

1550 nm DFB LASER DIODES
2.5 Gb/s MQW-DFB LASER DIODES

DL-5100S SERIES

FEATURES

- 2 Uncooled Laser Diode with MQW Structure
- 2 High Reliability, Long Operation Life
- 2 5 mW CW Operation at 0 °C ~ +70 °C
- 2 Single Frequency Operation with High SMSR
- 2 Operation up to 2.5 Gb/s
- 2 Build-in InGaAs Monitor
- 2 Flat Window Cap Package (DL-510XS)
- 2 Aspherical Lens Cap Package (DL-512XS)
- 2 2 mm Ball Lens Cap Package (DL-514XS)

APPLICATION

OC-3, OC-12, OC-48 and Gigabit Ethernet Optical communication system

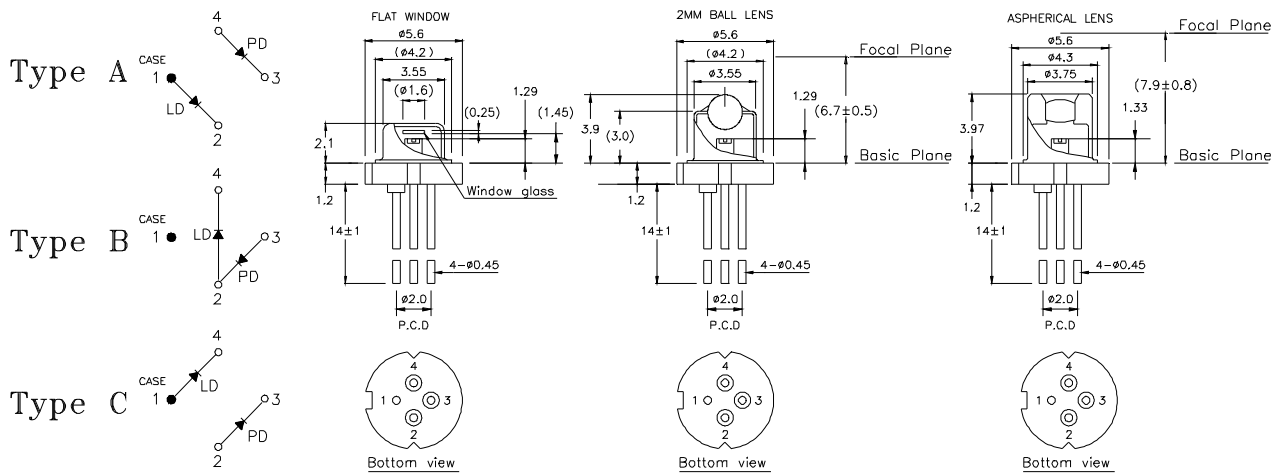
DESCRIPTION

DL-5100S series are MQW-DFB laser diodes that provide a durable, single frequency oscillation with emission wavelength of 1550 nm. DL-5100S series are hermetically sealed devices with the build-in photodiode for output monitoring.

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 _{th} +20mA		1.2	1.5	V
η	Slope Efficiency Part No:DL-510XS DL-512XS DL-514XS	CW, I _{th} +20mA	0.20 0.18 0.15	0.25 0.22 0.22		mW/mA
λ _c	Center Wavelength	CW, I _{th} +20mA	1530	1550	1570	nm
SMSR	Side Mode Suppression Ratio	CW, I _{th} +20mA	30	35		dB
θ	Beam Divergence (Parallel)	CW, I _{th} +20mA		25		deg.
θ _⊥	Beam Divergence (Perpendicular)	CW, I _{th} +20mA		35		deg.
t _r , t _f	Rise And Fall Times	I _F =I _{th} , I _{th} +20mA, 20~ 80%			150	ps
I _m	PD Monitor Current	CW, I _{th} +20mA, V _{RD} =1V	100			μA
I _D	PD Dark Current	V _{RD} =5V			0.1	μA
C _t	PD Capacitance	V _{RD} =5V, f=1MHz		10	15	pF
P _f	Fiber Coupled Power Part No:DL-512XS DL-514XS	CW, I _{th} +20mA, SM fiber	1.5 0.6			mW

ABSOLUTE MAXIMUM RATINGS (T _C =25 °C)			
Symbol	Parameter	Ratings	Unit
P _o	Optical Output Power	6	mW
V _{RL}	LD Reverse Voltage	2	V
V _{RD}	PD Reverse Voltage	15	V
I _{FD}	PD Forward Current	2	mA
T _{opr}	Operating Temperature	0~70	°C
T _{stg}	Storage Temperature	-40 ~ +85	°C

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



Note: Specifications subject to change without notice.

ORDER INFORMATION

Part No.: **D L - 5 1**

Code	Cap Type
0	Flat Window
2	Aspherical Lens
4	2 mm Ball Lens

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

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