

INFRARED EMITTING DIODE

General Description

The OSE-1ML2 is a high power GaAs IRED mounted in TO-18 type header with clear epoxy encapsulation.



Features

- Low profile package
- Low cost
- High output power
- Meet RoHS

Applications

- Optical emitters
- Optical readers
- Encoders

MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Reverse voltage	VR	5	V
Forward direct current	IF	100	mA
Power dissipation	PD	170	mW
Pulse forward current *1	IFP	1	A
Operating temp.	Topr.	-25 ~ +100	°C
Storage temp.	Tstg.	-25 ~ +100	°C

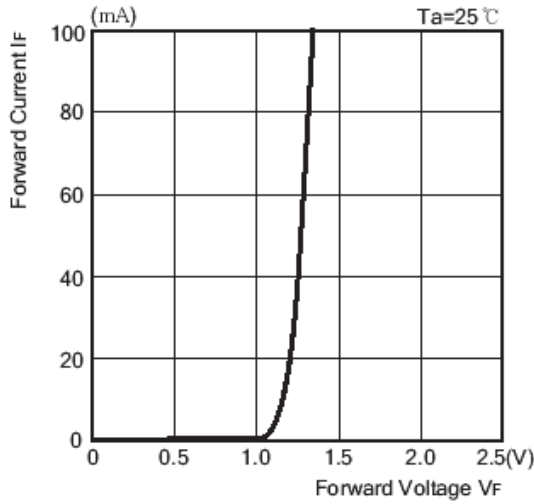
*1 tw=100us , T=10ms

ELECTRO-OPTICAL CHARACTERISTICS

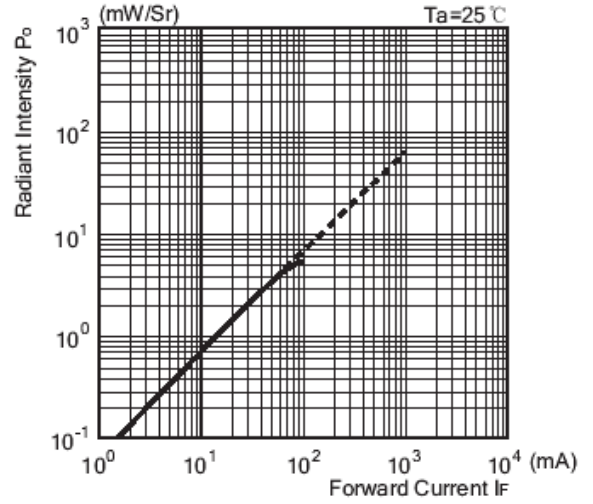
(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Radiant intensity	PO	IF=50mA	-	2.7	-	mW/sr
Forward voltage	VF	IF=50mA	-	1.2	1.5	V
Reverse current	IR	VR=5V	-	-	10	uA
Capacitance	Ct	f=1MHz	-	25	-	pF
Peak wavelength	λ_p	IF=50mA	-	940	-	nm
Spectral band width @ 50%	$\Delta \lambda$	IF=50mA	-	50	-	nm
Half angle	$\Delta \theta$	IF=50mA	-	± 32	-	deg.

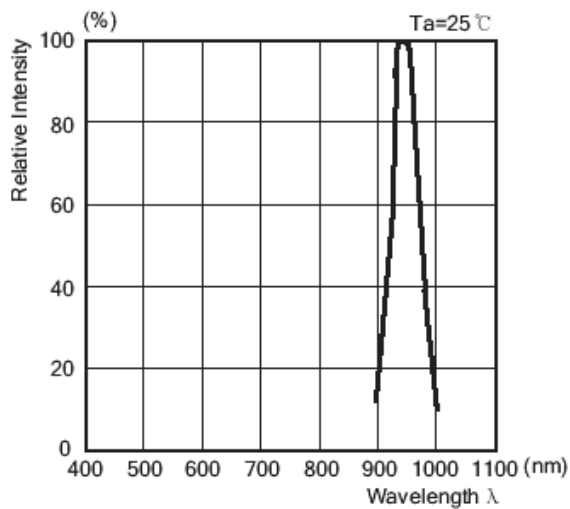
● Forward Current / Forward Voltage I_f/V_f



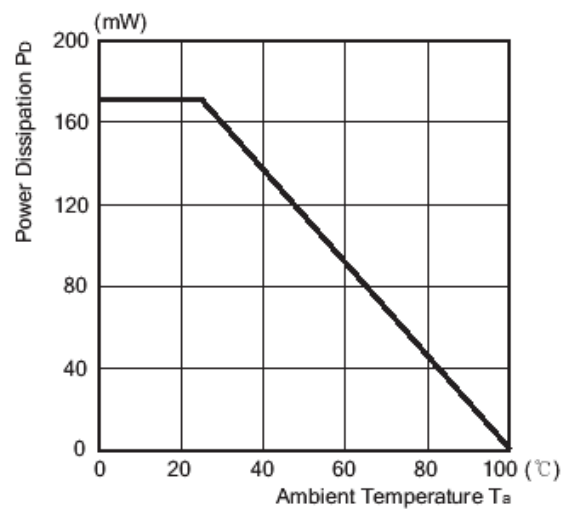
● Radiant Intensity / Forward Current P_o/I_f



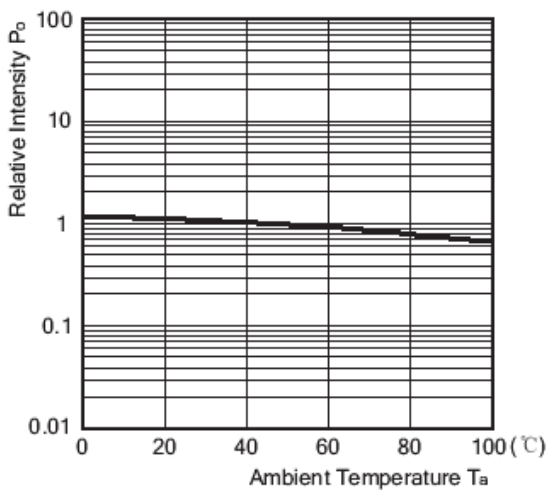
● Spectral Intensity



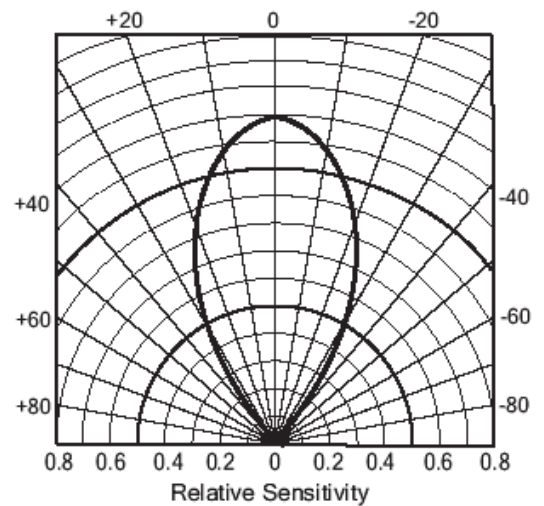
● Power Dissipation / Ambient Temperature P_D/T_a



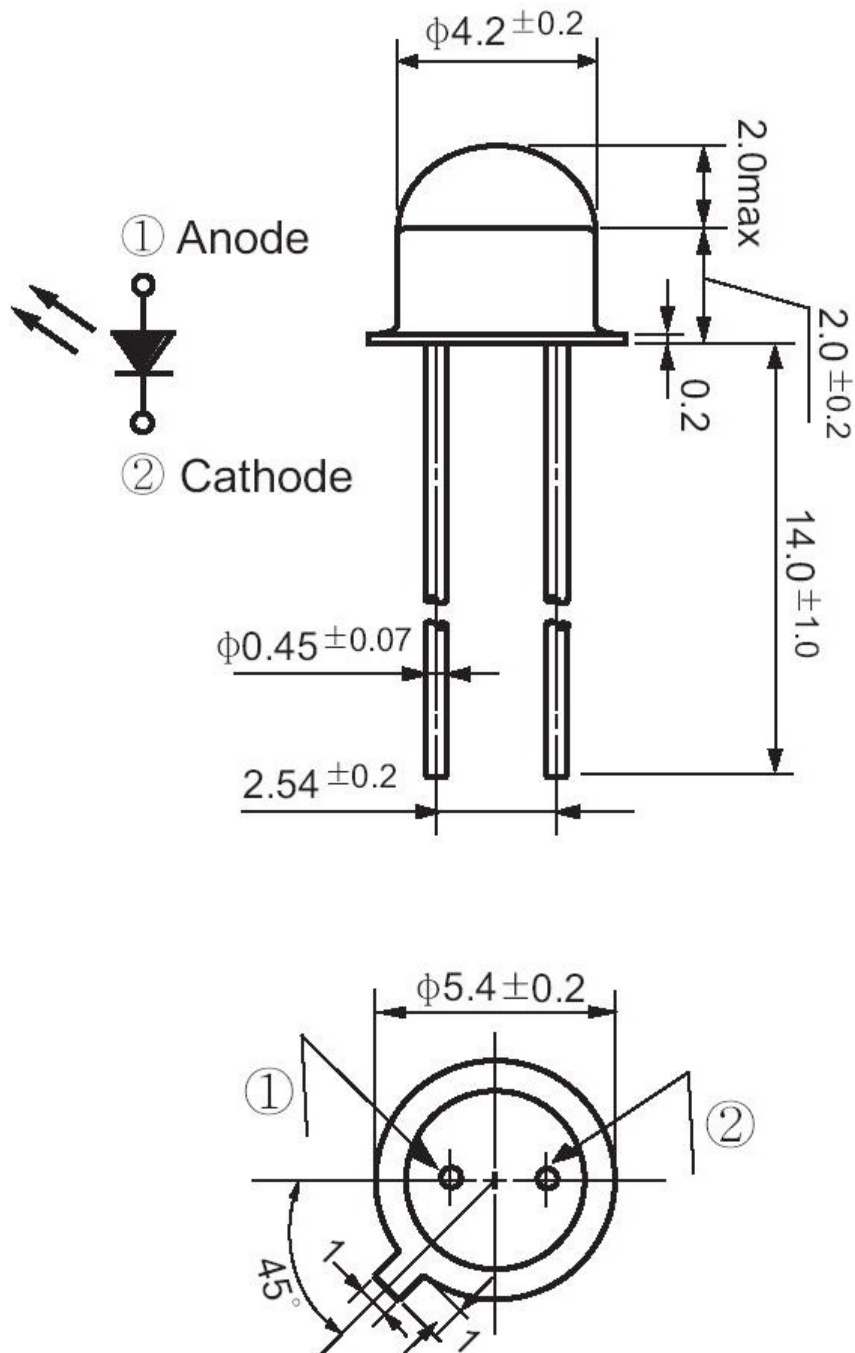
● Relative Intensity / Ambient Temperature P_o/T_a



● Directive Characteristics



DIMENSIONS



NOTES :

1. All dimensions are in millimeters.
2. Tolerance is ± 0.25 mm unless otherwise specified.
3. Specifications are subject to change without notice.

Recommended soldering conditions (Lead frame type)

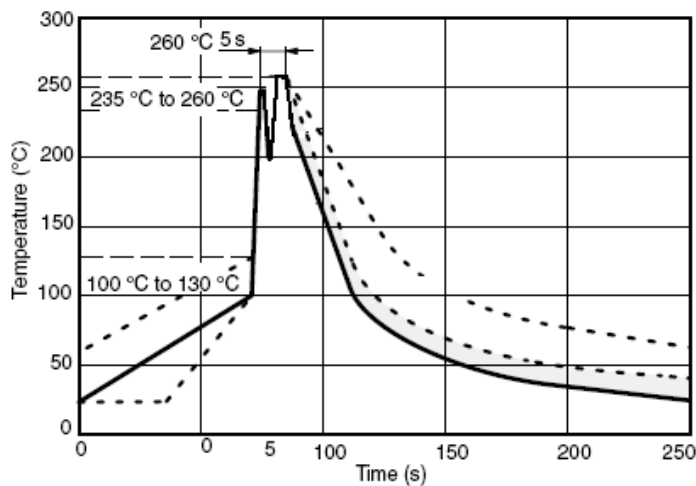
- Not to apply high temperature exceeding the maximum storage temperature to the epoxy resin.
- Not to apply any force to the epoxy resin at high temperature.
- Soldering process.
 - 1) The distance between holes should be the same as that of between terminal leads of the component to avoid any stress during the soldering process.
Also, lead forming should be done before soldering process not to apply stress to the inside of the epoxy resin.
 - 2) Not apply any stress to the component during the soldering process.

Wave soldering

- 1) Following soldering Bar & Wire recommended.

Melting temperature : 245 ~ 260°C

Composition : Pb-Free



Manual Soldering

- 1) Use the Pb-Free solder or the solder containing silver.
- 2) Soldering iron below 320°C within 3 seconds.