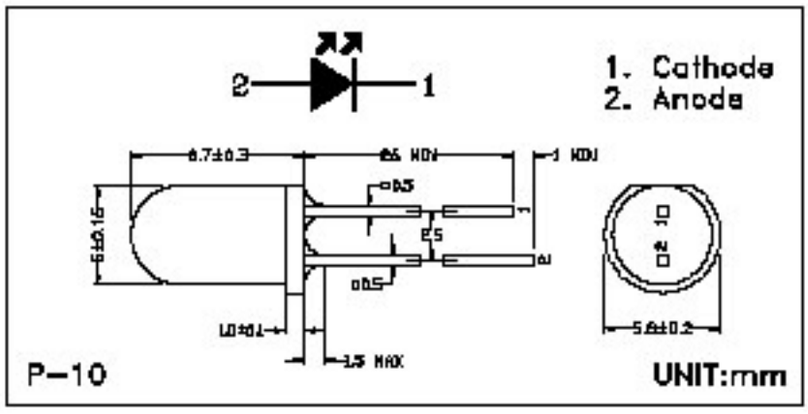
Infrared Emitting Diode

Module No.:

1. General Description:

is a high output power and high speed GaAlAs infrared light emitting diode, mounted in a clear epoxy end looking package. It emits narrow band of radiation peaking at 850nm.

Dimensions



2. Features

- Standard package (∅5mm)
- Narrow beam angle (±10°)
- Capable of pulse operation
- High output power
- Good Linearity

3. Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I_F	50	mA
Pulse Forward current *1	I_{FP}	1	A
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	95	mW
Operating Temperature	T_{opr}	-20 ~ +70	°C
Storage Temperature	T_{stg}	-25 ~ +80	°C
Soldering Temperature *2	T_{sol}	260	°C

*1 Pulse width ≤ 100μsec. Duty ratio = 0.01

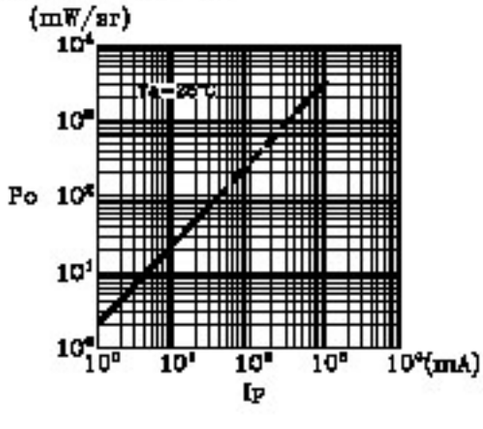
*2 At the position of 2mm from the bottom of the package within 5 seconds.

4. Electro-optical Characteristics

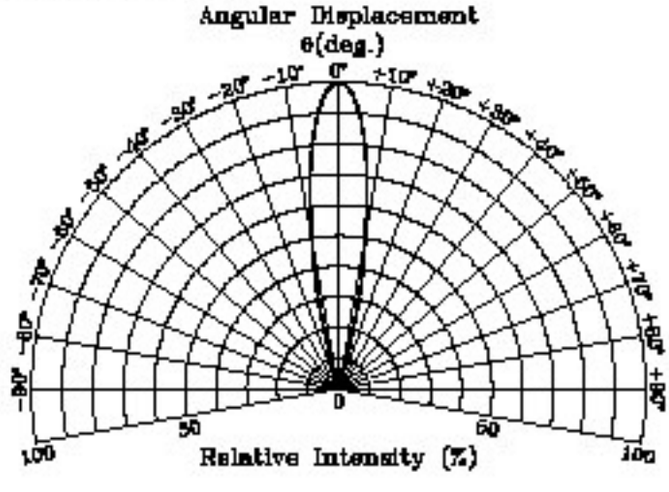
(Ta=25°C)

Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=50mA		1.5	1.9	V
Reverse Current	I_R	V_R=5V			10	μA
Radiant Intensity	Po	I_F=50mA	65	130		mW/sr
Terminal Capacitance	C_t	f=1MHz		20		pF
Half Power Beam Angle	Δθ			±10		deg.
Peak Emission Wavelength	λp	I_F=50mA		850		nm
Spectral Bandwidth at 50%	Δλ	I_F=50mA		30		nm

Radiant Intensity vs Forward Current

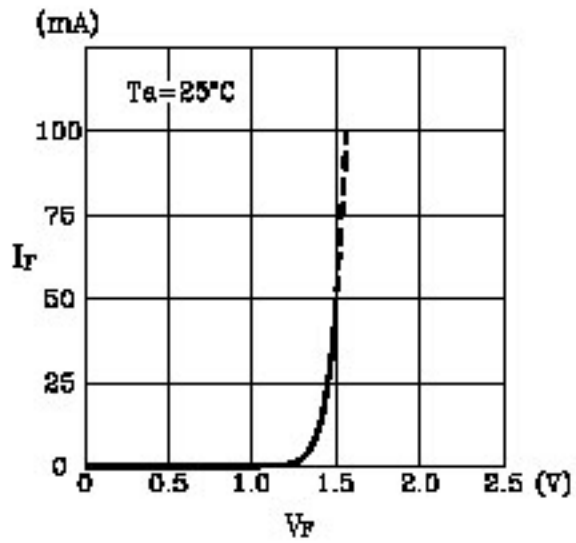


Radiation Diagram

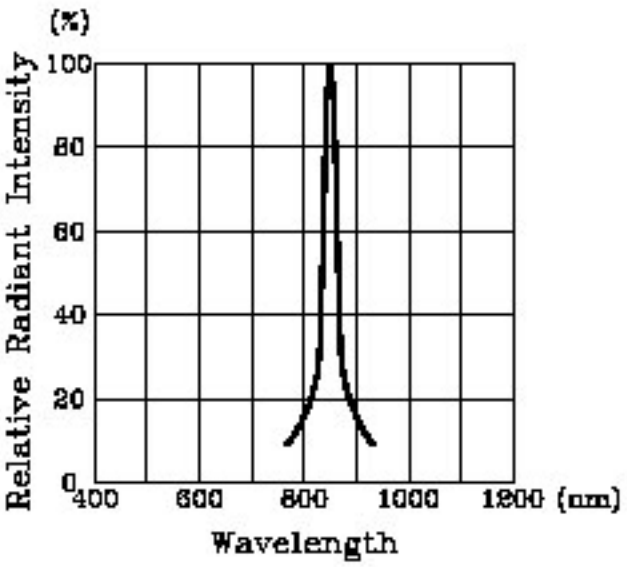


Module No.:

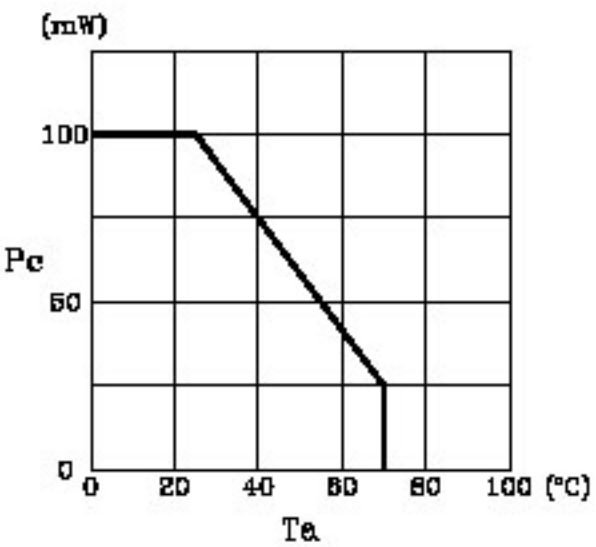
Forward Current vs
Forward Voltage



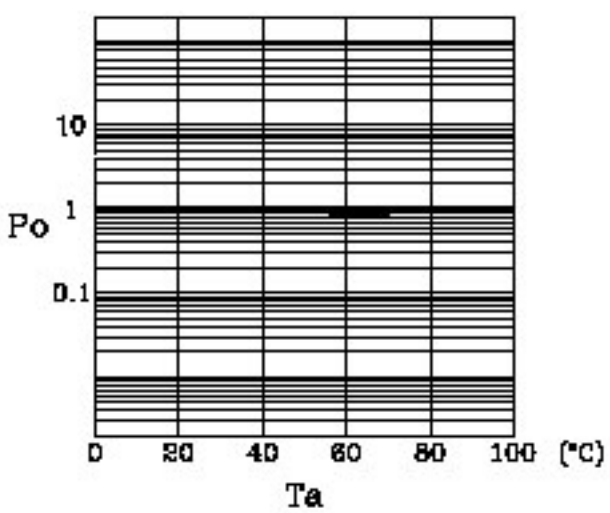
Spectral Distribution



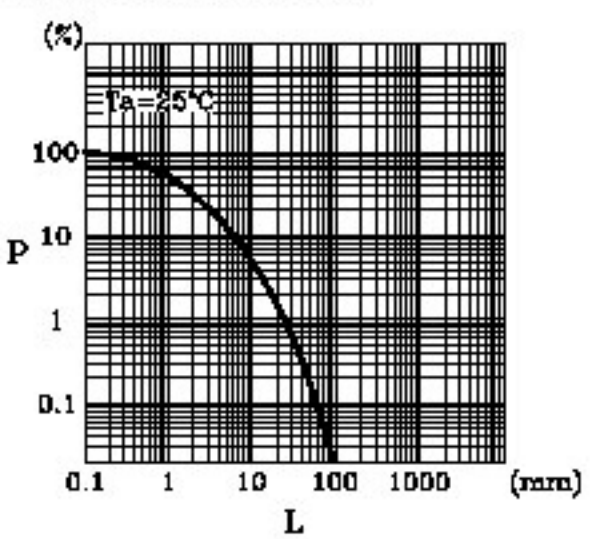
Power Dissipation vs
Ambient Temperature



Relative Output power vs
Ambient Temperature



Relative Power vs
Distance to Detector



Distance to Detector Test Conditions