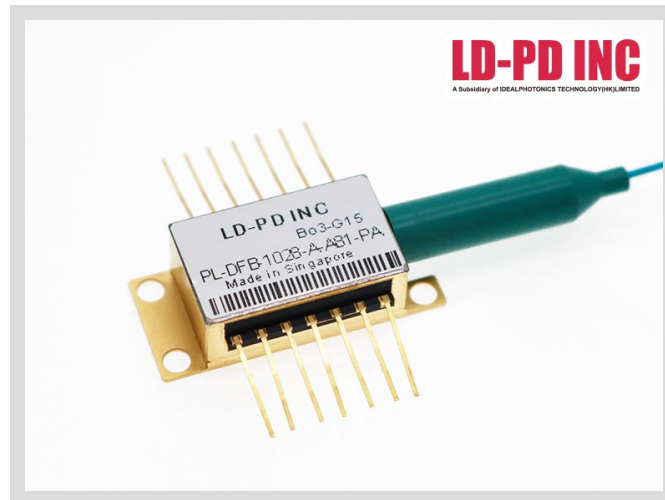


1028nm DFB Laser Diode



Description:

The PL-DFB-1028-A-A81 1028nm DFB laser diode module made by LD-PD is a cost effective, highly coherent laser source. The DFB laser diode chip is packaged in an industry standard hermetically sealed 14 pin butterfly package with TEC and PD Built in.

Features:

- Narrow Linewidth < 2MHz
- Excellent wavelength control and stability
- Industry Standard 14 pin Butterfly package
- Mode-Hop free tuning
- Excellent reliability
- Customer specific wavelengths available

Application:

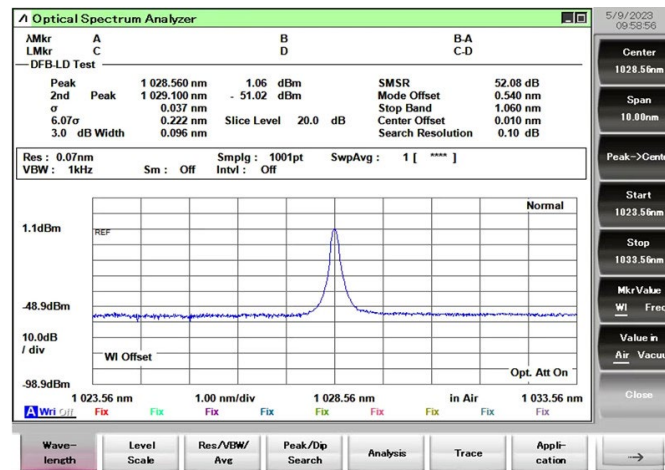
- Tunable diode laser absorption spectroscopy
- Seed laser
- Fiber laser

Laser Specifications:

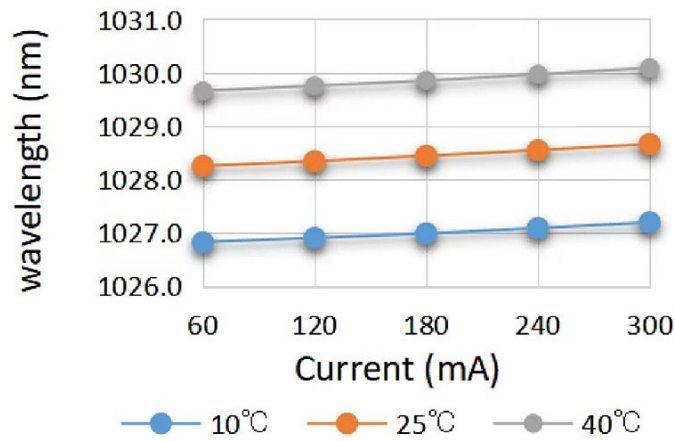
Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	1027.5	1028.0	1028.5	nm
Side Mode Suppression Ratio	SMSR	30	40		dB
Threshold Current	I _{th}		20	30	mA
Operating Current	I _{op}		180	250	mA
Chip output Power	P _f	50	70	90	mW
Quantum Efficiency	η	0.08	0.12		mW/mA
Current Tuning Coefficient	$\Delta\lambda/\Delta I$		0.015		nm/mA
Temperature Tuning Coefficient	$\Delta\lambda/\Delta T$		0.12		nm/K
Forward Voltage	V _f		1.3	2	V
Thermistor Resistance	RT	9.5	10	10.5	K Ω
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

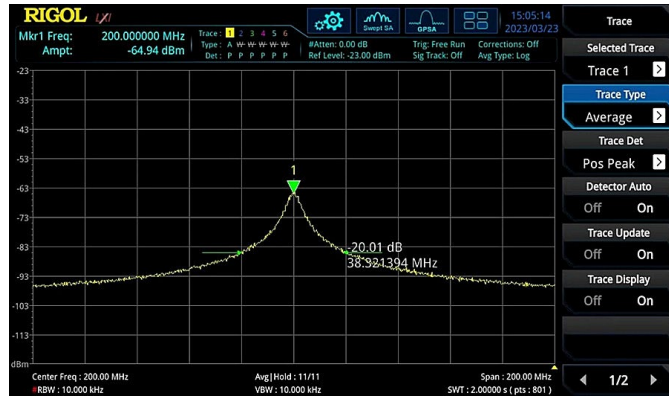
Spectrum:



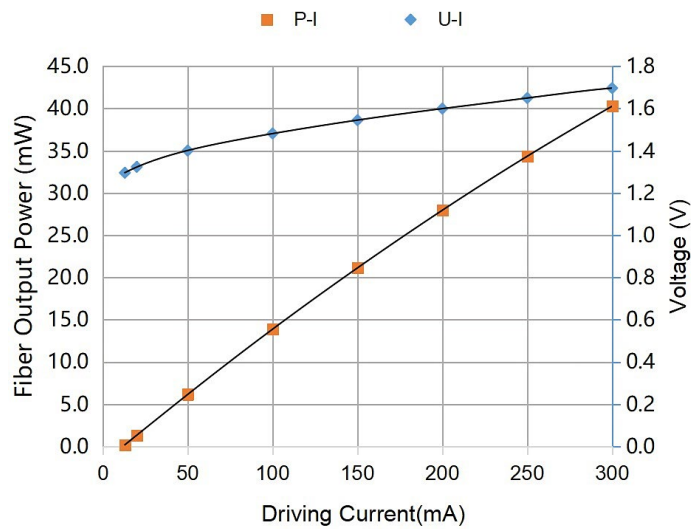
Tuning Characteristics:



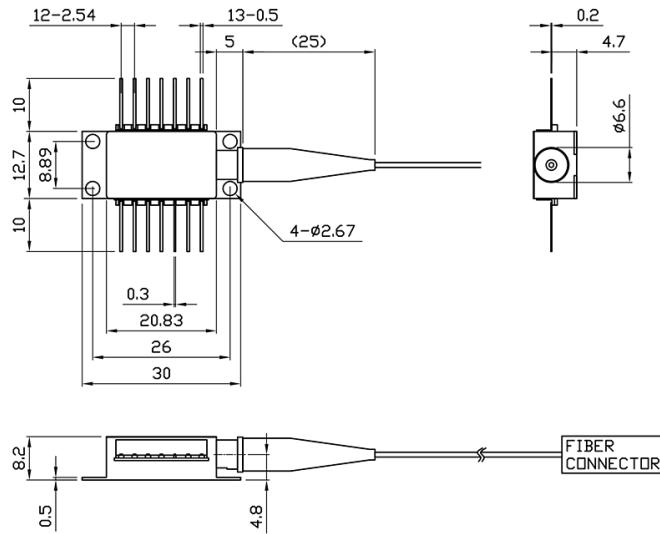
DFB Linewidth Testing Result:



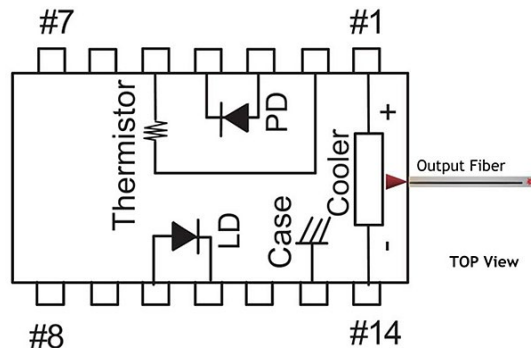
L-I Curve:



Package Size:



Pin definition:



1	Thermoelectric Cooler (+)	8	Thermoelectric Cooler (+)
2	Thermistor	9	Thermistor
3	PD Monitor Anode (-)	10	PD Monitor Anode (-)
4	PD Monitor Cathode (+)	11	PD Monitor Cathode (+)
5	Thermistor	12	Thermistor
6	N/C	13	N/C
7	N/C	14	N/C

Absolute Maximum Ratings:

Item	Unit	Min	Typ	Max
Case Temperature	°C	-5	25	70
Chip Temperature	°C	+10	25	40
Operating Current	mA	0	180	250
Forward Voltage	V	0.8	1.2	2.1
TEC Current	A	-	1.2	1.2
Reverse Voltage (LD)	V	-	-	2.0
Reverse Voltage (PD)	V	-	-	20