = 0.01

*2 At the position of 2mm from the bottom of the package within 5 seconds.

4. Electro-optical Characteristics

($T_a=25^\circ\text{C}$)

| Parameter | Symbol | Testing Conditions | Min. | Typ. | Max. | Unit |
|---------------------------|-----------------|--------------------|------|---------|------|---------------|
| Forward Voltage | V_F | $I_F=100\text{mA}$ | | 1.4 | 1.7 | V |
| Reverse Current | I_R | $V_R=5\text{V}$ | | | 10 | μA |
| Radiant Intensity | P_o | $I_F=100\text{mA}$ | 50 | 130 | | mW/sr |
| Terminal Capacitance | C_t | $f=1\text{MHz}$ | | 25 | | pF |
| Half Power Beam Angle | $\Delta\theta$ | | | ± 5 | | deg. |
| Peak Emission Wavelength | λ_p | $I_F=100\text{mA}$ | | 940 | | nm |
| Spectral Bandwidth at 50% | $\Delta\lambda$ | $I_F=100\text{mA}$ | | 45 | | nm |





Dongbao

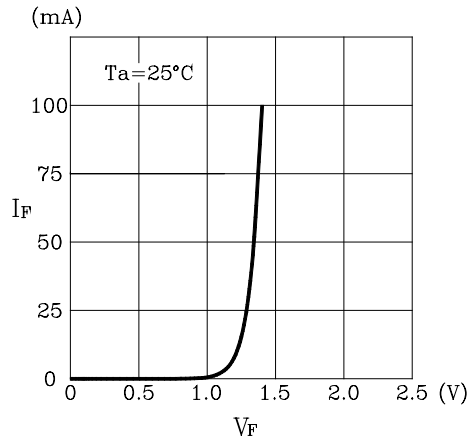
Infrared Emitting Diode

红外线发射管

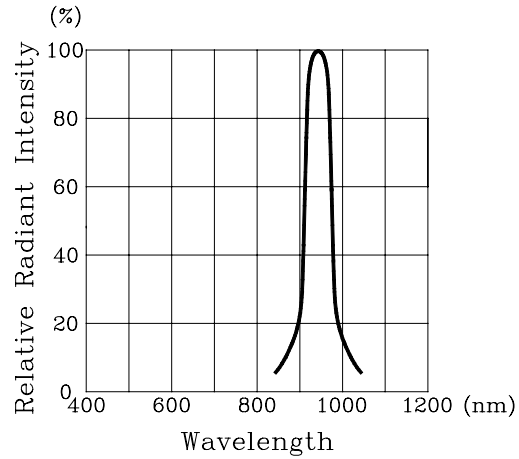
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RoHS

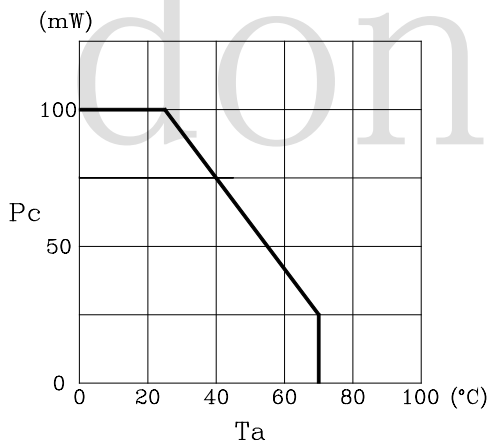
Forward Current vs Forward Voltage



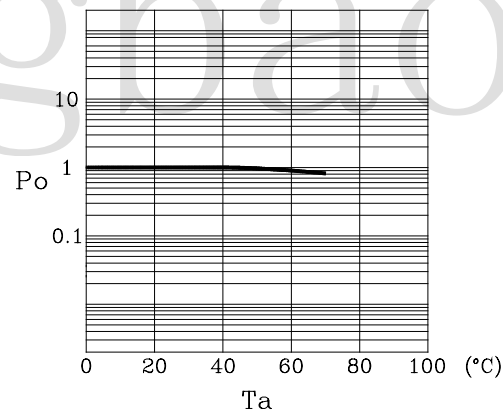
Spectral Distribution



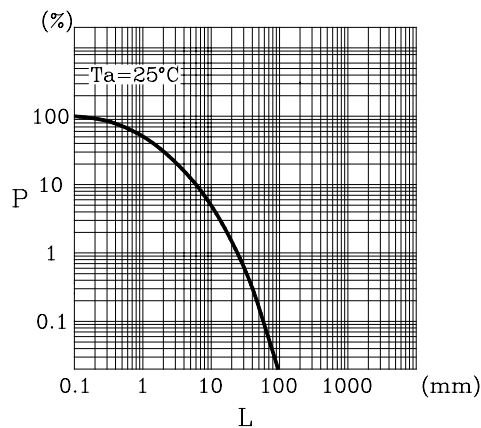
Power Dissipation vs Ambient Temperature



Relative Output power vs Ambient Temperature



Relative Power vs Distance to Detector



Distance to Detector Test Conditions

