

MITSUBISHI LASER DIODES

ML9XX11,ML9XX16,ML9XX22 SERIES

InGaAsP DFB LASER DIODES

**TYPE
NAME**

ML925B11F / ML925B16F / ML925B22F

DESCRIPTION

ML9XX11,ML9XX16 and ML9XX22 series are DFB (Distributed Feedback) laser diodes emitting light beam with emission wave length of 1470 ~ 1610nm. They are well suited for light source in long distance digital transmission application of coarse WDM. They are hermetically sealed devices with the photo diode for optical output monitoring.

APPLICATION

- Long - distance digital transmission system
- Coarse WDM application

FEATURES

- Low threshold current (typical 10mA)
 - Wide temperature range operation
 - High - side mode suppression ratio (typical 40dB)
 - High speed response (typical 0.2nsec)
 - MQW* active layer
 - FSBH** structure fabricated by MOCVD process
- * Multiple Quantum Well
** Facet Selective - growth Buried Hetero structure

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	6	mW
VRL	Reverse voltage (Laser diode)	-	2	V
VRD	Reverse voltage (Photo diode)	-	20	V
IFD	Forward current (Photo diode)	-	2	mA
Tc	Case temperature	-	0 to +85	°C
Tstg	Storage temperature	-	- 40 to +100	°C

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
Ith	Threshold current	CW	-	10	30	mA
Iop	Operation current	CW,Po=5mW	-	20	60	mA
Vop	Operating voltage	CW,Po=5mW	-	1.2	1.8	V
η	Slope efficiency	CW,Po=5mW	0.15	0.25	-	mW/mA
λp	Peak wavelength	CW,Po=5mW	<***>			nm
θ//	Beam divergence angle (parallel)	CW,Po=5mW	-	25	35	deg.
θ⊥	Beam divergence angle (perpendicular)	CW,Po=5mW	-	35	45	deg.
SMSR	Side mode suppression ratio	CW,Po=5mW	30	40	-	dB
Im	Monitoring output current	CW,Po=5mW	-	0.2	-	mA
tr,tf	Rise and Fall time	If=Ith,Po=5mW,10 - 90%	-	0.2	0.4	ns

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<***> Peak wave length

Type	Symbol	Test condition	Limits			Unit
			Min.	Typ.	Max.	
ML925B16F-04	λ_p	CW Po=5mW Tc=25°C	1467	1470	1473	nm
ML925B16F-05			1487	1490	1493	
ML925B11F-04			1507	1510	1513	
ML925B11F-05			1527	1530	1533	
ML925B11F-06			1547	1550	1553	
ML925B22F-04			1567	1570	1573	
ML925B22F-05			1587	1590	1593	
ML925B22F-06			1607	1610	1613	

OUTLINE DRAWINGS

ML925B11F
ML925B16F
ML925B22F



(Dimension:mm)

