



1310nm FORWARD PATH DFB LASER MODULE

6001A Series

Specification Datasheet

Description

6001A series module is MQW DFB laser, packaged by 14 PIN butterfly housing and terminated by single-mode fiber pigtail.

The module is suitable as a light source for using long reach analog transmission system, especially for CATV networks application.

Features

- MQW DFB Laser diode module
- High Linearity
- High-frequency response
- PAL and NTSC system loading available
- Comply Telcordia 468 specifications
- Up to 31mw high output power

Application

Forward path CATV application, or long reach analog transmission system, especially for CATV networks, and analog application in Satcom system and GSM/CDMA repeater.



XESTON 6001A Laser module photo

Performance

Absolute Maximum Ratings

Parameter	Symbol	Rating	Units	Test condition
-----------	--------	--------	-------	----------------

Address: Room 305-306 Block B, Shenzhen Academy of International Technology,
10th Kejinan Rd, High-tech zone, Nanshan District, Shenzhen, China. Zip 518057

Document: 6001A_specs_Version 4.0 www.xeston.com



Xeston Technologies

Laser reverse voltage	V_{rl}	2	V	-
Photodiode reverse voltage	V_{rd}	20	V	-
Storage Temperature	T_s	-40~+85	°C	-
Operating Case Temperature	T_O	-20~+65	°C	-
TE Cooler Current	I_c	1.5	A	--
Operating current	I_{op}	120	mA	25 Deg C

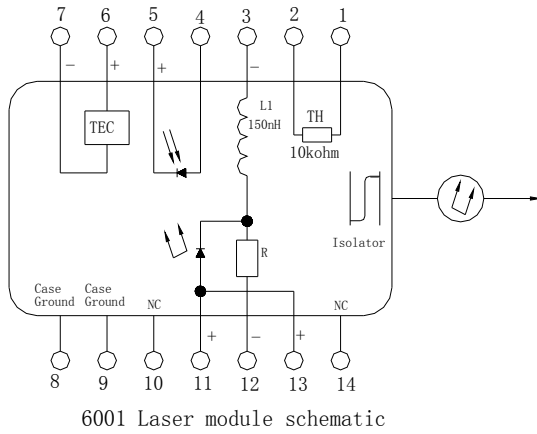
Electrical/Optical Characteristics ($T_c=25^\circ\text{C}$)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
I_{th}	Threshold Current	CW	-	9	20	mA
I_{op}	Operating Current		30	-	100	mA
i_{in}	Input impedance	$I_F=I_{op}$	-	25	-	Ohm
R_T	Thermistor Resistance	@+25Deg C	9.5	10	10.5	kOhm
	Thermistor Temp. Coeff.	@+25Deg C	-	-4.4	-	%/Deg C
λ_c	Center Wavelength	CW, $I_F=I_{op}$	1300	1310	1320	nm
P_o	Optical Output Power from fiber	CW, $I_F=I_{op}$	4	-	31	mW
SMSR	Side Mode Suppression Ratio	CW, $I_F=I_{op}$	35	-	-	dB
I_m	Monitor Operating Current	-	10	-	200	$\mu\text{A}/\text{mW}$
ISO	Optical Isolation	-	30			dB
Fr	Frequency Range	-	40		1000	MHz
	Frequency Response flatness	-	-0.5		+0.5	dB
RIN	Relative intensity Noise	-	-	-	-155	dB/Hz
C/N	Carrier to noise ratio	79 channel NTSC load, OMI 3.2% , single-mode fiber link loss, 0dBm received power, Noise equivalent current of receiver 8pA/root Hz, responsivity of receiver 0.87mA/mW	51	-	-	dB
CSO	Composite second order		-	-	-57	dBc
CTB	Composite triple beat		-	-	-65	dBc

Address: Room 305-306 Block B, Shenzhen Academy of International Technology,
10th Kejinan Rd, High-tech zone, Nanshan District, Shenzhen, China. Zip 518057

Document: 6001A_specs_Version 4.0 www.xeston.com

Electric schematics



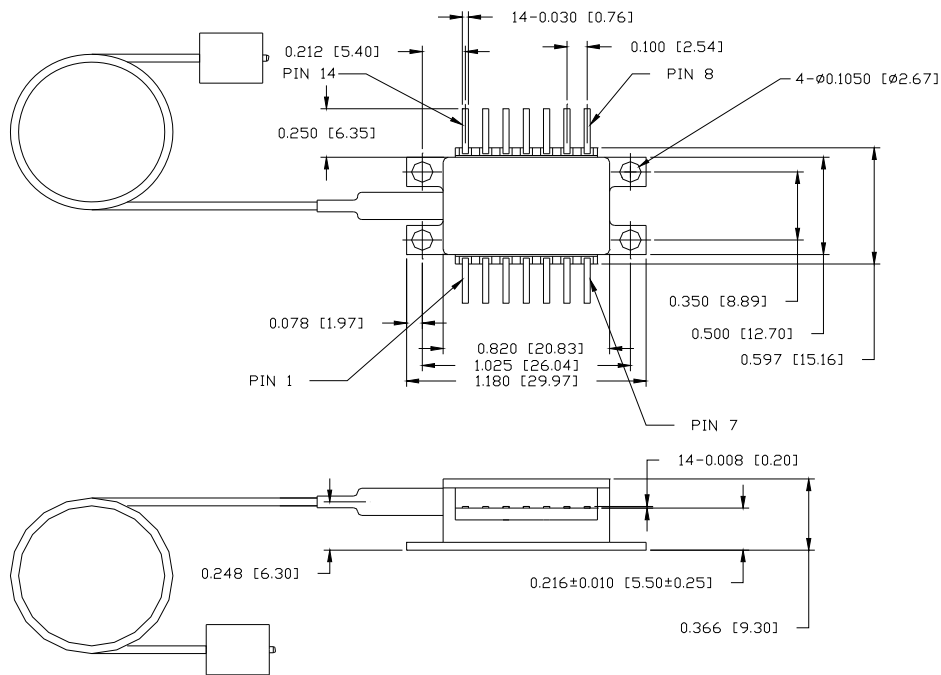
Fiber Characteristic

Type: Hytrel 900um diameter SM-28 single mode fiber

Fiber length: 1.0m minimum

Outline Drawing

Dimension in inch [mm]



Unit : inch [mm]



Xeston Technologies

Connection

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 (+), Case Ground
5	MPD Cathode	12	Laser Modulation (-)
6	TEC (+)	13	Laser Common (+), Case Ground
7	TEC (-)	14	NC

Laser Safety

Class IIIb laser Product

FDA/CDRH Class IIIb laser product. All versions are Class IIIb laser products per CDHR 1040 Laser Safety Requirements. All versions are class 3B laser products per IEC_60825-1:1993. The device has been classified with the FDA under accession number 220191.

This product complies with 21 CFR 1040.10 and 1040.11.

Single-mode fiber pigtail

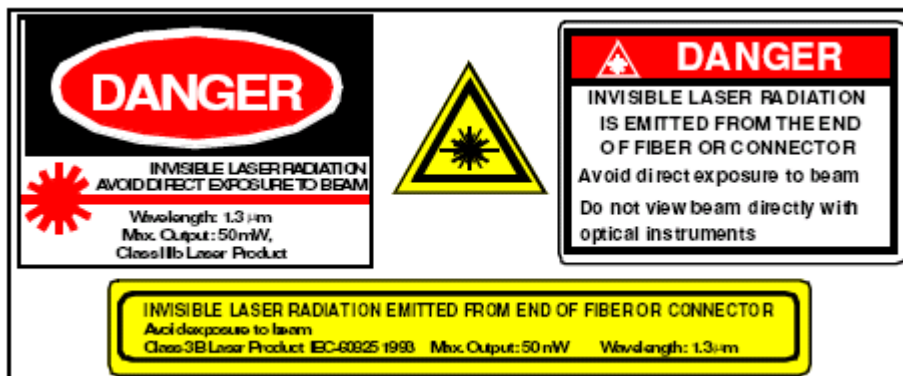
Wavelength = 1310nm

Maximum power = 50 mW

Because of size constraints, laser safety labeling (including an FDA class IIIb label) is not affixed to the module but attached to the outside of the shipping carton.

Product is not shipped with power supply.

Caution: Use of controls, adjustments and procedures other than those specified herein may result in hazardous laser radiation exposure.



Address: Room 305-306 Block B, Shenzhen Academy of International Technology,
10th Kejinan Rd, High-tech zone, Nanshan District, Shenzhen, China. Zip 518057

Document: 6001A_specs_Version 4.0 www.xeston.com



Ordering information

6001□-□□ — □□

Optical Connector

C1 = FC/APC

C2 = SC/APC

Optical power typ. output (mw)

PL: 8 mw

PA: 12mw

PB: 16mw

PC: 18mw

PD: 21mw

PE: 25mw

PS: 29mw

PX: 31mw

Distortion Performance

A: Standard Performance, 79ch NTSC plan

B: Super Performance, 110ch NTSC plan

1310nm Butterfly packaged CATV forward path laser module

Xeston Technologies Ltd. reserves the right to make changes to the product(s) or information contained herein without any notice in advance.

Copyright 2008-2018 Xeston Technologies Ltd. All Rights Reserved.