

1310 nm DFB LASER DIODES

DL-3100S SERIES

2.5 Gb/s MQW-DFB LASER DIODES

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-310XS)
- 2 Aspherical Lens Cap Package (DL-312XS)
- 2 2 mm Ball Lens Cap Package (DL-314XS)

APPLICATION

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

DESCRIPTION

DL-3100S series are MQW-DFB laser diodes that provide a durable, single frequency oscillation with emission wavelength of 1310 nm. DL-3100S 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-310XS DL-312XS DL-314XS	CW, I _{th} +20mA	0.25 0.20 0.20	0.36 0.32 0.25		mW/mA
λ _c	Center Wavelength	CW, I _{th} +20mA	1290	1310	1330	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-312XS DL-314XS	CW, I _{th} +20mA, SM fiber	1.5 0.8			mW

