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)

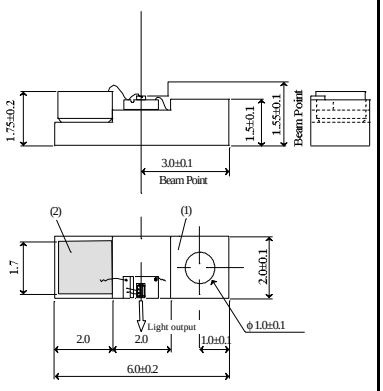
Symbol	Parameter	Conditions	Limits			Unit
			Min.	Typ	Max	
Ith	Threshold current	CW	-	**20**	**35**	**mA**
Iop	Operation current	CW,Po=60mW	-	**200**	**300**	**mA**
Vop	Operating voltage	CW,Po=60mW	-	**1.8**	**2.5**	**V**
η	Slope efficiency	CW,Po=60mW	**0.30**	**0.35**	-	**mW/mA**
λ p	Peak wavelength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

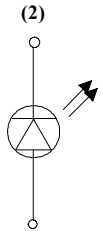
ML9xx37 SERIES

High Power InGaAsP DFB LASER DIODE

OUTLINE DRAWINGS

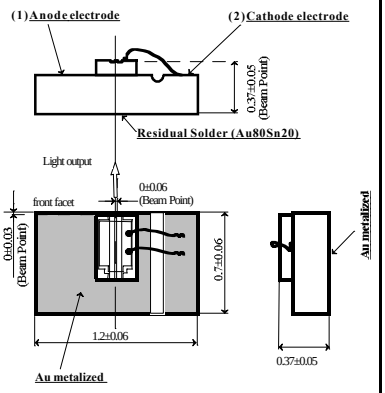
ML99237

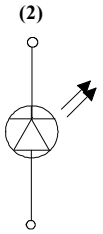




(1) Case

ML9SM37





(1) Case

* 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.