

Module No.: IE-0505HP

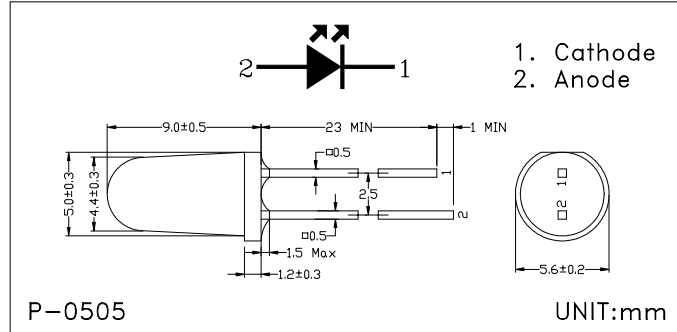
1. General Description:

IE-0505HP 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

(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

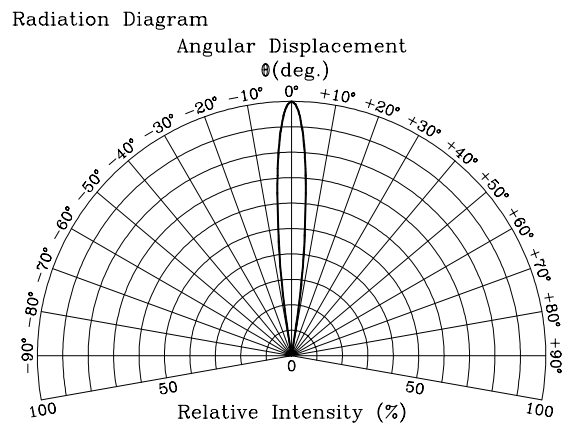
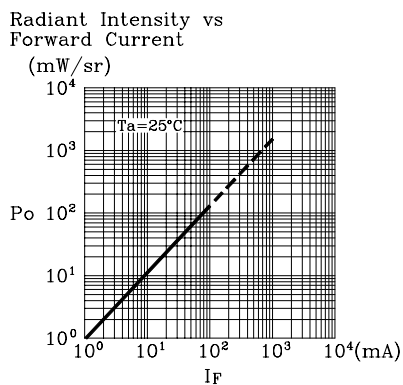
*1 Pulse width ≤ 100μsec. Duty ratio = 0.01

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

4. Electro-optical Characteristics

(Ta=25°C)

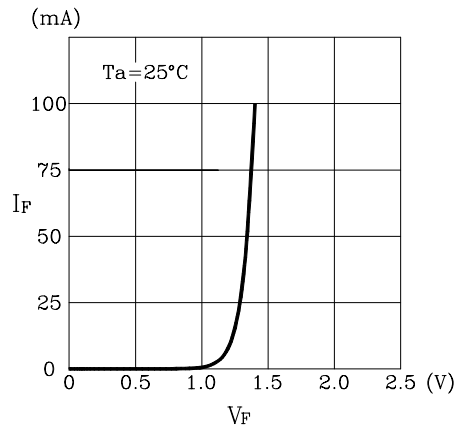
Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V _F	I _F =100mA		1.4	1.7	V
Reverse Current	I _R	V _R =5V			10	μA
Radiant Intensity	P _o	I _F =100mA	50	130		mW/sr
Terminal Capacitance	C _t	f=1MHz		25		pF
Half Power Beam Angle	Δθ			±5		deg.
Peak Emission Wavelength	λ _p	I _F =100mA		940		nm
Spectral Bandwidth at 50%	Δλ	I _F =100mA		45		nm



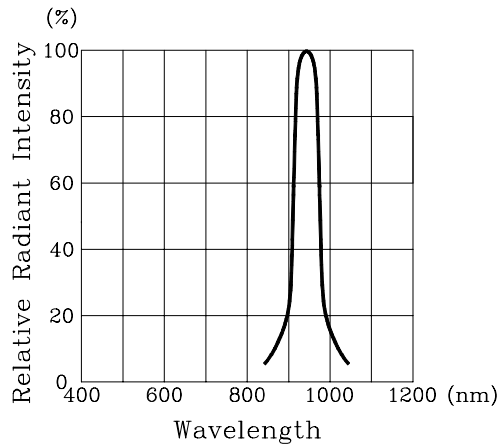
Infrared Emitting Diode

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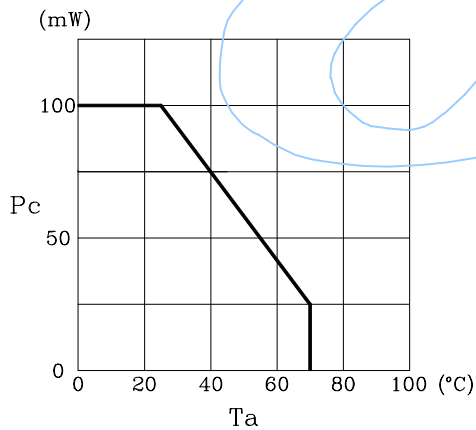
Forward Current vs Forward Voltage



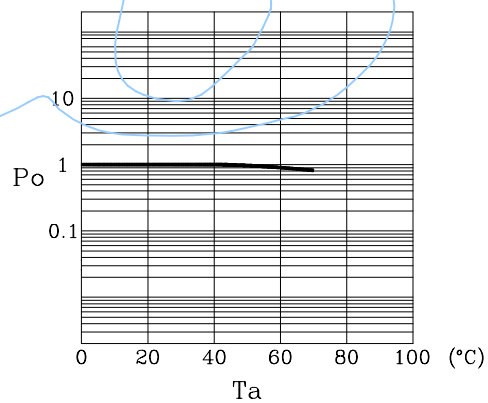
Spectral Distribution



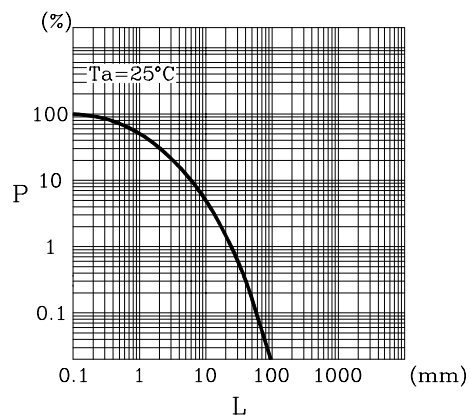
Power Dissipation vs Ambient Temperature



Relative Output power vs Ambient Temperature



Relative Power vs Distance to Detector



Distance to Detector Test Conditions

