Waitrony

Infrared Emitting Diode

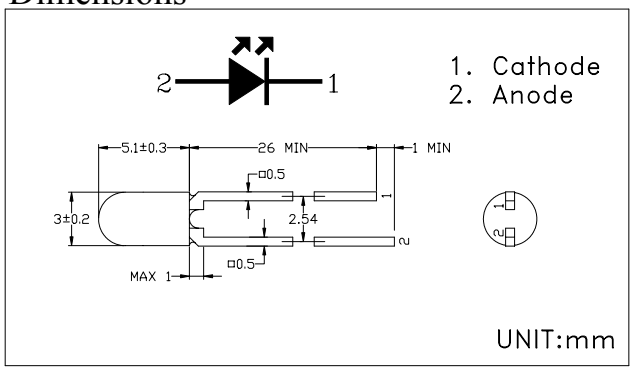
0-04-06-17

Module No.: IE-0330XW

1. General Description:

The IE-0330XW is a high output power GaAlAs infrared light emitting diode mounted in a clear epoxy end looking package. It allows a broad range of intensity selection. The lens effect of the package allows a radiation half-power angle of 30°.

Dimensions



2. Features

- Compact (∅3mm)
- Wide 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 = 0.12ms. Duty ratio = 0.01

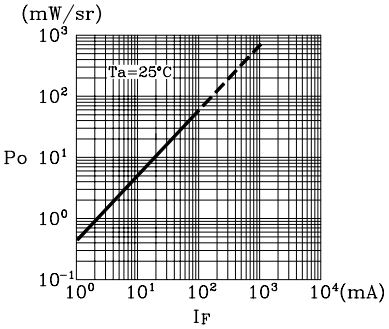
*2 At the position of 2mm from the bottom of the package within 5 seconds.

4. Electro-optical Characteristics

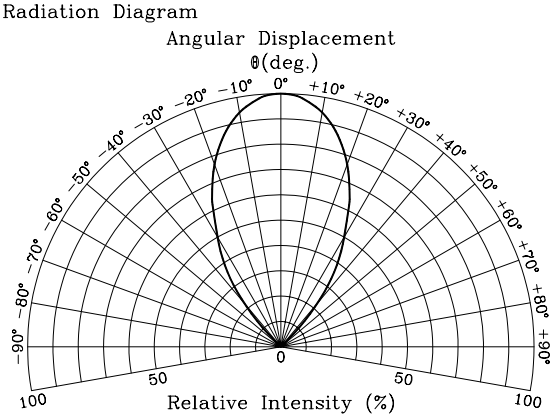
(Ta=25°C)

Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=100mA		1.35	1.7	V
Reverse Current	I_R	V_R=5V			10	μA
Radiant Intensity	Po	I_F=100mA	25	57		mW/sr
Terminal Capacitance	C_t	f=1MHz		40		pF
Half Power Beam Angle	Δθ			±30		deg.
Peak Emission Wavelength	λp	I_F=100mA		940		nm
Spectral Bandwidth at 50%	Δλ	I_F=100mA		50		nm

Radiant Intensity vs Forward Current



Radiation Diagram



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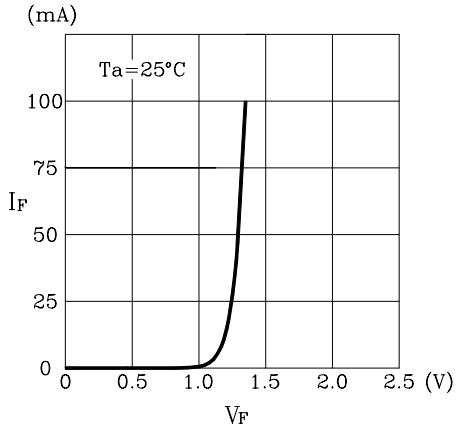
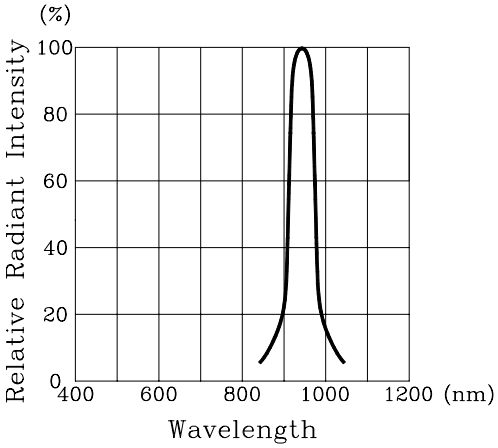
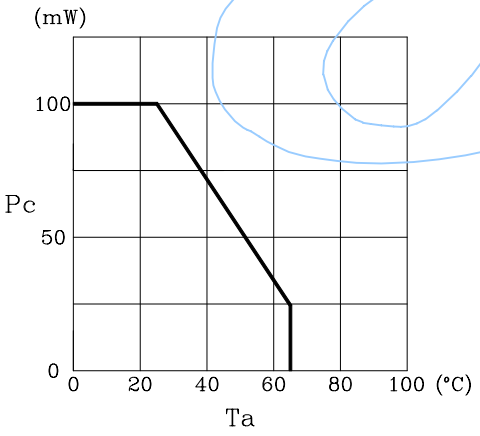
Forward Current vs
Forward Voltage



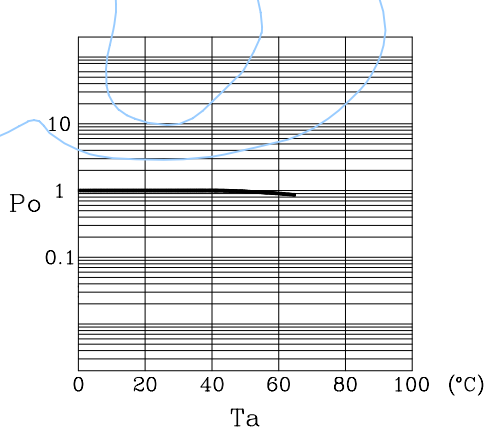
Spectral Distribution



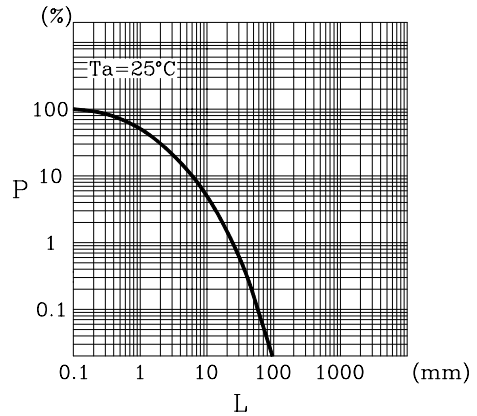
Power Dissipation vs
Ambient Temperature



Relative Output power vs
Ambient Temperature



Relative Power vs
Distance to Detector



Distance to Detector Test Conditions