

DEVICE DFB Laser, 1550 nm, Up to 40 mW, PM Output, DM Capable

OVERVIEW	The Optilab DFB-1550H-PM is a single frequency 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
OVERVIEW	operation for seeding the external modulation and coherence interferometry, or
	directly modulated for signal transmission. This MQW DFB laser features 40 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. Contact Optilab for more information.

- FEATURES
- Polarization maintaining output
- Up to 40 mW output power
- Low RIN noise, -145 dB/Hz max.
- Wavelengths Range to select: from 1549
 nm to 1553 nm
- Built in TEC, Thermistor & Monitor PD

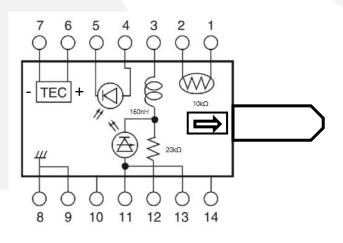
USE IN

- Dense Wavelength Division
 Multiplex (DWH)
- RF over Fiber (RFoF)

- Hybrid Fiber-Coaxial (HFC)
- General laboratory and research use
- Direct Modulation

FUNCTIONAL DIAGRAM

Pin#	Desc	Pin#	Desc
1	Thermistor	8	Case Ground
2	Thermistor	9	Case Ground
3	LD- (Bias)	10	NC
4	PD+	11	LD+
5	PD-	12	LD RF -
6	TEC+	13	LD+
7	TEC-	14	NC







optilab

DFB-1550H-PM

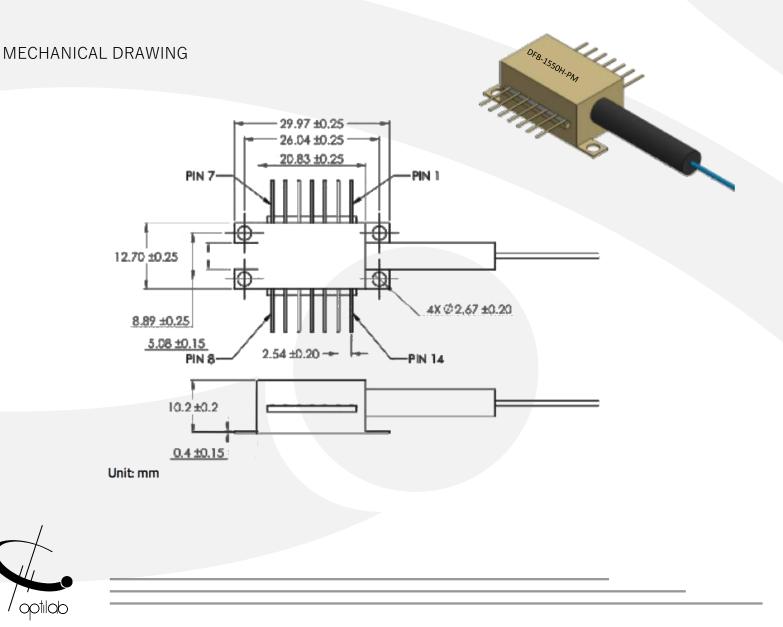
	Wavelength Range	1549nm-1553nm
SPECIFICATIONS	Wavelength Accuracy	±2 nm
	Wavelength Tuning	± 1.5 nm
	Optical Output Power	Up to 40 mW
	Operating Current	650 mA
	Forward Voltage	2.5 V typ.
	Series Resistance	25 Ω typ.
	Threshold Current	25 mA typ.
GENERAL	Monitor Current	0.10 mA min., 1.0 mA max.
GENERAL	Photodiode Dark Current	2 nA typ., 100 nA max.
	Side Mode Suppression	40 dB min.
	Linewidth	3 MHz max
	Optical Isolation	35 dB typ.
	Relative Intensity Noise	-160 dB/Hz max.
	Polarization Extinction Ratio	20 dB typ.
	Operating Temperature	-10°C to +60 °C
MECHANICAL	Storage Temperature	-40°C to +70 °C
	Operating Humidity	95% @ < 30 °C
	Optical Fiber Type	PANDA PM
	Optical Connector	FC/APC, other available
TEC AND THERMISTOR	TEC Current	1.0 A max.
CHARACTERISTICS	TEC Voltage	2.4 V max.
	TEC Resistance	2.4 Ω typ.
	Thermistor Resistance	10 +/-0.5 kOhm @ 25°C, NTC
	Thermistor B Constant	3,270 K min., 3,450 K typ., 3,630 K max.
	Deventer	nv
	Reverse Voltage	2 V
ABSOLUTE		
	Operating Current	400 mA
	Operating Current PD Reverse Voltage	400 mA 20 V
ABSOLUTE MAXIMUM RATING	Operating Current	400 mA



OPTIONS

DFB-XXXXH-PM-YY

- **XXXX:** Wavelength in nm :1549 ~ 1553
- YY: Output Power in mW :Up to 40



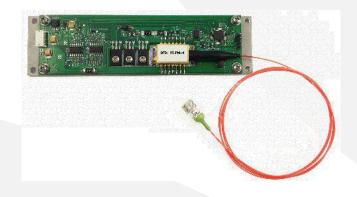


AVAILABLE ACCESSORIES

UNIVERAL LASER DIODE CONTROLLER (ULDC)



ULDC is a fully integrated laser diode controller with precise current and temperature setting. With a Zero Insertion Force (ZIF) adaptor, ULDC can be used with all 14 pin laser diodes. It also features ~2MHz direct modulation with external board



DFB-1550-PM can be ordered as DFB- PM-M, which allows DFB laser's operating temperature and output power precisely controlled to ensure constant wavelength and power stability. It can be used for module level integration system.

