

Optoelectronics Components Data Sheet

■ DE-0747

Preliminary

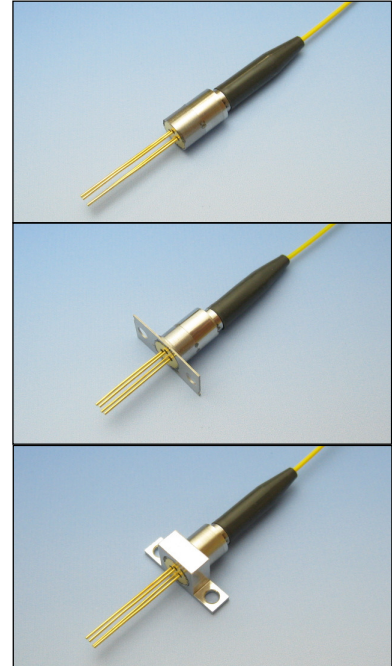
1650nm, 7.5mW DFB Laser Diode Coaxial Module

Description

DE-0747 is 1650nm laser diode (LD) modules of coaxial pigtail type. These modules consist of a multi quantum well distributed feed-back (MQW-DFB) LD, a monitor photo diode (PD), a single-stage optical isolator, a single-mode fiber and a coaxial package.

Features

- ◆ Fiber output power : 6mW Min., 7.5mW Typ.
- ◆ Side mode suppression: 32dB Min.
- ◆ MQW DFB-LD structure
- ◆ Built-in single-stage optical isolator
- ◆ Hermetically sealed LD device
- ◆ YAG laser spot welding for high reliability
- ◆ Coaxial package



Applications

- Optical measuring instruments

Absolute Maximum Ratings

(Tc=25°C, unless otherwise specified)

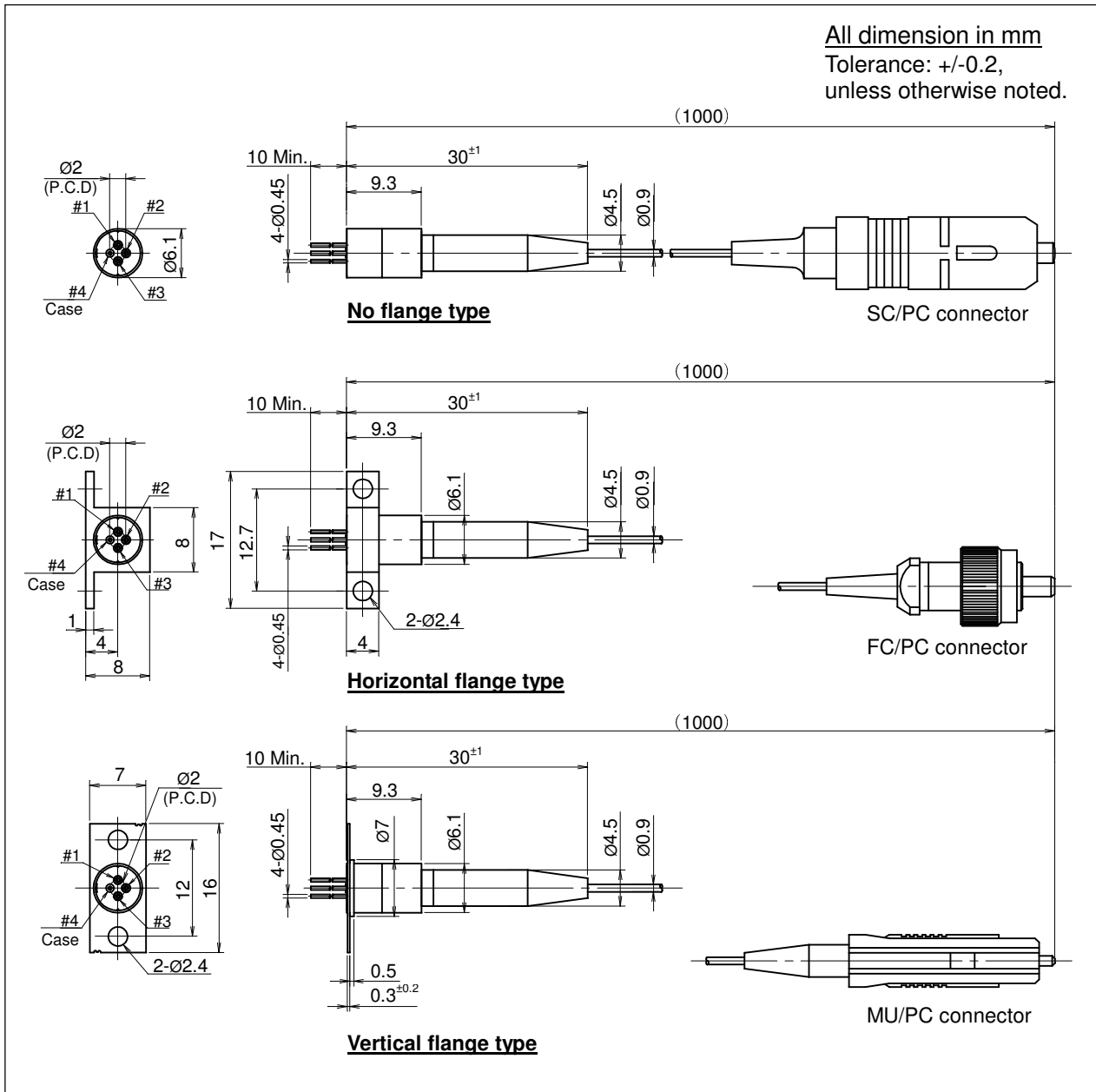
Parameter	Symbol	Ratings	Unit	Conditions
Fiber output power	Pf	10	mW	CW
LD reverse voltage	V _{RL}	2	V	---
LD forward current	If	150	mA	---
Monitor PD Reverse voltage	V _{RP}	15	V	---
Monitor PD Forward current	I _{FP}	2	mA	---
Storage temperature	T _{stg}	-40 ~ +85	°C	---
Operating temperature	T _c	0 ~ +60	°C	---
Soldering temperature	T _s	260	°C	10sec, >2mm

Electrical and Optical Characteristics

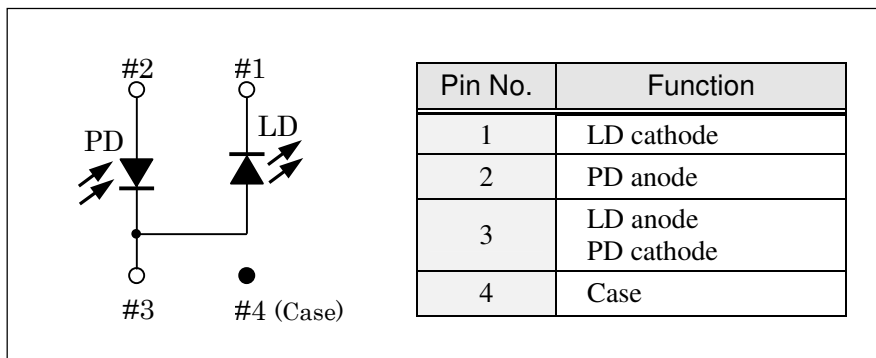
(Tc=025°C, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Fiber output power	Pf	CW	6	7.5	---	mW
Threshold current	I _{th}	CW	---	---	15	mA
Operation current	I _{op}	CW, Pf=6mW	---	---	100	mA
Operation voltage	V _{op}	CW, Pf=6mW	---	---	1.6	V
Peak wavelength	λ _p	CW, Pf=6mW	1647	1650	1653	nm
Spectrum width	Δλ	CW, Pf=6mW, -20dB	---	---	1	nm
Side mode suppression ratio	SMSR	CW, Pf=6mW	30	---	---	dB
Monitor PD output current	I _m	V _{RP} =5V, Pf=6mW	50	---	2000	μA
Monitor PD dark current	I _d	V _{RP} =5V	---	---	50	nA
Tracking Error	TE	CW, I _m (@Tc=25°C) =constant	-1	---	1	dB

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-0747-□□

Code	Connector type	Code	Flange type
S	SC/SPC	N	No flange
F	FC/SPC	H	Horizontal type
M	MU/SPC	V	Vertical type

Connector type **Flange type**

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All specifications described herein are subject to change without notice.

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