

## Optoelectronics Components Data Sheet

### ■ DE-0522

1490nm, 100mW FP Laser Diode Coaxial Module for OTDR

#### Description

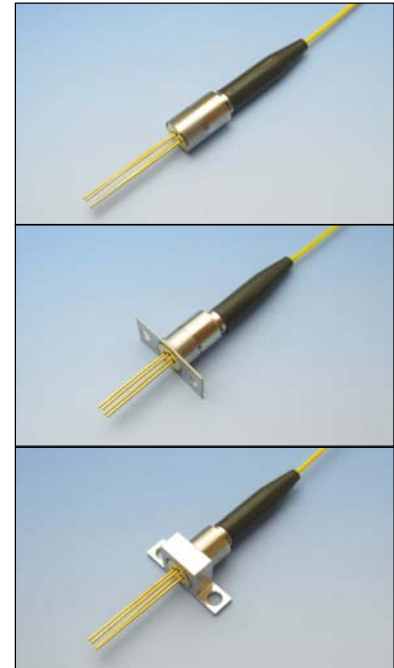
DE-0522 is 1490nm high-power pulse drive laser diode (LD) modules of coaxial pigtail type. This module consists of a multi quantum well Fabry Perot (MQW FP) LD, a monitor photo diode (PD), a single-mode fiber and a coaxial package. This module is suitable for OTDR applications.

#### Features

- ◆ Fiber output power : 100mW Min. (Pulse drive)
- ◆ MQW FP LD structure
- ◆ 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	120	mW	(*1)
LD reverse voltage	V <sub>RL</sub>	2	V	(*1)
LD forward current	If	1000	mA	(*1)
Storage temperature	T <sub>stg</sub>	-40 ~ +85	°C	---
Operating temperature	T <sub>c</sub>	-20 ~ +60	°C	---
Soldering temperature	T <sub>s</sub>	260	°C	10sec, >2mm

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

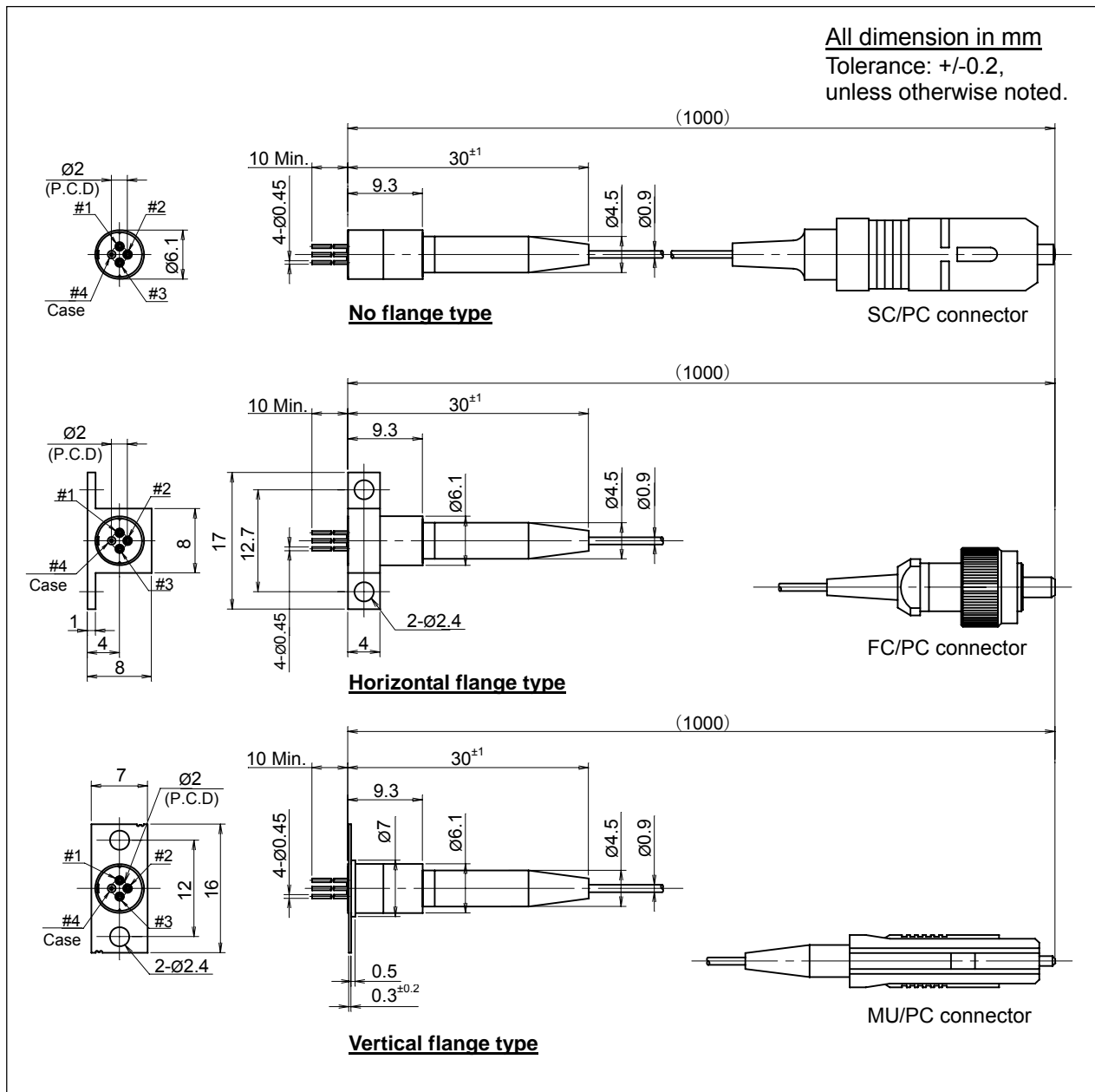
### **Electrical and Optical Characteristics**

(Tc=25°C, unless otherwise specified)

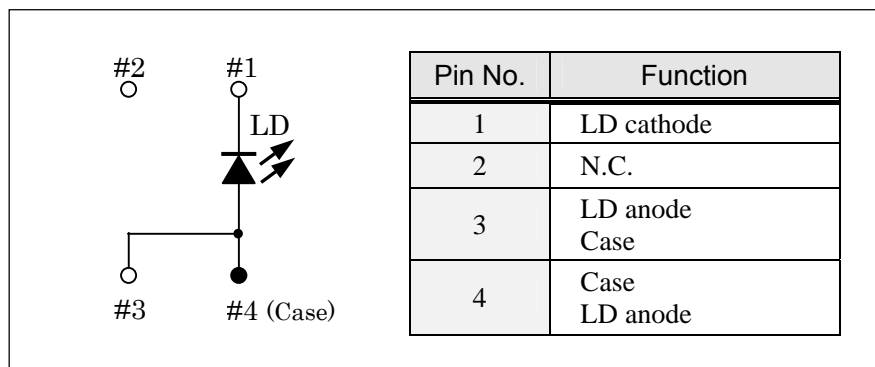
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Fiber output power	Pf	I <sub>op</sub> =800mA (peak), (*2)	100	---	---	mW
Threshold current	I <sub>th</sub>	(*2)	---	25	60	mA
Operation current	I <sub>op</sub>	Pf=100mW, (*2)	---	700	800	mA
Operation voltage	V <sub>op</sub>	Pf=100mW, (*2)	---	---	3	V
Center wavelength	λ <sub>c</sub>	Pf=100mW, RMS, (*2)	1475	1490	1505	nm
Spectrum width	Δλ	Pf=100mW, RMS σ, -20dB, (*2)	---	5	10	nm

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

## Outline Drawings



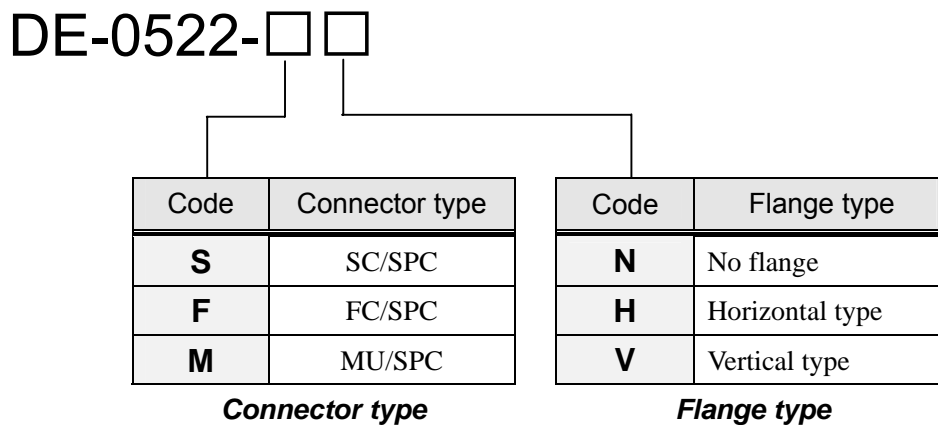
## Pin configuration



### 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



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