

MITSUBISHI LASER DIODES
ML7XX11 SERIES
 InGaAsP DFB-LASER DIODES

**TYPE
NAME**

ML725B11F / ML720J11S

DESCRIPTION

ML7XX11 series are DFB (Distributed Feedback) laser diodes emitting light beam around 1310nm. They are well suited for light source in long -distance digital transmission systems. ML725B11F / ML720J11S are hermetically sealed devices with the photo diode for optical output monitoring.

APPLICATION

Long - distance digital transmission system

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

*****Specification Note**

Type	Operation Temperature Range
ML7XX11-01	Tc=-40 to 85°C
ML7XX11-02	Tc=-20 to 85°C
ML7XX11-03	Tc= 0 to 85°C

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	-	-01	-40 to +85	°C
			-02	-20 to +85	
			-03	0 to +85	
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	40	mA
Vop	Operating voltage	CW,Po=5mW	-	1.2	1.8	V
η	Slope efficiency	CW,Po=5mW	0.3	0.5	-	mW/mA
λ_p	Peak wavelength	CW,Po=5mW ***Note	1290	1310	1330	nm
$\theta_{//}$	Beam divergence angle (parallel)	CW,Po=5mW	-	25	35	deg.
θ_{\perp}	Beam divergence angle (perpendicular)	CW,Po=5mW	-	30	40	deg.
SMSR	Side mode suppression ratio	CW,Po=5mW ***Note	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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OUTLINE DRAWINGS

