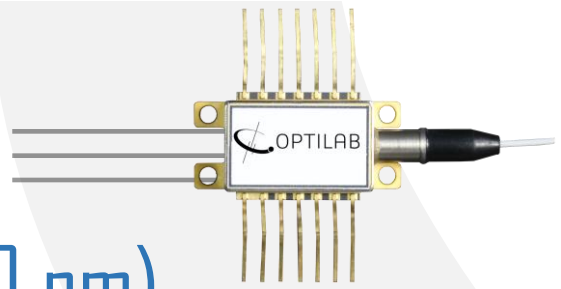


DFB-1XXXA-PM (1270,1290,1310,1330 nm)



DEVICE

DFB Laser, 1310 nm, Up to 200 mW, PM Output

OVERVIEW

The Optilab DFB-1XXXA-PM (available in 1270/1290/1310/1330nm) is a single frequency CW laser coupled with Polarization Maintaining fiber. Built with Distributed Feed-Back Grating (DFB) as cavity reflector, it provides a pure, single longitudinal mode, and extremely stable wavelength source. This laser diode is fabricated with Multiple Quantum Well (MQW) for excellent reliability and stability. It can be used either in CW operation for seeding the external modulation and coherence interferometry, or directly modulated for signal transmission. This MQW DFB laser features 200 mW of output optical power, high Side Mode Suppression Ratio (SMSR). The standard 14-pin butterfly integrates TEC, thermistor, monitor PD and an output isolator. Mode hop free version available upon request. Contact Optilab for more information.

FEATURES

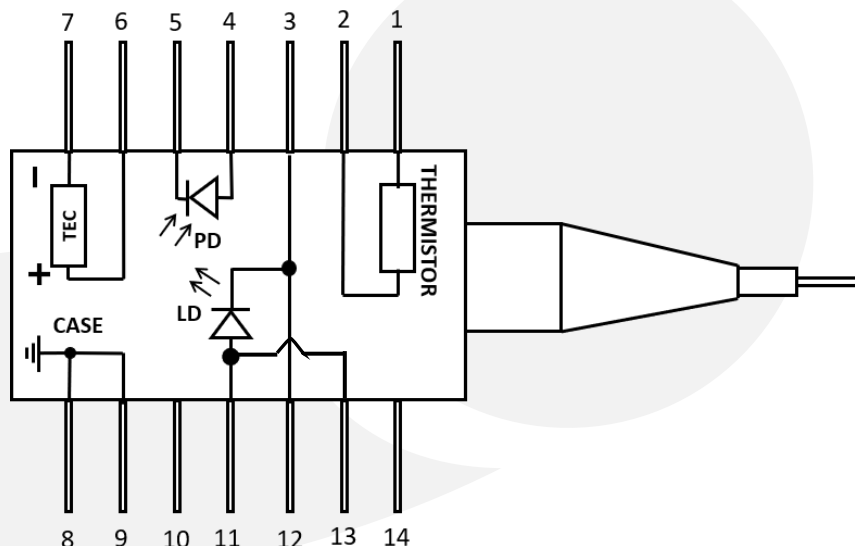
- 1270/1290/1310/1330 nm Available
- Up to 200 mW Output Power
- Built-in Isolator
- Polarization Maintaining Fiber Output
- Built-in TEC, Thermistor & Monitor PD
- Side Mode Suppression Ratio 50 dB
- Zero Chromatic Dispersion
- Mode Hop free Version Available

USE IN

- PM Pulse Laser Source
- Stabilized Single Frequency Source
- Light Source for Interferometer
- CW 1310 nm Laser Source
- External Modulation Optical Link

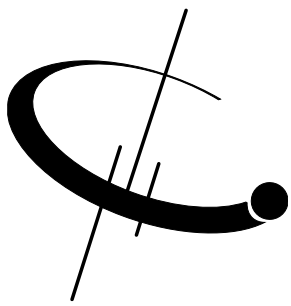
FUNCTIONAL DIAGRAM

**A Type
Pinout**



1	Thermistor
2	Thermistor
3	LD -
4	PD +
5	PD -
6	TEC +
7	TEC -
8	Case GND
9	Case GND
10	N.C.
11	LD +
12	LD-
13	LD +
14	N.C.





DFB-1XXXA-PM

(1270,1290,1310,1330 nm)

ABSOLUTE MAXIMUM RATING

LD Forward Current	750 mA
LD Forward Voltage	2.9 V
LD Reverse Voltage	2 V
PD Forward Current	5 mA
PD Reversed Voltage	10 V
TEC Voltage	4.2 V
TEC Current	1.8 A
Lead Soldering Time	10 s @ < 260 °C

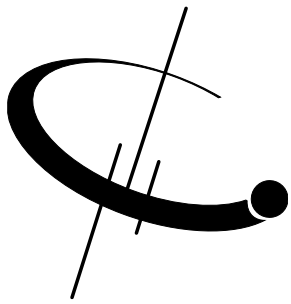
E/O SPECIFICATIONS

Center Wavelength Range	1270/1290/1310/1330 (+/- 3 nm) [See Detail in Ordering Options]
Optical Output Power	Up to 200 mW (See ordering Option)
Threshold Current	15 mA typ.
LD Operation Current	500 mA typ., 700 mA max
Forward Voltage	2.5 V typ.
Side Mode Suppression Ratio	50 dB Min., 55 dB typ.
Wavelength Temperature Coefficient	80 pm/°C typ.
Laser Linewidth	10 MHz Max.
Relative Intensity Noise	-145 dB/Hz
Thermistor Resistance	10 +/- 0.5 kOhm @ 25°C, NTC
Thermistor B Constant	3950 +/- 100 K
Polarization Extinction Ratio	20 dB Min.
Optical Isolation	30 dB typ.

MECHANICAL & ENVIRONMENT SPECIFICATIONS

Operating Case Temperature	-20 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Optical Connectors	FC/APC, slow axis aligned
Optical Fiber Type	Fujikura SM13-PS-U40D, Panda
Fiber Tubing	900 µm Loose Tube

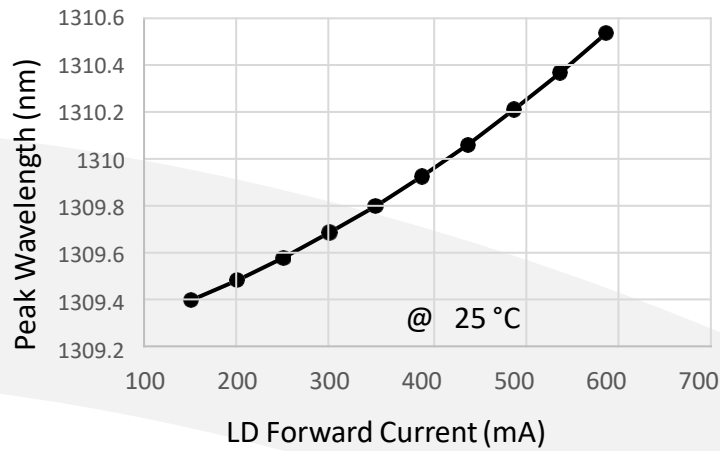




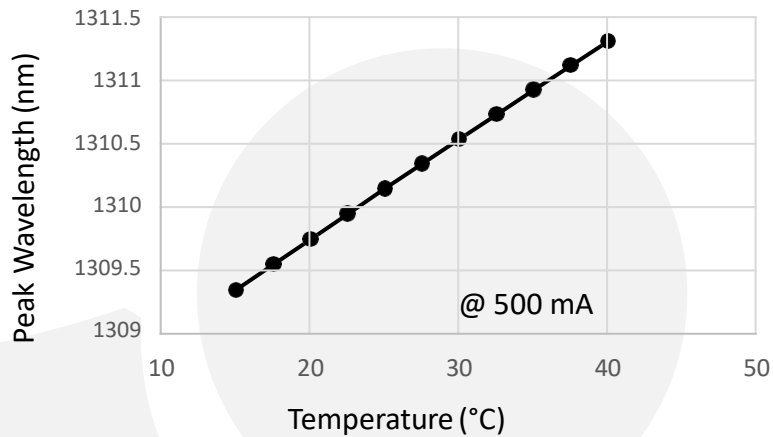
DFB-1XXXA-PM (1270,1290,1310,1330NM)

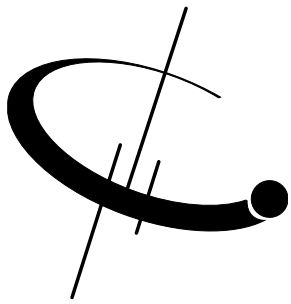
SAMPLE TEST DATA

Drive Current Tuned Wavelength



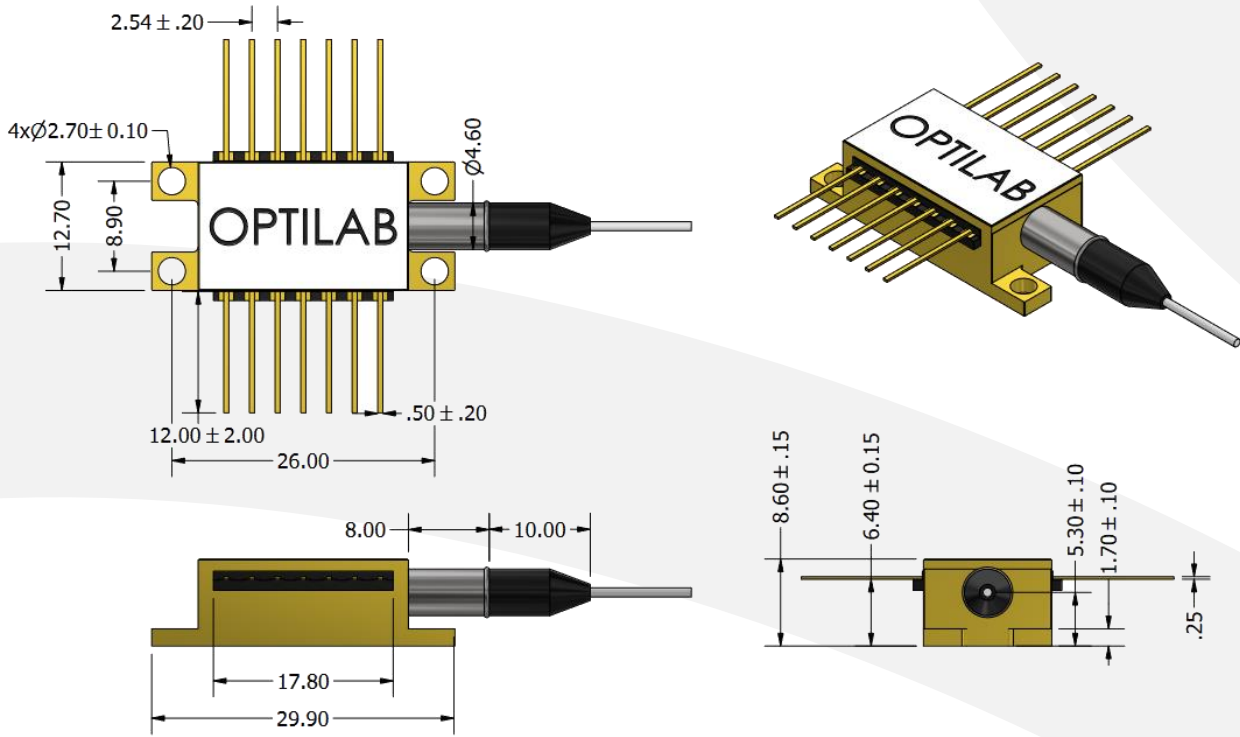
Temperature Tuned Wavelength





DFB-1XXXA-PM (1270,1290,1310,1330NM)

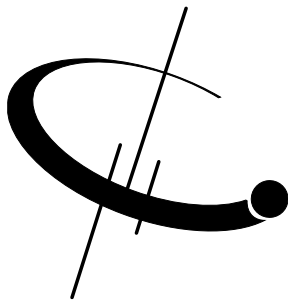
MECHANICAL DRAWING



ORDERING OPTION

DFB-XXXXA-PM-YYY	
XXXX: Wavelength in nanometer	1270, 1290, 1310, 1330 nm
YYY: Optical power in mW	Up to 200 mW (Please contact Sales for more details)





DFB-1XXXA-PM (1270,1290,1310,1330NM)

AVAILABLE ACCESSORIES

- **ULDC-XXXX-MC**



The Optilab Universal Laser Diode Controller (ULDC) is designed for use with DFB-1310A-PM and other 14 pin butterfly laser diodes. Current models can be driven up to 500 mA (ULDC-0500-MC) and 1000 mA (ULDC-1000-MC).

REGULATORY INFORMATION

All Versions of this laser are Class 1M laser product, tested according to IEC 60825-1:2014/EN 60825-1:2014 Single-mode fiber pigtail with FC/APC connectors (standard).

Wavelength = 1.3 μ m. Maximum power = 200 mW.

Because of size constraints, laser safety labeling (including an FDA class 1M 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.

