

Infrared Emitting Diode

Module No.: IE-470E

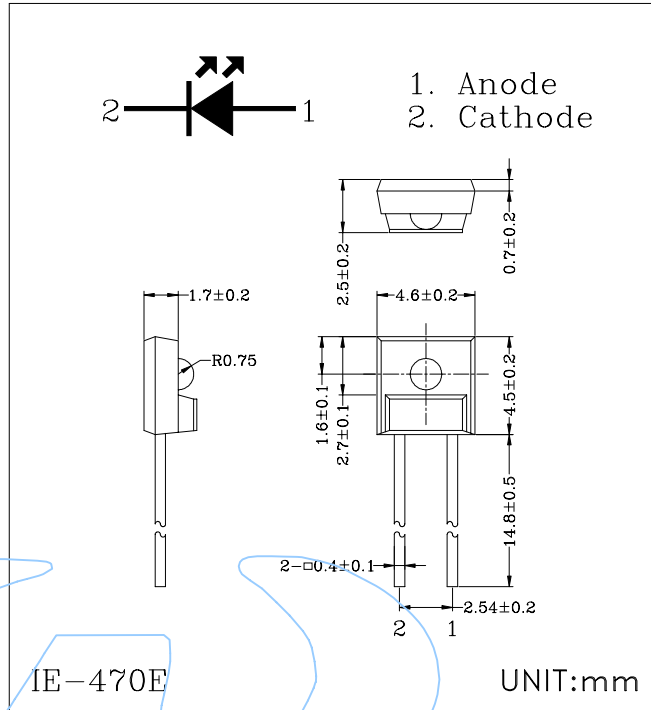
1. General Description:

IE-470E is a high output power GaAlAs infrared light emitting diode, mounted in a clear epoxy side looking package. It is compact, low profile and easy to mount.

2. Features

- Side looking package
- Wide beam angle ($\pm 30^\circ$)
- Capable of pulse operation
- Compact
- Low profile
- Low cost

Dimensions



3. Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	60	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}	-20 ~ +75	°C
Storage Temperature	T _{stg}	-30 ~ +85	°C
Soldering Temperature *2	T _{sol}	240	°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)

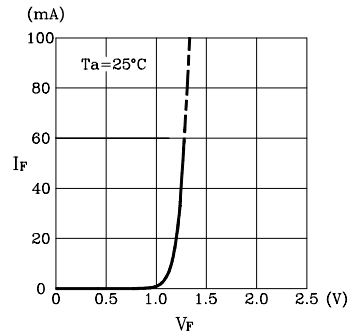
Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V _F	I _F =20mA		1.2	1.6	V
Reverse Current	I _R	V _R =5V			10	μA
Radiant Intensity	P _o	I _F =20mA	2.0	4.0		mW/sr
Terminal Capacitance	C _t	f=1MHz		25		pF
Half Power Beam Angle	Δθ			±30		deg.
Peak Emission Wavelength	λ _p	I _F =20mA		940		nm
Spectral Bandwidth at 50%	Δλ	I _F =20mA		50		nm



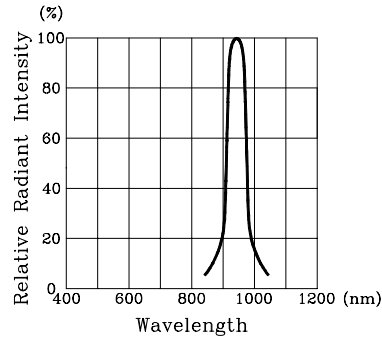
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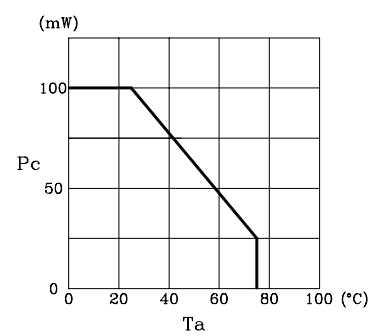
Forward Current vs
Forward Voltage



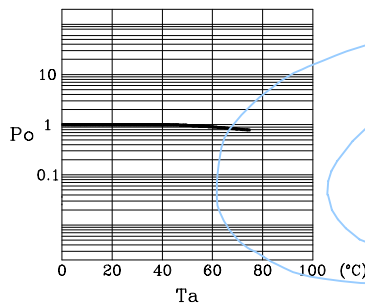
Spectral Distribution



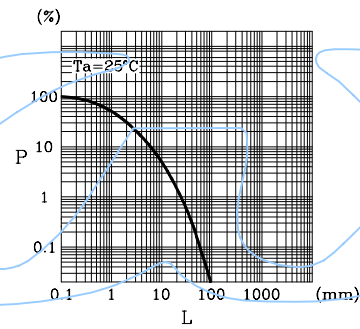
Power Dissipation vs
Ambient Temperature



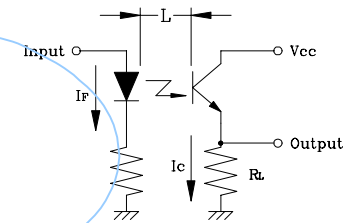
Relative Output power vs
Ambient Temperature



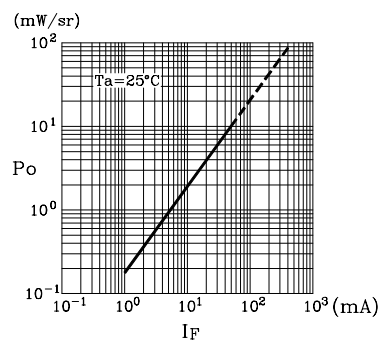
Relative Power vs
Distance to Detector



Distance to Detector Test Conditions



Radiant Intensity vs
Forward Current



Radiation Diagram

