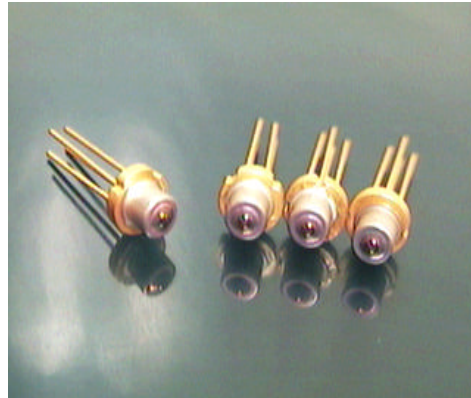


1310 nm LASER DIODE

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.
 10 F, No. 88-8, Sec. 1, Kuang-Fu Rd.,
 Sanchung City, 241 Taipei, Taiwan

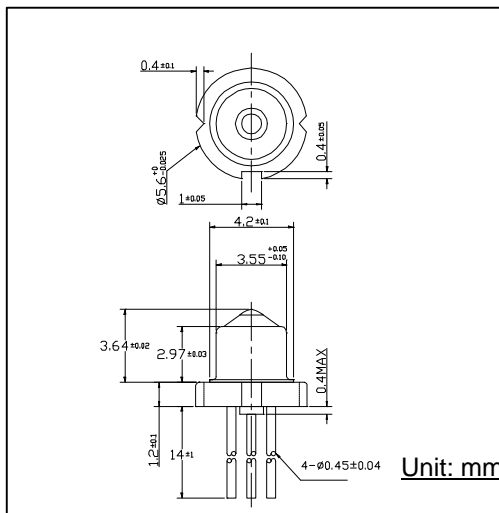
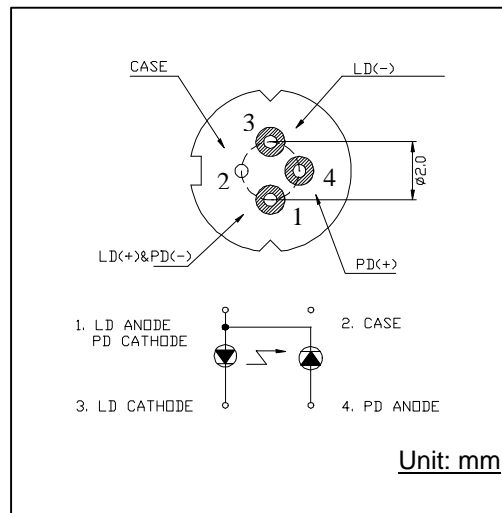
For prototype and Production call
 TEL: 886 - 2 -2999 - 3988
 FAX: 886 - 2 -2999 - 3910
 REV. A 09/04/2003

Absolute Maximum Ratings (Tc = 25 °C)

Parameter	Symbol	Rated Value	Unit
Optical output power (CW)	P _o	10	mW
LD reverse voltage	V _{rL}	2	V
PD reverse voltage	V _{rP}	10	V
PD Forward current	I _{fP}	1	mA
Operating case temperature	T _{op}	- 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	P _o	Kink free, CW	5	3/4	3/4	mW
Threshold current	I _{th}	P _o =5mW, CW	3/4	10	20	mA
Operating voltage	V _{op}	P _o =5mW, CW	3/4	1.2	1.7	V
Lasing Wavelength	λ _p	P _o =5mW, CW	1290	1310	1330	nm
Spectral Width (RMS)	Δλ	P _o =5mW, CW	3/4	2	5	nm
Beam divergence	q [^]	P _o =5mW, CW, FWHM	3/4	15	3/4	deg.
	q//	P _o =5mW, CW, FWHM	3/4	8	3/4	deg.
Rise /Fall time	tr/tf	P _o =5mW, CW, I _{bias} =I _{th} , 20~80 %	3/4	3/4	0.5/0.5	ns
Slope efficiency	h	P _o =5mW, CW	0.2	0.3	3/4	mW/mA
PD Monitor current	I _m	P _o =5mW, CW	100	3/4	3/4	μA
PD Dark Current	I _D	V _{rP} =5V	3/4	3/4	0.1	μA
PD Capacitance	C _t	V _{rP} =5V, f=1 MHz	3/4	3	15	pF


Package Dimensions

Pin Connections (Bottom View)

NOTE: Specifications are subjected to change without notice.

Unity Opto Technology Co., Ltd.
 10 F, No. 88-8, Sec. 1, Kuang-Fu Rd.,
 Sanchung City, 241 Taipei, Taiwan

For prototype and Production call
 TEL: 886 - 2 -2999 - 3988
 FAX: 886 - 2 -2999 - 3910
 REV. A 09/04/2003