ML9XX18 SERIES

InGaAsP MQW-DFB LASER DIODE WITH EA MODULATOR

TYPE NAME **ML9XX18**

DESCRIPTION

ML9XX18 series are DFB (Distributed Feedback) laser diodes with a monolithcally integrated EA (Electro-Absorption) modulator emitting light beam at 1550nm.

The laser is suitable to a light source for use in 10Gbps long-haul transmission over 50km.

FEATURES

DFB laser diode integrated with EA (Electro-Absorption) modulator

10Gbps long-haul transmission over 50km

High side-mode-suppression-ratio (typical 40dB)

High extinction ratio

Wavelengths in range from 1530nm to 1564nm are available for WDM application

APPLICATION

10Gbps trunk-line systems

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
IF	Laser forward current	CW	**200**	mA
VRL	Laser reverse voltage	-	**2**	V
VEA	Modulator voltage	-	**-3**	V
Tc	Case temperature	-	**+ 15 - +35**	**deg.C**
Tstg	Storage temperature	-	**- 40 -+100**	**deg.C**

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25deg.C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Thereshold current	CW,Vmod=0V	-	10	30	mA
Iop	Operation current	CW,Po=5mW,Vmod=0V	-	70	100	mA
Vop	Operating voltage	CW,Po=5mW,Vmod=0V	-	1.2	2.0	V
Wp	Peak wavelength	CW,Po=5mW,Vmod=0V	1530	-	1564	nm
FFPh	Beam divergence angle (parallel)	CW,Po=5mW,Vmod=0V	-	30	-	deg.
FFPv	Beam divergence angle (perpendicular)	CW,Po=5mW,Vmod=0V	-	45	-	deg.
Pm	Monitoring output	CW,Po=5mW,Vmod=0V	-	1.0	-	mW
f c	Cutoff frequency (-3dB)	CW,Po=5mW,Vmod=-1V	10	14	-	GHz
tr,tf	Rise and fall time(10%-90%)	9.95328Gb/s,NRZ,PRBS2^{23}-1 If=Iop Vpp=0 - 2.5V	-	-	40	psec
SMSR	Side mode suppression ratio		35	40	-	dB
Ex	Extinction Ratio		10	12	-	dB
P p	Power penalty	ditto SMF 50km (D=800ps/nm) @BER = 10^{-10}	-	1.0	-	dB