

PRELIMINARY

Notice: Some parametric limits are subject to change

ML9xx37 SERIES

High Power InGaAsP DFB LASER DIODE

**TYPE
NAME****ML99237/ML9SM37****DESCRIPTION**

ML9xx37 series are high power DFB (Distributed Feedback) laser diodes for optical transmission emitting light beam at 1550nm. ML9xx37 achieves 60mW CW operation with stable single longitudinal mode oscillation and narrow linewidth. ML9xx37 is a suitable light source for a 10Gbps/40Gbps external modulator.

APPLICATION

CW light source for external modulator

FEATURES

- High power operation: 60mW (@25°C)
- High side-mode suppression ratio: 45dB (typ)
- Narrow line width: 0.5MHz (typ)
- Small size chip-on-carrier

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
Po	Optical output power	CW	80	mW
If	Laser forward current	-	450	mA
VRL	Laser reverse voltage	-	2	V
Tsld	Soldering temperature	1 minute	320	°C
Tc	Operation temperature	-	+15~ +35	°C
Tstg	Storage temperature	-	-40 ~+100	°C

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C)

Symbol	Parameter	Conditions	Limits			Unit
			Min.	Typ	Max	
Ith	Threshold current	CW	-	20	35	mA
Iop	Operation current	CW, Po=60mW	-	200	300	mA
Vop	Operating voltage	CW, Po=60mW	-	1.8	2.5	V
η	Slope efficiency	CW, Po=60mW	0.30	0.35	-	mW/mA
λ_p	Peak wavelength	CW, Po=60mW	1530	1550	1565	nm
SMSR	Side mode suppression ratio	CW, Po=60mW	35	45	-	dB
$\theta_{ }$	Beam divergence angle (parallel)	CW, Po=60mW	-	20	40	deg.
$\theta_{\perp}$	(perpendicular)	CW, Po=60mW	-	25	45	deg.
Δf	Linewidth	CW, Po=60mW	-	0.5	1.0	MHz
RIN	Relative Intensity Noise	CW, Po=60mW, 0.5~10GHz	-	-	-145	dB/Hz


**MITSUBISHI
ELECTRIC**

Feb. 2003

MITSUBISHI LASER DIODES
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OUTLINE DRAWINGS

ML99237		
ML9SM37		

* Notification for a submount product

The submount product may show the change of the optical and electrical characteristics due to the influences of an assembly substrate (strain, thermal conductivity, etc.) prepared by the customer. Therefore, the supplier is not obliged to guarantee that all optical and electrical characteristics meet specifications after the shipment.



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