

Optoelectronics Components Data Sheet

■ DE-0782

1550nm, 20mW FP Laser Diode Coaxial Module for OTDR

Description

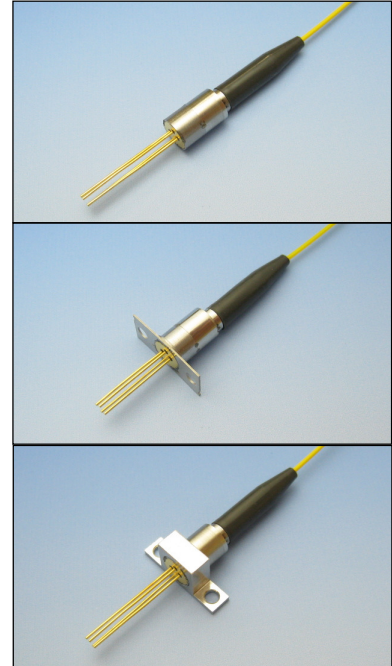
DE-0782 is 1550nm pulse drive laser diode (LD) modules of coaxial pigtail type. This module consists of a multi quantum well Fabry Perot (MQW FP) LD, a monitor photo diode (PD), a single-mode fiber and a coaxial package. This module is suitable for OTDR applications.

Features

- ◆ Fiber output power : 20mW Min. (Pulse drive)
- ◆ MQW FP structure
- ◆ Includes monitor PD
- ◆ Hermetically sealed LD device
- ◆ YAG laser spot welding for high reliability
- ◆ Coaxial package

Applications

- OTDR systems
- Optical measuring instruments



Absolute Maximum Ratings

(Tc=25°C, unless otherwise specified)

Parameter	Symbol	Ratings	Unit	Conditions
Peak fiber output power	Pf	30	mW	(*1)
LD reverse voltage	V _{RL}	2.5	V	(*1)
LD forward current	If	250	mA	(*1)
Monitor PD Reverse voltage	V _{RP}	20	V	---
Monitor PD Forward current	I _{FP}	2	mA	---
Storage temperature	T _{stg}	-40 ~ +85	°C	---
Operating temperature	T _c	-20 ~ +70	°C	---
Soldering temperature	T _s	260	°C	10sec, >2mm

Note : (*1) LD driving conditions ; 10μsec pulse width and 1% duty

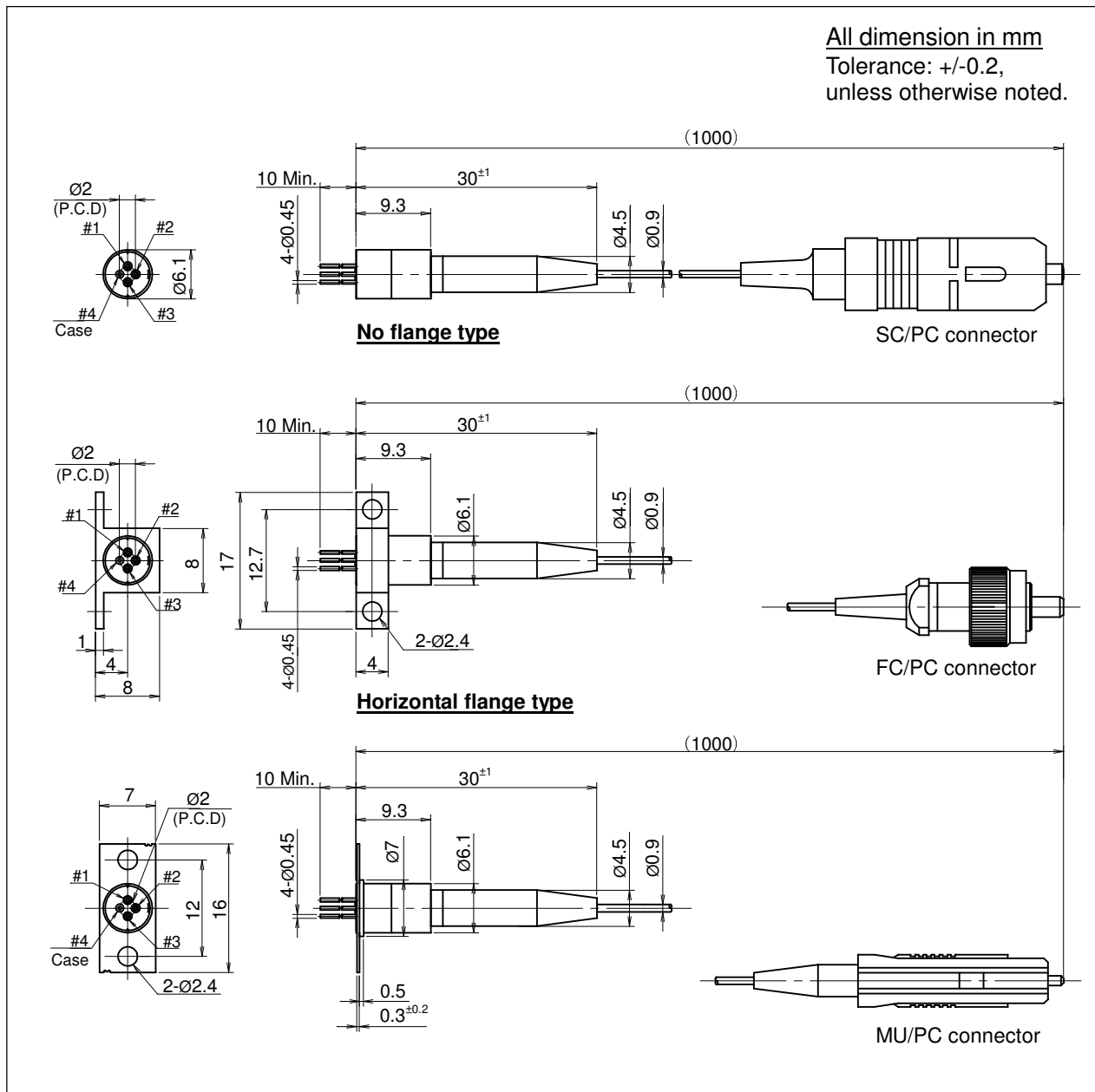
Electrical and Optical Characteristics

(Tc=25°C, unless otherwise specified)

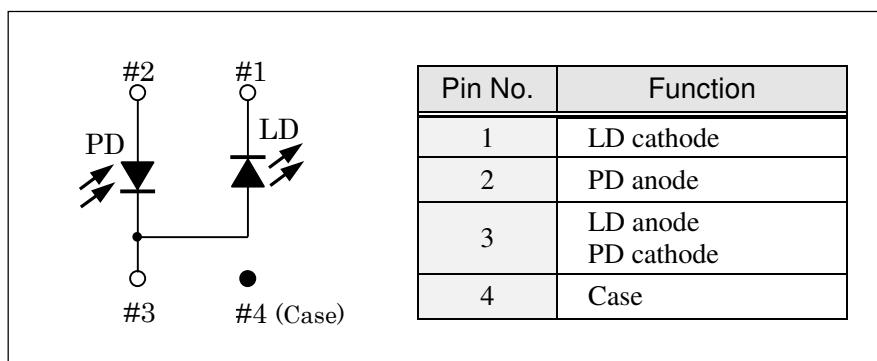
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Fiber output power	Pf	I _{op} =200mA (peak), (*2)	20	---	---	mW
Threshold current	I _{th}	(*2)	---	---	20	mA
Operation current	I _{op}	Pf=20mW, (*2)	---	170	200	mA
Operation voltage	V _{op}	Pf=20mW, (*2)	---	---	2.5	V
Center wavelength	λ _c	Pf=20mW, RMS, (*2)	1535	1550	1565	nm
Spectrum width	Δλ	Pf=20mW, RMS2σ, -20dB, (*2)	---	---	12	nm
Rise & Fall time	t _r , t _f	10-90%, I _b =I _{th} , Pf=20mW, (*2)	---	---	1	ns
Monitor PD output current	I _m	V _{RP} =10V, Pf=2mW, CW	100	---	900	μA
Tracking Error	TE	CW, I _m (@Tc=25°C) =constant	-1	---	1	dB

Note : (*2) LD driving conditions ; 10μsec pulse width and 1% duty

Outline Drawings



Pin configuration

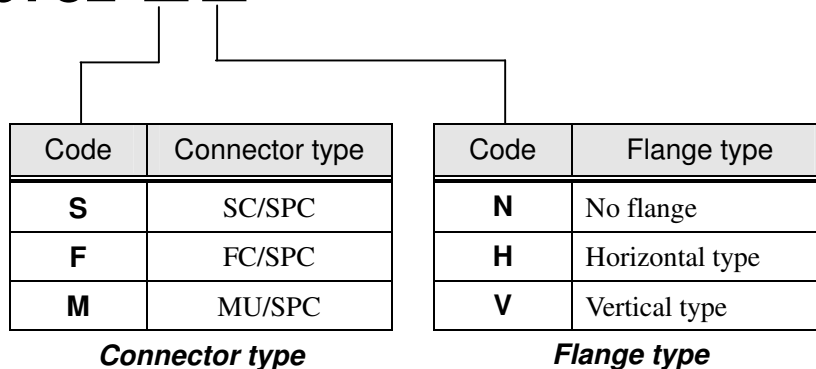


Optical Fiber Characteristics

Parameter	Min.	Typ.	Max.	Unit
Fiber type	Single mode			---
Mode field diameter	8	9	10	μm
Clad diameter	123	125	127	μm
Concentricity error	---	---	1	μm
Cladding non-circularity	---	---	2	%
Mode field non-circularity	---	---	6	%
Cut off wavelength	1270	---	---	nm
Jacket diameter	0.8	0.9	1	mm
Bending Radius	20	---	---	mm
Tensile strength fiber case	5	---	---	N
Length	---	(1000)	---	mm
Connector	FC type / SPC			
	SC type / SPC			
	MU type / SPC			

Ordering information

DE-0782-□□



OPTOHUB Co., Ltd.

305 Live Tower Musashi Urawa
 7-6-8 Bessho, Minami-ku, Saitama-shi
 Saitama, 336-0021 JAPAN

URL : <http://www.optohub.com>
 E-mail : info@optohub.com
 TEL : +81-48-844-8899
 FAX : +81-48-844-8902