Waitrony

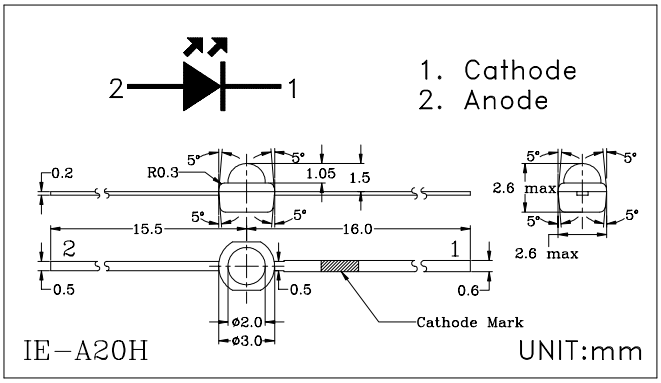
Infrared Emitting Diode

Module No.: IE-A20H

1. General Description:

IE-A20H is a high output power GaAlAs axial type infrared light emitting diode, which use a plate surface lead frame in a clear plastic package.

Dimensions



2. Features

- Axial type (∅2mm)
- Wide beam angle (±25°)
- Capable of pulse operation
- High output power
- High reliability

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	4	V
Power Dissipation	P_D	60	mW
Operating Temperature	Topr	-25 ~ +75	°C
Storage Temperature	Tstg	-40 ~ +85	°C
Soldering Temperature *2	Tsol	260	°C

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

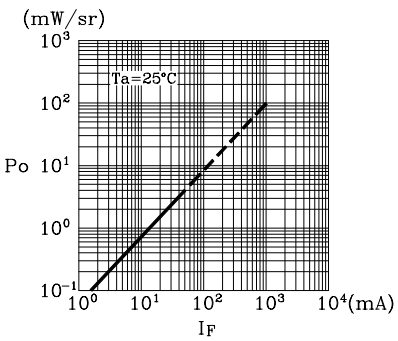
*2 At the position of 2mm from the bottom of the package within 5 seconds.

4. Electro-optical Characteristics

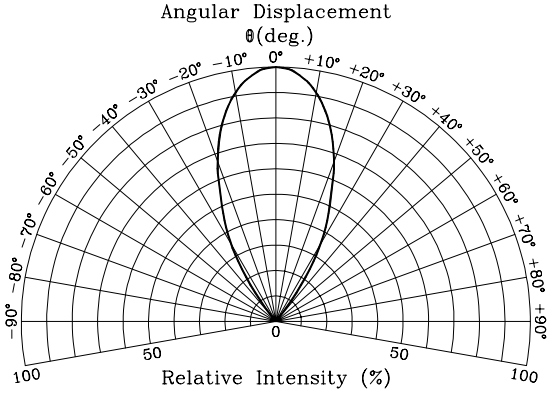
(Ta=25°C)

Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=50mA		1.35	1.7	V
Reverse Current	I_R	V_R=4V			10	μA
Radiant Intensity	Po	I_F=50mA		4		mW/sr
Terminal Capacitance	Ct	f=1MHz		25		pF
Half Power Beam Angle	Δθ			±25		deg.
Peak Emission Wavelength	λp	I_F=50mA		940		nm
Spectral Bandwidth at 50%	Δλ	I_F=50mA		50		nm

Radiant Intensity vs Forward Current



Radiation Diagram



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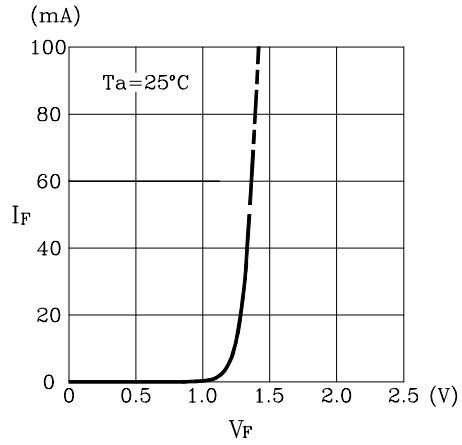
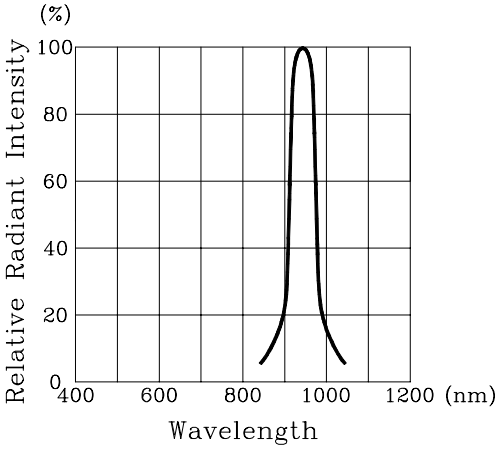
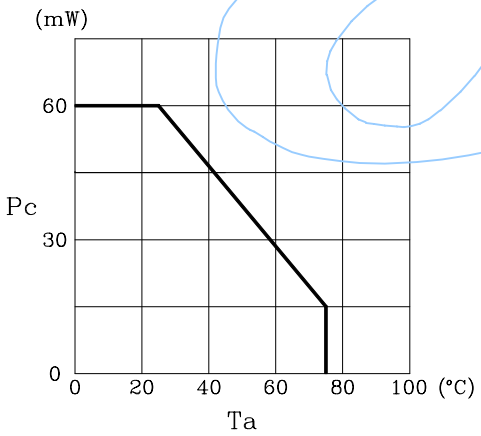
Forward Current vs
Forward Voltage



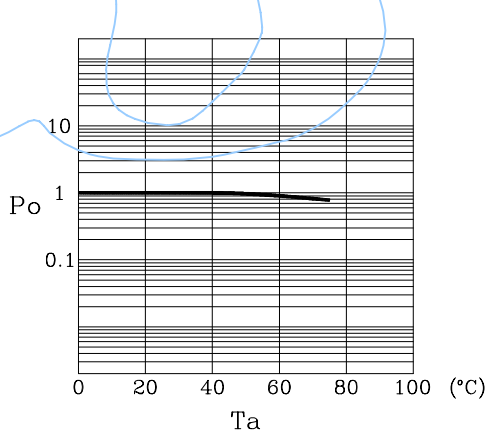
Spectral Distribution



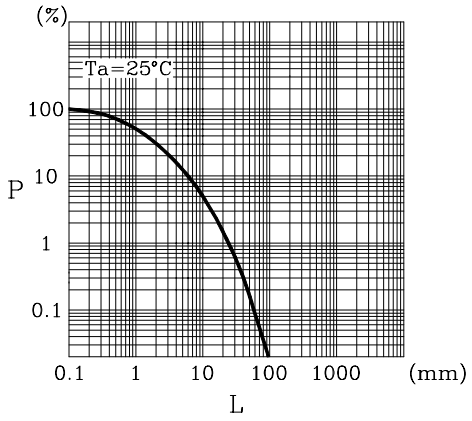
Power Dissipation vs
Ambient Temperature



Relative Output power vs
Ambient Temperature



Relative Power vs
Distance to Detector



Distance to Detector Test Conditions