DESCRIPTION

The ALM3HP-X series of 1310nm DFB laser modules is intended primarily for use as a CW light source for external modulators. All critical components, including optical isolator, TEC, thermistor, laser, and monitor photodiode are hermetically sealed in a butterfly package.

FEATURES

- CW Source laser with modulation input
- Polarization maintaining fiber output
- OC-48 compatible pinouts
- Internal TEC, thermistor & monitor PD
- 14 pin butterfly package
- Up to 15 dBm (31mW) optical output power

APPLICATIONS

- Source laser for external modulation

MODEL NUMBERS:

MODEL #s	ALM3HP-U1	ALM3HP-U2
Output Power	14 dBm	15 dBm

Note:

- Modules come with FC/APC connectors

OPTICAL FIBER and PIN LEAD SPECIFICATIONS

- Type: PMF fiber, flame retardant Hytrel coating, 0.9 mm diameter
- Length: 1-meter minimum
- Nominal Pin Lead Length: 5mm (from external package wall)

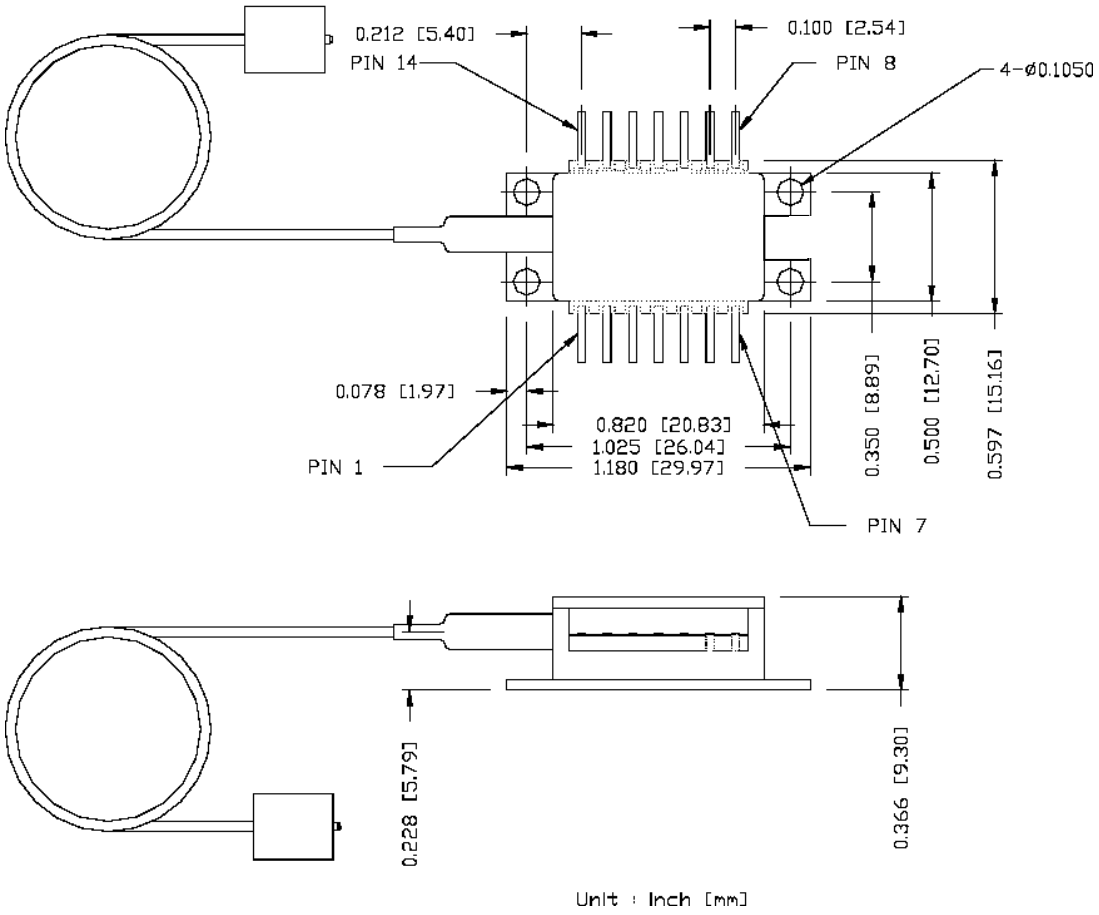
ELECTRO-OPTICAL CHARACTERISTICS
(Laser Chip Temp T_{OP}=25°C, unless otherwise specified)

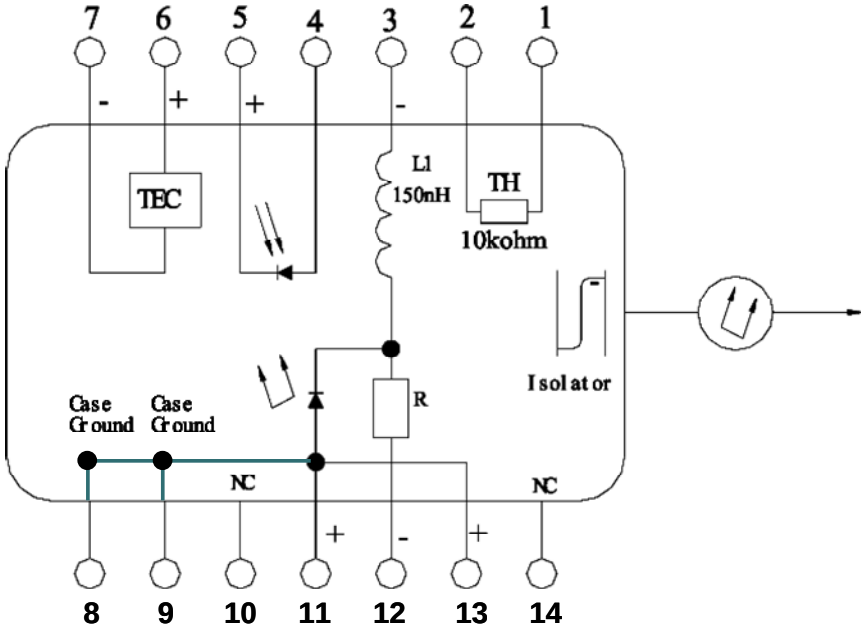
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Threshold Current	I_{TH}		--		20	mA
Operating Current	I_{OP}		-		120	mA
Operating Voltage	V_{OP}		--		2.1	V
Output Power	P_o	See Model #s	-	-		-
Monitor PD Responsivity	R_{MPD}	--	10		200	μA/mW
Dark Current	I_D	I_{OP} = 0 mA	--		0.2	μA
Operating Wavelength	λ_{OP}	I_F=I_{OP}	1305		1314	nm
Side Mode Suppression	SMSR	I_F=I_{OP}	35		--	dB
Optical Isolation	ISO		30		--	dB
Optical Return Loss	ORL		40		--	dB
Nominal Input Impedance	Z_{IN}		25			Ohm
Bandwidth			1.1			GHz
TEC Case Temp Range	T_C		-40		70	°C
TEC Current	I_{TEC}	-40<T_C<70°C	-1.5		1.5	A
Thermistor Resistance	R_{TH}		9.5		10.5	kΩ
TE Cooler Voltage	V_{TH}		-2.5		2.5	V
Polarization Extinction Ratio	PER	E-field along slow axis	18			dB
Relative Intensity Noise	RIN			-155	-145	dB/Hz

MAXIMUM RATINGS (T=25°C, unless otherwise specified)

PARAMETER	CONDITION	LIMIT
Storage Temperature	--	-40 to +85°C
Monitor Photodiode Reverse Voltage	60 seconds	15 V
	Continuous	10 V
Forward DC Laser Current	Continuous	150 mA
Reverse DC Laser Voltage	Continuous	1 V
TE Cooler current	Continuous	-1.9A to 1.9 A

MECHANICAL DRAWINGS





PIN ASSIGNMENTS			
Pin #	Function	Pin #	Function
1	Thermistor	8	Case Ground
2	Thermistor	9	Case Ground
3	DC Laser Bias (-)	10	NC
4	MPD Anode	11	Laser Common (+)
5	MPD Cathode	12	Laser Modulation (-)
6	TEC (+)	13	Laser Common (+)
7	TEC (-)	14	NC