Infrared Emitting Diode

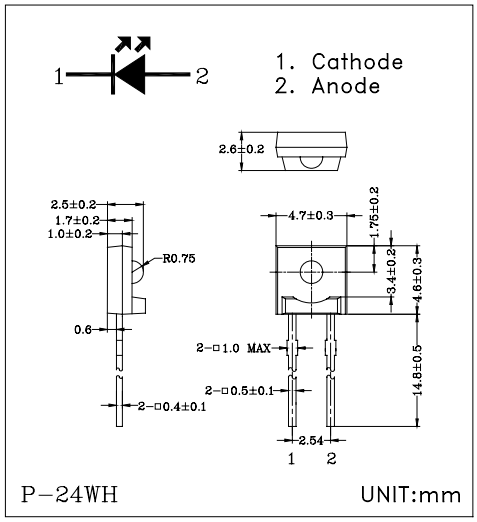
3-06-10-21

Module No.: IE-24WH

1. General Description:

IE-24WH 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.

Dimensions



2. Features

- Medium beam angle (±30°)
- Capable of pulse operation
- High output power
- Low cost

3. Absolute Maximum Ratings (Ta=25°C)

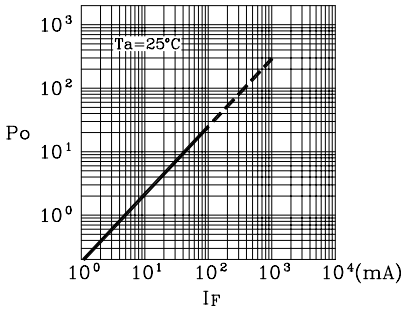
Parameter	Symbol	Ratings	Unit
Forward Current	I_F	100	mA
Pulse Forward current *1	I_{FP}	1	A
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	100	mW
Operating Temperature	T_{opr}	-25 ~ +65	°C
Storage Temperature	T_{stg}	-25 ~ +85	°C
Soldering Temperature *2	T_{sol}	260	°C

*1 Pulse width ≤ 100μsec. Time Cycle=10msec.
*2 At the position of 2mm from the bottom of the package within 5 seconds.

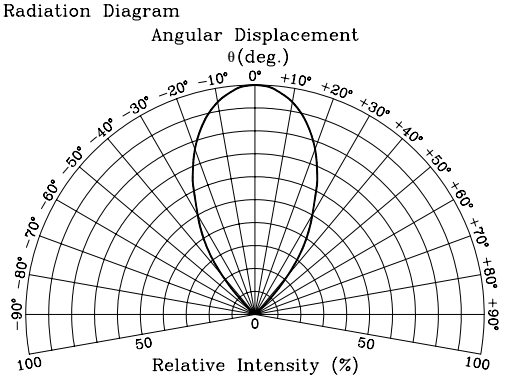
4. Electro-optical Characteristics (Ta=25°C)

Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=20mA		1.25	1.6	V
Reverse Current	I_R	V_R=5V			10	μA
Radiant Intensity	Po	I_F=20mA		4.5		mW/sr
Terminal Capacitance	C_t	f=1MHz		20		pF
Half Power Beam Angle	Δθ			±30		deg.
Peak Emission Wavelength	λp	I_F=20mA		940		nm
Spectral bandwidth at 50%	Δλ	I_F=20mA		50		nm

Radiant Intensity vs Forward Current



Radiation Diagram



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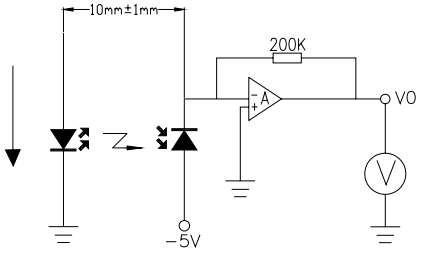
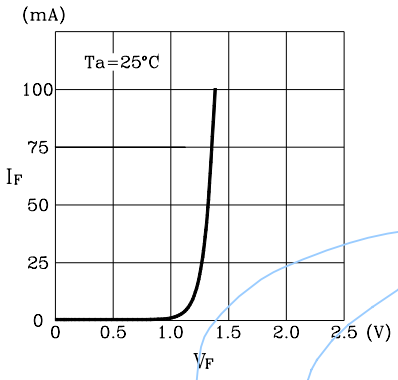
5. Delivery Ranking

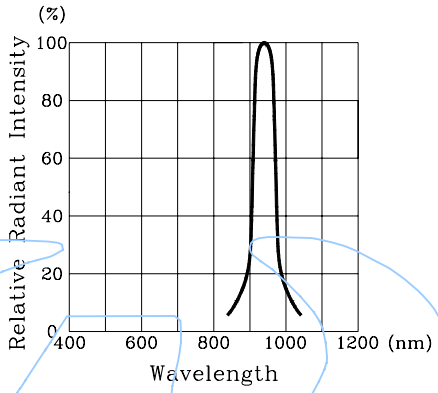
Parameter	Rank	Unit(V)
Radiant Intensity	B	0.35 ~ 0.75
	C	0.60 ~ 1.15
	D	0.95 ~ 1.70
	E	1.50 ~ 2.40
	F	2.20 ~ 3.30



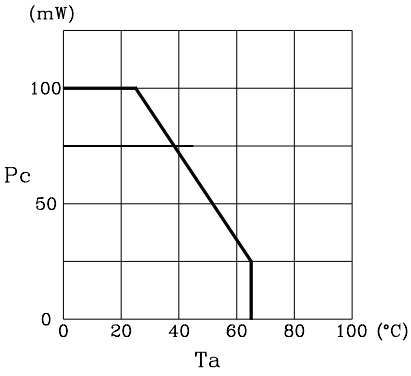
Forward Current vs
Forward Voltage



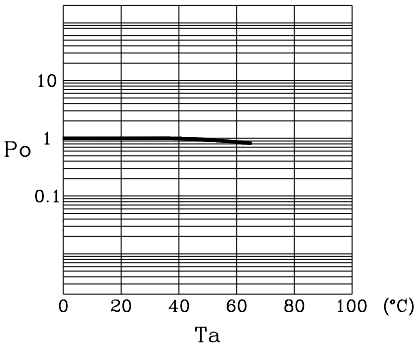
Spectral Distribution



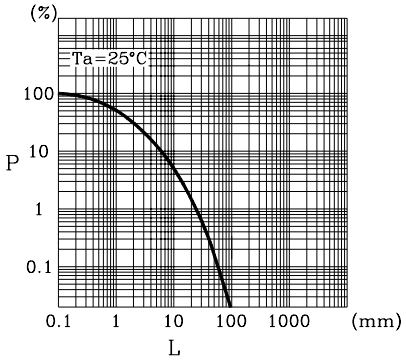
Power Dissipation vs
Ambient Temperature



Relative Output power vs
Ambient Temperature



Relative Power vs
Distance to Detector



Distance to Detector Test Conditions