

## 1650nm DFB SM coaxial laser diode Version: 3.1.1 17-12-12

**Model: LSDLD165**

**Features:**

- MQW-DFB
- Direct modulation rate up to 4Gbps
- High side-mode-suppression ratio (typical>35dB)
- High reliable, Built-in monitor PD
- Low threshold/operate current
- Hermetic package TO56 Can with receptacle or with fiber coupling



**Applications:**

- Optical communication
- Optical Sensing
- Test and Measurement Equipment

**Absolute maximum ratings:**

parameter	symbol	value	unit
Operating temperature	Top	-20~+85	°C
Storage temperature	Tstg	-40~+100	°C
Laser diode Reverse voltage	V <sub>r</sub>	2	V
Soldering temperature/time		260/10	°C/S

**Electrical and optical characteristics:(T=25°C)**

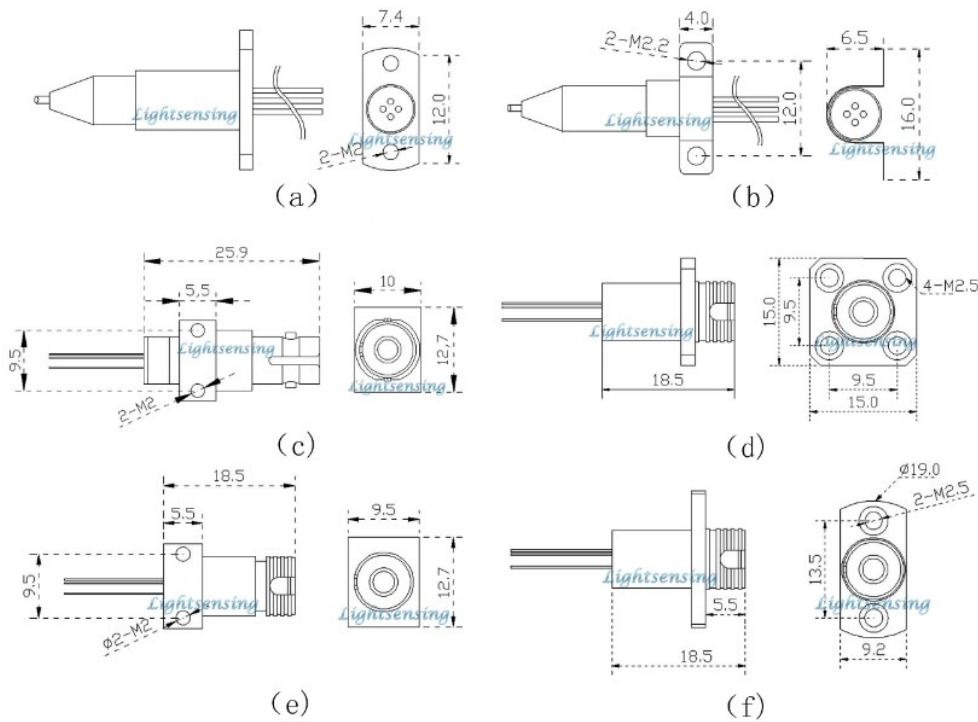
parameter	symbol	Min.	Typ.	Max.	unit
Center wavelength	$\lambda$	1640	1650	1660	nm
Threshold Current	I <sub>th</sub>		12		mA
Operating Current	I <sub>op</sub>		30	40	mA
Operating Voltage	V <sub>op</sub>		1.1	1.6	V
Output power(from fiber)	P		3		mW
Spectral width	$\Delta\lambda$		0.1	1.0	nm
Wavelength/Temp. Coefficient	$\Delta\lambda/\Delta T$		0.1		nm/°C
Side mode suppression ratio	SMSR	35	40		dB
Rise/ Fall time	Tr/Tf(I <sub>th</sub> +20mA)		120		ps
Direct modulation rate	R(I <sub>th</sub> +20mA)		4		Gbps
Monitoring Output Current	I <sub>m</sub> (I <sub>th</sub> +20mA)	0.02	1		mA
Monitor Dark current	I <sub>d</sub> (V <sub>r</sub> =5V)			200	nA
Monitor Capacitance	C (V <sub>r</sub> =5V)		10		pF
Optical Isolation(note1)	Iso	30			dB Single
		50			dB Double
package	Hermetic package TO56 Can with receptacle or with fiber coupling				

Note: keep the lead length shorter when you use laser diode.

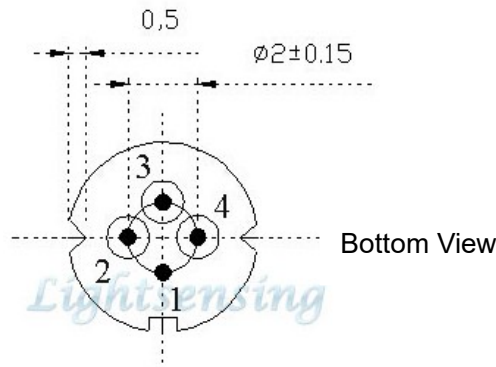
Note1: temperature range:-5~70°C.

NOTICE: The above product specifications are subject to change without notice.

### The package Dimensions



### PIN description



### PIN OUT

F type	
1	LD(+)/Case
2	LD(-)
3	PD(-)
4	PD(+)

### Order information

LSDLX-X-X-X-X-X

X=165 1650nm

mW

Pin out

Isolator

Rate

X=a

a package with SM Fiber or PM Fiber with FC/UPC or FC/APC

Other

X=3

X=F F Type

X=0 NO

X=2 2.5Gbps

X=b

b package with SM Fiber or PM Fiber with FC/UPC or FC/APC

Other

X=1 Single

X=4 4Gbps

X=cJKST

c package with ST receptacle

X=2 Double

Other

X=dJKFC

d package with FC receptacle

X=e JKFC

e package with FC receptacle

X=f JKFC

f package with FC receptacle

X=Other

By customer's request

### The cautions

1: The above product specifications are subject to change without notice.

2: The suitable ESD protecting measures are recommend in storage,transporting and using.

3: The fiber bending radius no less than 20mm for avoiding fiber damaged ,Be sure the fiber coupling facet is clean before connecting it to opto-circuit.