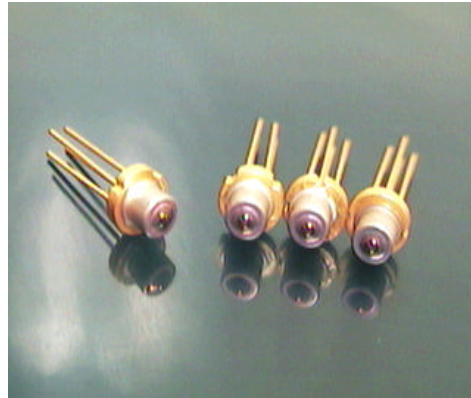


1310 nm LASER DIODE

Features

- ~ 1310 nm typical emission wavelength
- ~ High temperature operation no TEC required
- ~ 5 mW CW operation at wide temp. range (-40~+80°C)
- ~ Low threshold current ,low operating current
- ~ PIN photodiode for monitoring laser output
- ~ High reliability, long operation life and advanced packaging technology
 - Multiple Quantum Well active layer
 - Hermetically sealed active component
 - 5.6 mm packaging with a ball lens cap



Applications

- ~ Optical communication system
 - Optical data links
 - Optical LANs
 - Subscriber loops

Handling and Safety Precautions

Anti-static protection, such as ionized air blowers or grounded wrist straps with a 1 mega series resistor, should be used at all times when handling laser diodes. In addition, soldering irons should be well grounded.

Overheating caused by soldering of the leads of a laser diode must be prevented. Recommend soldering iron temperature and maximum exposure times are below 260°C and 10 seconds.

Description

The MCE-3E5B-012 is a low cost and high performance 1310 nm EEL (Edge Emitting Laser) and built-in InGaAs/InP PIN photodiode for optical output monitoring. This product is designed for short and medium distance optical fiber communication.

The MCE-3E5B-012 is compatible with industry standard wave or hand solder processes and eye safety .

Unity Opto Technology Co., Ltd.

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For prototype and Production call

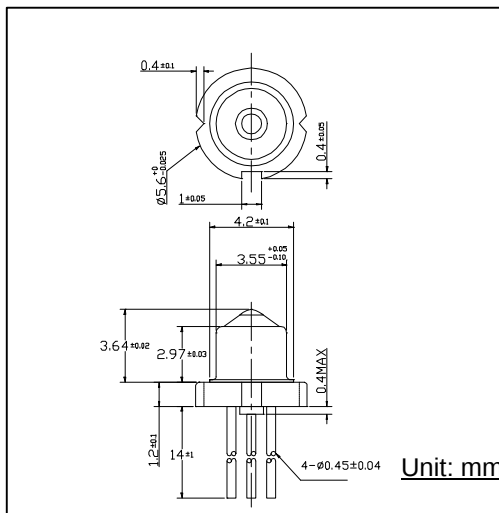
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• **Absolute Maximum Ratings (Tc = 25 °C)**

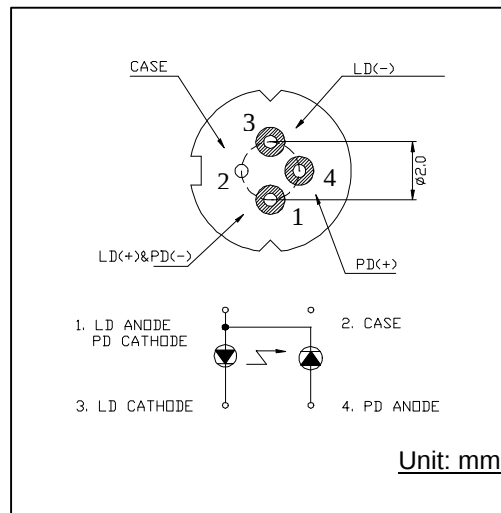
Parameter	Symbol	Rated Value	Unit
Optical output power (CW)	Po	10	mW
LD reverse voltage	Vr _L	2	V
PD reverse voltage	Vr _P	10	V
PD Forward current	If _P	1	mA
Operating case temperature	Top	- 40 to +85	°C
Storage temperature	T _{STG}	- 40 to +85	°C

• **Optical & Electrical Characteristics (Tc = 25 °C)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Optical output power	Po	Kink free, CW	5	¾	¾	mW
Threshold current	I _{th}	Po=5mW, CW	¾	10	20	mA
Operating voltage	Vop	Po=5mW, CW	¾	1.2	1.7	V
Lasing Wavelength	λ _p	Po=5mW, CW	1290	1310	1330	nm
Spectral Width (RMS)	Δλ	Po=5mW, CW	¾	2	5	nm
Beam divergence	q^	Po=5mW, CW, FWHM	¾	15	¾	deg.
	q//	Po=5mW, CW, FWHM	¾	8	¾	deg.
Rise /Fall time	tr/tf	Po=5mW, CW, I _{bias} =I _{th} , 20~80 %	¾	¾	0.5/0.5	ns
Slope efficiency	h	Po=5mW, CW	0.2	0.3	¾	mW/mA
PD Monitor current	I _m	Po=5mW, CW	100	¾	¾	μA
PD Dark Current	ID	Vr _P =5V	¾	¾	0.1	μA
PD Capacitance	Ct	Vr _P =5V, f=1 MHz	¾	3	15	pF



Package Dimensions



Pin Connections (Bottom View)

NOTE: Specifications are subjected to change without notice.

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