

1650 nm DFB LASER DIODE MODULE

UNCOOLED MQW DFB LD WITH PIGTAIL

DL-5300-1650 Series

FEATURES

- ✧ 1650 nm Uncooled Laser Diode with MQW Structure
- ✧ High Reliability, Long Operation Life
- ✧ Single Frequency Operation with High SMSR
- ✧ 0 to 70°C operation without active cooling
- ✧ Build-in InGaAs monitor
- ✧ Build-in single stage isolator

APPLICATION

Trunk Line, OTDR

DESCRIPTION

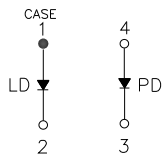
DL-5300-1650 series are designed for coupling a single mode optical fiber with 1650 nm MQW DFB uncooled laser diode. These modules are ideally suitable for long reach and intermediate reach OC-3, OC-12, and Gigabit Ethernet transmission application.

ELECTRICAL AND OPTICAL CHARACTERISTICS (T _C =25 °C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{th}	Threshold Current	CW		10	15	mA
V _{OP}	Operating Voltage	CW, I _F = I _{th} +25mA		1.2	1.5	V
P _f	Optical Output Power Part No:DL-532XX-1650 DL-533XX-1650	CW, I _F = I _{th} +25mA	1.0 2.0		2.0 3.0	mW
λ _c	Center Wavelength	CW, P _o = P _f	1640	1650	1660	nm
SMSR	Side Mode Suppression Ratio	CW, I _{th} +25mA	30	35		dB
t _r , t _f	Rise And Fall Times Part No:DL-53XX-1650 DL-53XXS-1650	I _F =I _{th} , I _{th} +25mA , 20~ 80%			226 150	ps
Δ P _f / P _f	Tracking Error	APC, 0~+70 °C	-1.5		1.5	dB
I _m	PD Monitor Current	CW, I _{th} +25mA , V _{RD} =1V	100		1500	μA
I _D	PD Dark Current	V _{RD} =5V			0.1	μA
C _t	PD Capacitance	V _{RD} =5V, f=1MHz		10	15	pF

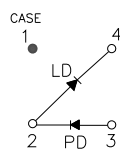
ABSOLUTE MAXIMUM RATINGS (T _C =25 °C)			
Symbol	Parameter	Ratings	Unit
P _o	Optical Output Power (532XX/533XX)	1.5/3	mW
V _{RL}	LD Reverse Voltage	2	V
V _{RD}	PD Reverse Voltage	10	V
I _{FD}	PD Forward Current	1.0	mA
T _{opr}	Operating Temperature	0 to 70	°C
T _{stg}	Storage Temperature	-40~+85	°C

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT

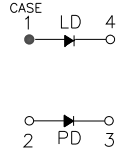
Type A



Type B



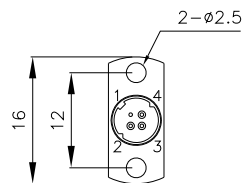
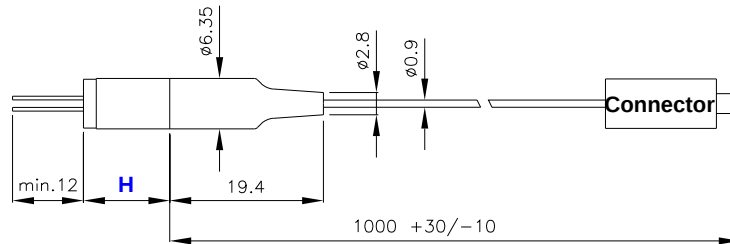
Type C



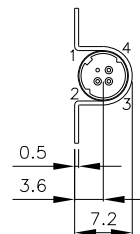
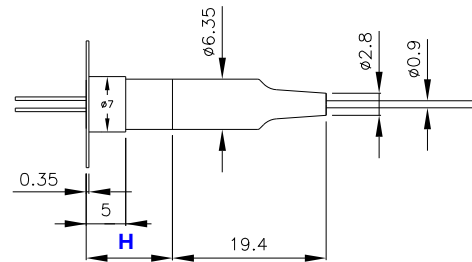
P/N	H
DL-532XX-1650-XXS	9
DL-533XX-1650-XXS	10.9



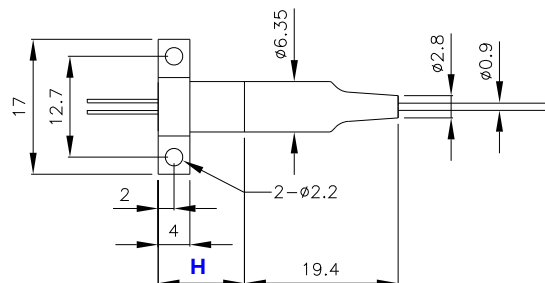
Flangeless



Vertical Flange



Horizontal Flange



Note: Specifications subject to change without notice.

ORDER INFORMATION

Part No.: D L - 5 3 ☐ ☐ ☐ - 1 6 5 0 - ☐ ☐ ☐ **S**

Code	Pout (mW)
2	1
3	2

Code	Pin Assignment
0	Type A
5	Type B
8	Type C

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

Code	Flange
V	Vertical
H	Horizontal
X	No Flange

Code	Connector
S	SC/PC
F	FC/PC
T	ST/PC
L	LC/PC
X	No connector
SA	SC/APC
FA	FC/APC
TA	ST/APC
LA	LC/APC

Code	Isolator
S	Single-Stage

Revision History

Version	Subject	Release Date
1.0	Initial datasheet	2004/8/1
2.0	Combine 1.25G and 2.5G characteristics in one data sheet	2007/12/1
3.0	Revise mechanical dimension and order information	2009/4/10

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