

Preliminary Data Sheet



AC3330 Series Uncooled 10 Gbps 1310 nm InAlGaAs Fabry Perot Laser Module

Description

The AC3330 series laser modules are uncooled semiconductor InAlGaAs Fabry Perot laser working 1310 nm wavelength. The device is delivered in hermetic MiniDIL package with photodiode for optical power monitoring. This package includes high fiber coupling optics to achieve high optical output power. This high performance, and high reliability laser is suitable for

applications up to 10 Gb/s in short haul links or local networks.

Features

- 1310 nm typical emission wavelength
- High power over wide temperature range (1 mW over 0 to 75°C)
- High Reliability
- Multi-quantum Well (MQW) active layer

Applications

- Telecommunication
- Data Communication
- Storage area networks

Absolute Maximum Rating

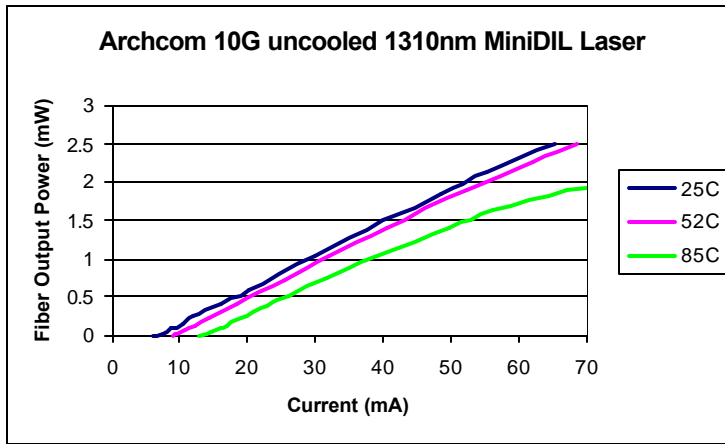
Symbol	Parameter	Ratings	Unit
P_o	Light output power	5	mW
V_{RL}	Reverse Voltage (Laser diode)	2	V
V_{RD}	Reverse Voltage (Photodiode)	20	V
I_{FD}	Forward current (Photodiode)	2	MA
T_C	Case temperature	0 ~ +75	°C
T_{stg}	Storage temperature	-40 ~ +100	°C

Electrical/Optical Characteristics ($T_C=25^\circ\text{C}$)

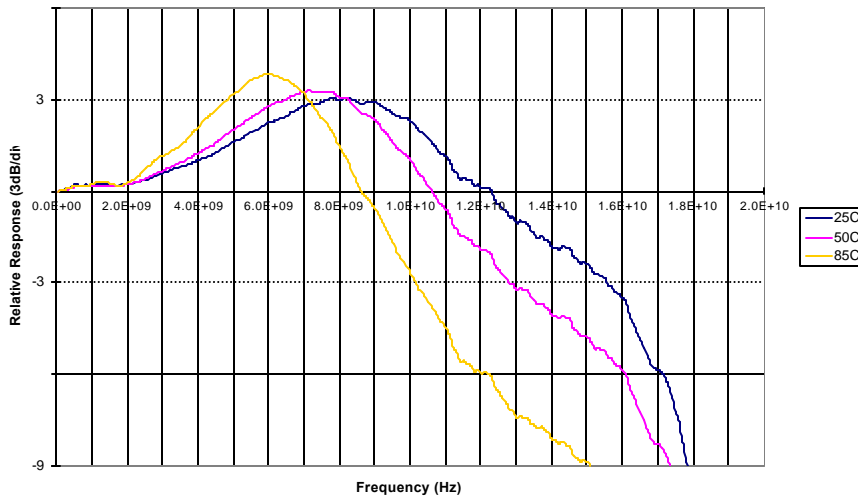
Symbol	Parameter	Test Conditions	Min.	Typ.	Max	Unit
I_{th}	Threshold current	CW		7	10	mA
I_{op}	Operating current	CW, $P_o = 1\text{mW}$		35	45	mA

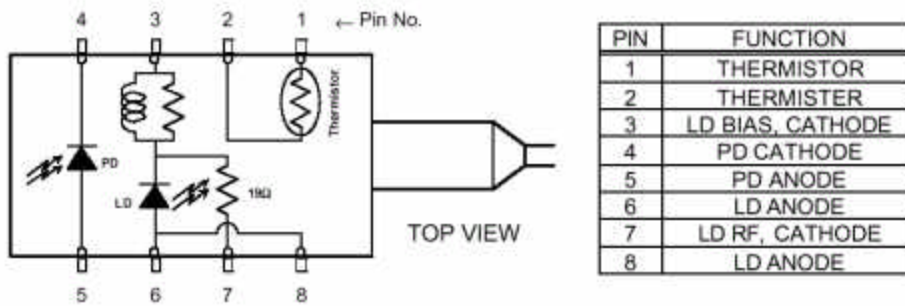
V _{op}	Operating voltage	CW, P _o = 1mW		1.1	1.5	V
η	Slope efficiency	CW, P _o = 1mW	0.035	0.04		mW/mA
λ _c	Center Wavelength	CW, P _o = 1mW	1290	1310	1330	nm
Δλ	Spectral width (RMS)	CW, P _o = 1mW		1	2	nm
Tr, Tf	Rise and fall time	If=lth, P _o = 1mW, 10~90%		40	60	ps
I _m	Monitor current (Photodiode)	CW, P _o =1mW, V _{RD} =1V	0.1	0.5		mA
I _D	Dark current (Photodiode)	V _{RD} =10V		0.01	0.1	μA
C _t	Capacitance (Photodiode)	V _{RD} =10V, f=1MHz		10	20	pF

Typical Characteristics

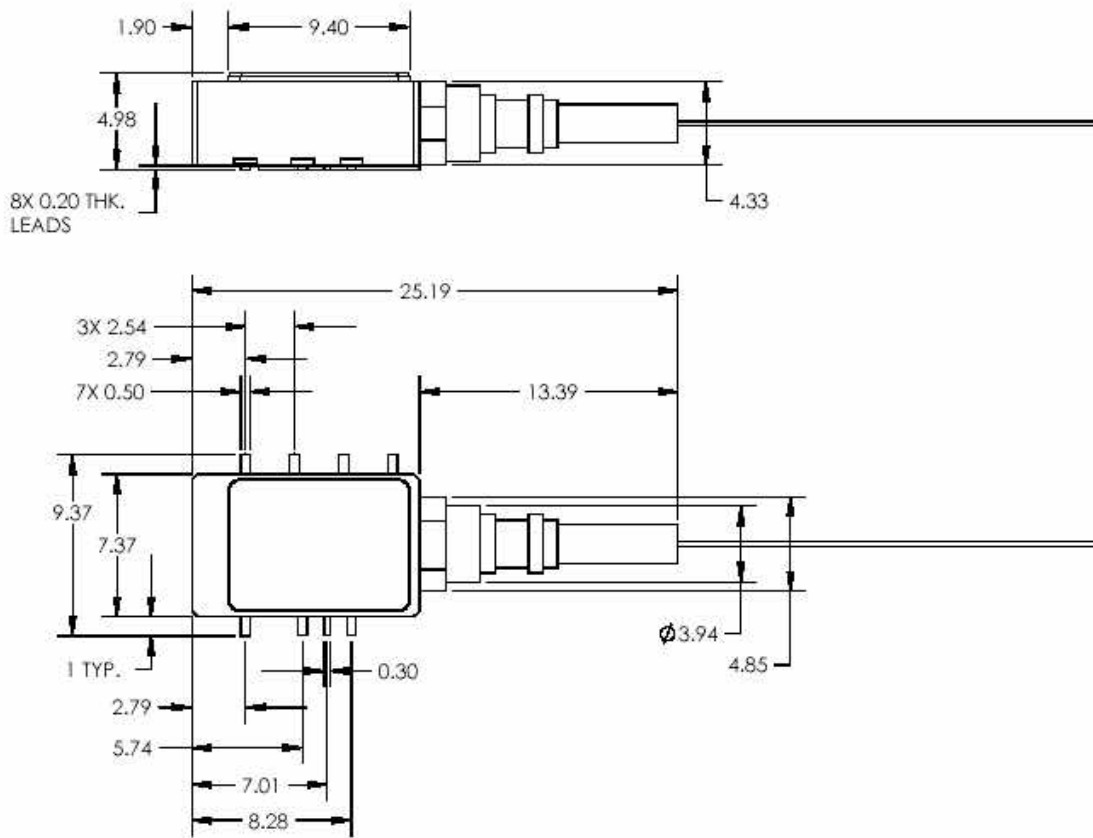


Frequency Response at 25 °C, 50 °C, and 85°C





Outline Drawing (dimension in mm)



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