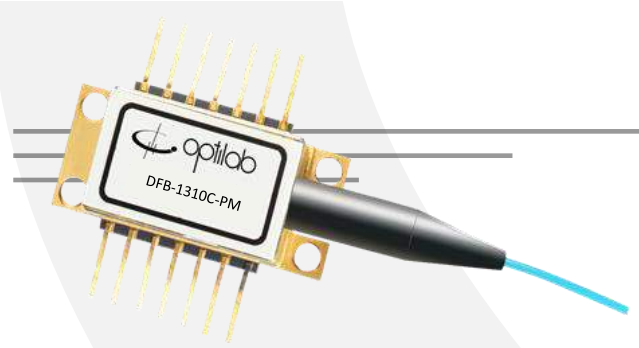


# DFB-1310C-PM



## DFB Laser, 1310 nm, Up to 150 mW, PM Output

### DEVICE

### OVERVIEW

The Optilab DFB-1310C-PM is a single frequency CW laser coupled with Polarization Maintaining fiber. Built with Distributed Feed-Back Grating (DFB) as cavity reflector, it provides pure, single longitudinal mode, hopping free 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 150 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

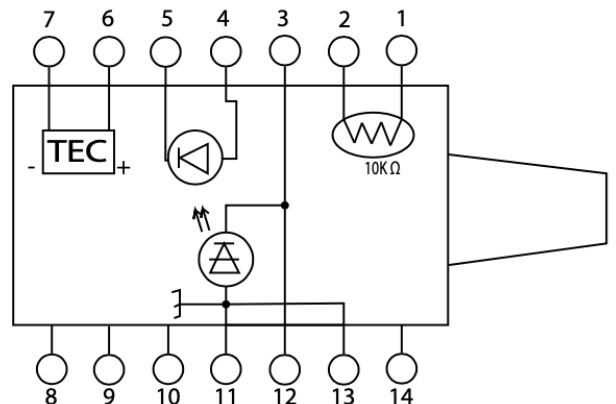
- Up to 150 mW output power
- CW Laser
- Built-in Isolator
- Polarization maintained Fiber Output
- Built-in TEC, Thermistor & Monitor PD
- Side Mode Suppression Ratio 50 dB
- Zero Chromatic Dispersion
- Mode hop free version available

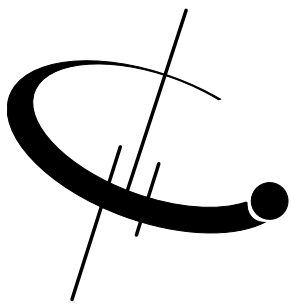
### USE IN

- PM pulse laser source
- Stabilized Single Frequency Source
- Light Source for Interferometer
- CW 1310C nm laser source
- External modulation optical link

### FUNCTIONAL DIAGRAM

Pin#	Desc	Pin#	Desc
1	Thermistor	8	NC
2	Thermistor	9	NC
3	LD-	10	NC
4	PD+	11	LD+/Case GND
5	PD-	12	LD-
6	TEC+	13	LD+
7	TEC-	14	NC





# DFB-1310C-PM

## ABSOLUTE MAXIMUM RATING

LD Forward Current	650 mA
LD Forward Voltage	2.9 V
LD Reverse Voltage	2 V
PD Forward Current	5 mA
PD Reversed Voltage	10 V
TEC Voltage	3.5 V
TEC Current	1.5 A
Lead Soldering Time	10 s @ < 260 °C

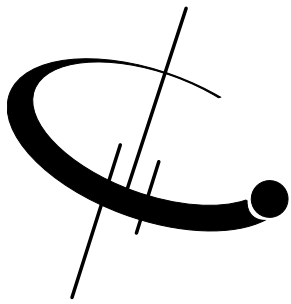
## E/O SPECIFICATIONS

Center Wavelength Range	1310C +/- 3 nm
Optical Output Power	Up to 150 mW (Contact Sales for output power selection)
Threshold Current	15 mA typ.
LD Operation Current	500 mA typ., 600 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.
3 dB S21 Bandwidth	2 GHz Min.
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 +65 °C
Storage Temperature	-40 °C to +85 °C
Optical Connectors	FC/APC, slow axis aligned
Optical Fiber Type	Fujikura SMI3-PS-U40D, Panda
Fiber Tubing	900 µm Loose Tube

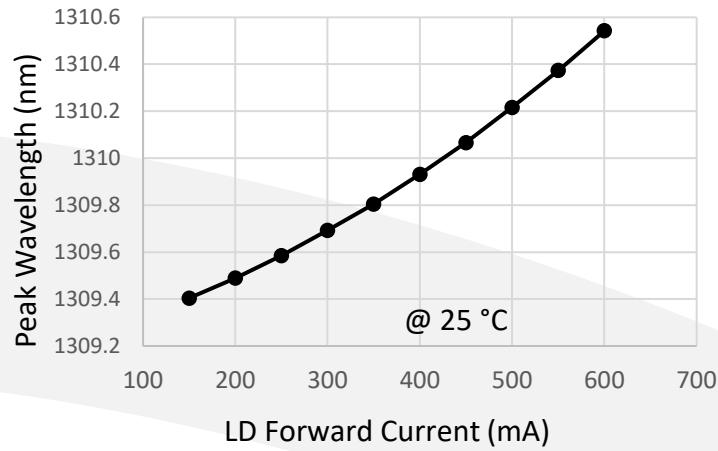




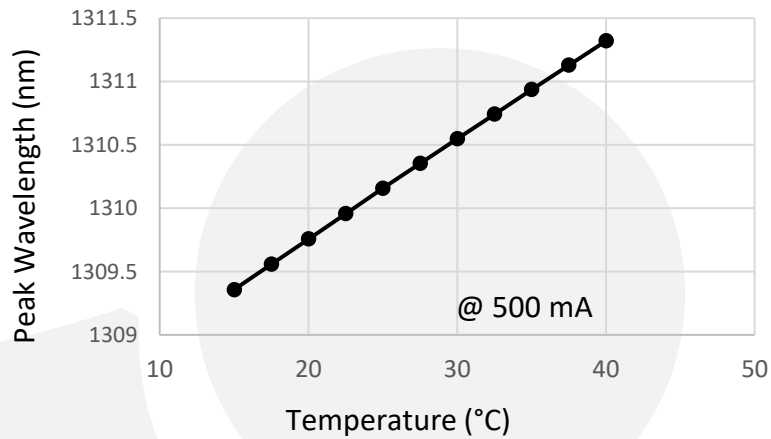
# DFB-1310C-PM

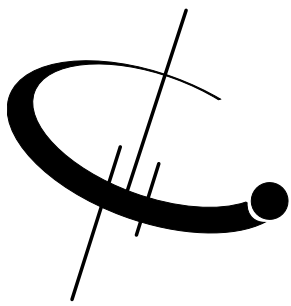
## SAMPLE TEST DATA

### Drive Current Tuned Wavelength



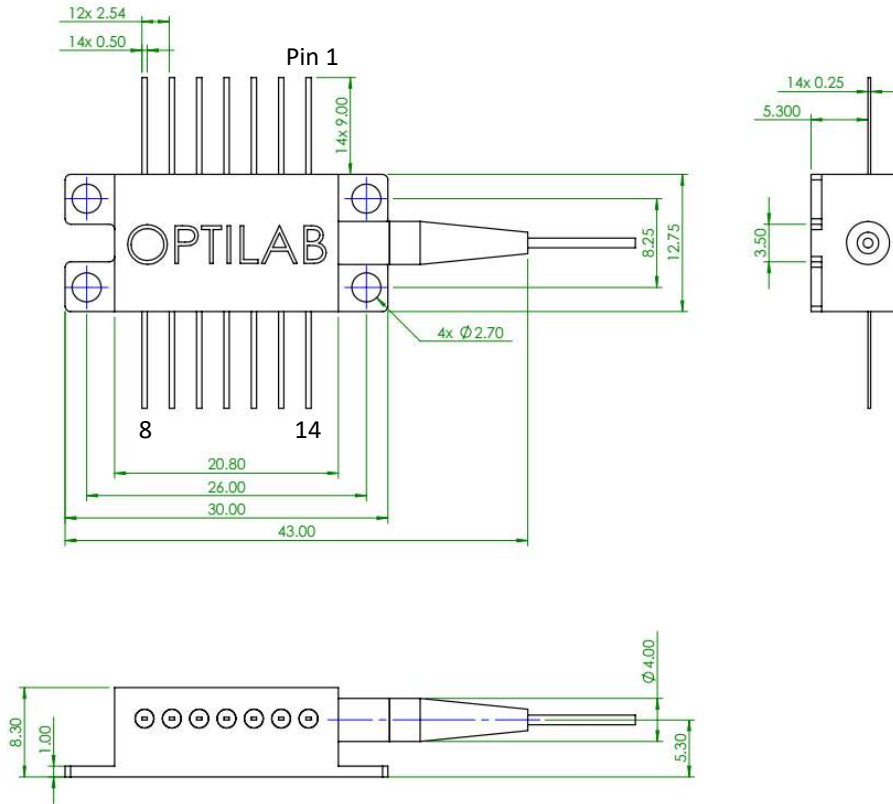
### Temperature Tuned Wavelength





# DFB-1310C-PM

## MECHANICAL DRAWING



## ORDERING OPTION

<b>DFB-XXXX-PM-YYY</b>	
XXXX: Wavelength in nanometer	1270, 1290, 1310C, 1330 nm
YYY: Optical power in mW	Up to 150 mW (Please contact Sales for detail)

