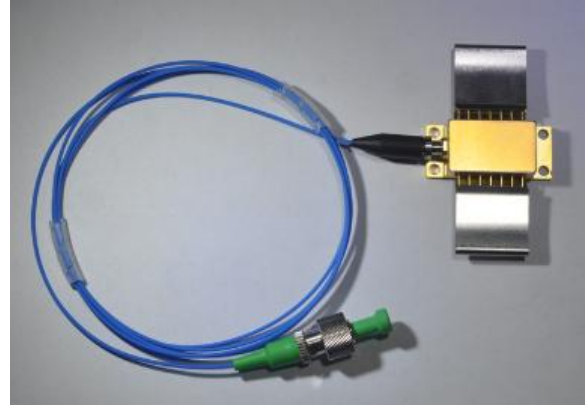


1310nm High Power Narrow linewidth DFB Laser

PRODUCT OVERVIEW

1310nm DFB is a high power and narrow linewidth laser diode. The laser is butterfly packaged and coupled out using single mode fiber. The laser diode has up to 80 mW output power, very low RIN, low phase noise and narrow linewidth. The packaged laser has industry-standard footprint, mounting pattern and electrical connections makes it an easy drop-in replacement for existing systems. The laser is designed for ideal semiconductor optical solution in multiple applications, such as remote sensing, distributed temperature, strain, acoustic fiber optical sensing, high resolution spectroscopy, FMCW LiDAR, etc.



Key Features:

- Single longitudinal mode
- High Output Power
- Narrow optical linewidth
- High Side-Mode Suppression Ratio
- High frequency tuning bandwidth
- Cost-Effective

Applications:

- FMCW LiDAR
- Coherent communications
- Acoustic and seismic sensing
- Interferometric fiber optic sensing
- Metrology and spectroscopy

Electro-Optical Characteristic

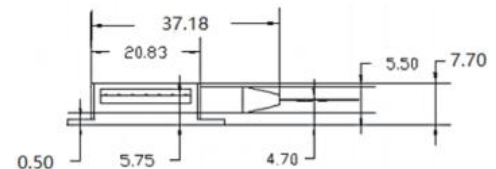
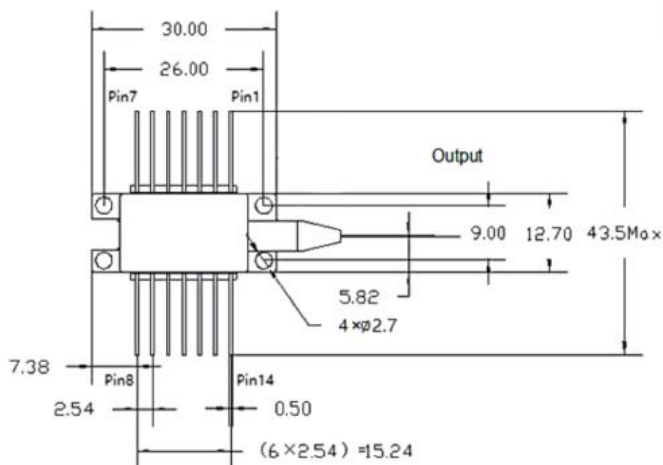
Parameter	Symbol	Condition	Min	Typical	Max	Unit
Central Wavelength	λ	T=25°C, CW		1310		nm
Linewidth	$\Delta\lambda$	T=25°C, I= 300mA		85	100	kHz
Threshold Current	I_{th}	T=25°C		30	35	mA
Output Power	P_{out}	T=25°C, I=300mA	80			mW
Relative Intensity Noise	RIN	T=25°C, @100kHz		-145		dBc/Hz

Absolute Maximum Rating

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these or any other conditions in excess of those given in the operational sections of the data sheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Min	Max	Unit
Operating Temperature	Top	0	70	°C
Storage Temperature	Tst	-20	80	°C
Reverse Voltage	Vr		2	V
Maximum Operating Current	Iop		500	mA

Mechanical Drawings and Pin Definition

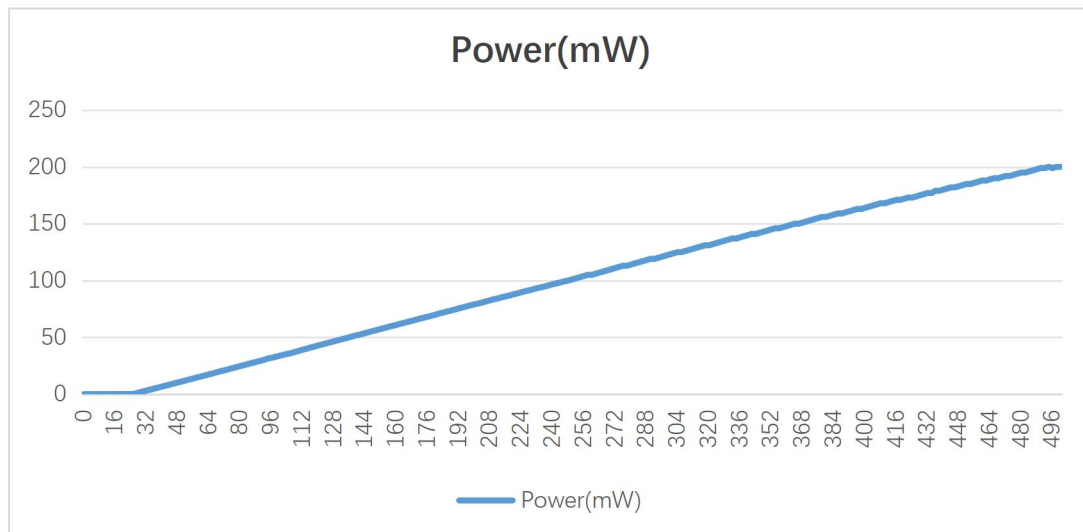


Pin Assignments			
1	TEC (+)	14	TEC (-)
2	Thermistor	13	GND
3	NC	12	NC
4	NC	11	Chip (-)
5	Thermistor	10	Chip (+)
6	NC	9	NC
7	NC	8	NC

Typical Test Data

Measured P-I curve

DFB Laser Source Spec



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