

1550 nm LASER DIODES

FL-5100 SERIES

UNCOOLED MQW-FP LASER DIODES

FEATURES

- 2 1550 nm typical emission wavelength
- 2 High reliability, long operation life
- 2 Build-in InGaAs monitor
- 2 Complies with Bellcore TA-NWT-000983
- 2 Flat Window Cap Package (FL-510X)
- 2 Ball Lens Cap Package (FL-511X)
- 2 Aspherical Lens Cap Package (FL-512X)

APPLICATION

Optical communication system

DESCRIPTION

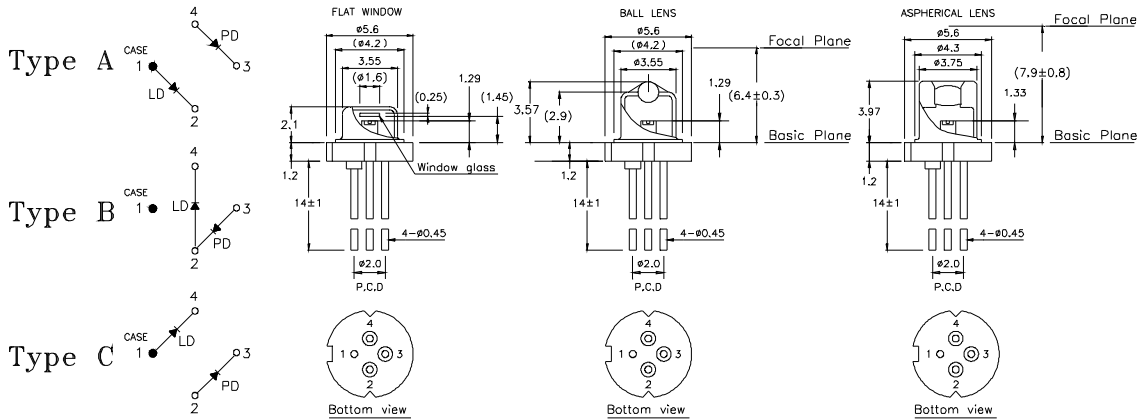
FL-5100 series are MQW-FP laser diodes that provide a durable, single transverse mode oscillation with emission wavelength of 1550 nm. FL-5100 series are hermetically sealed devices with the build-in photodiode for output monitoring.

ELECTRICAL AND OPTICAL CHARACTERISTICS (T _C =25 °C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{th}	Threshold Current	CW		12	15	mA
V _{OP}	Operating Voltage	CW, P _O =5mW		1.2	1.5	V
η	Slope Efficiency Part No.: FL-510X FL-511X FL-512X	CW, P _O =5mW	0.2 0.15 0.15	0.25 0.2 0.2		mW/mA
λ _c	Center Wavelength	CW, P _O =5mW	1520	1550	1580	nm
Δλ	Spectral Width	CW, P _O =5mW, RMS (σ)			3	nm
θ _∥	Beam Divergence (Parallel)	CW, P _O =5mW, Flat Window		20		deg.
θ _⊥	Beam Divergence (Perpendicular)	CW, P _O =5mW, Flat Window		35		deg.
t _r , t _f	Rise And Fall Times	I _F =I _{th} , P _O =5mW, 10~ 90%			0.3	ns
I _m	PD Monitor Current	CW, P _O =5mW, 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.: FL-511X FL-512X	CW, I _{th} +20mA, SM fiber	0.4 1.5	0.6		mW

ABSOLUTE MAXIMUM RATINGS (T _C =25 °C)			
Symbol	Parameter	Ratings	Unit
P _o	Optical Output Power	7/6*	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	-40~+85	°C
T _{stg}	Storage Temperature	-40~+85	°C

Remark: * applied for ball-lens type only

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



Note: Specifications subject to change without notice.

ORDER INFORMATION

Part No.: F L - 5 1

Code	Cap Type
0	Flat Window
1	Ball Lens
2	Aspherical Lens

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

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