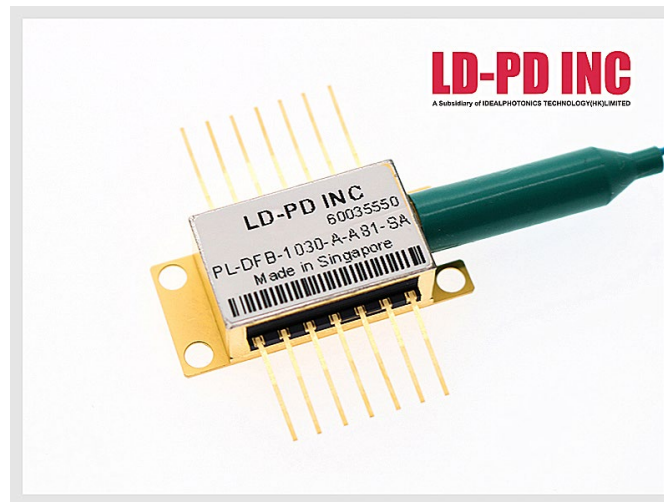


1030nm DFB Laser diode for Seed Laser



Description:

The PL-DFB-1030-A-A81 1030nm 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

Optional:

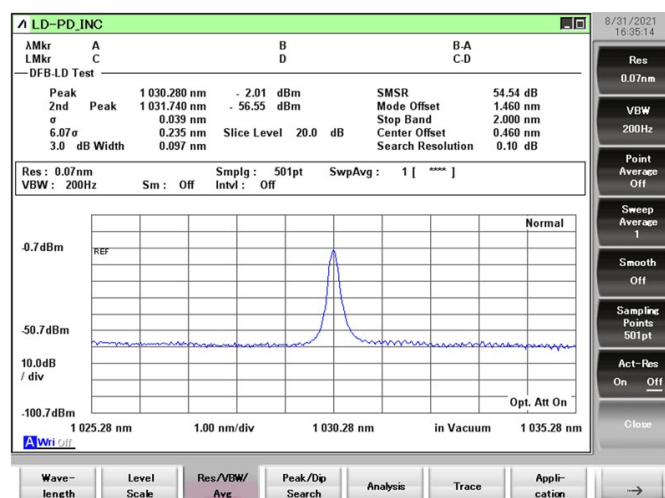
- Tunable diode laser absorption spectroscopy
- Seed laser
- Fiber laser

Laser Specifications:

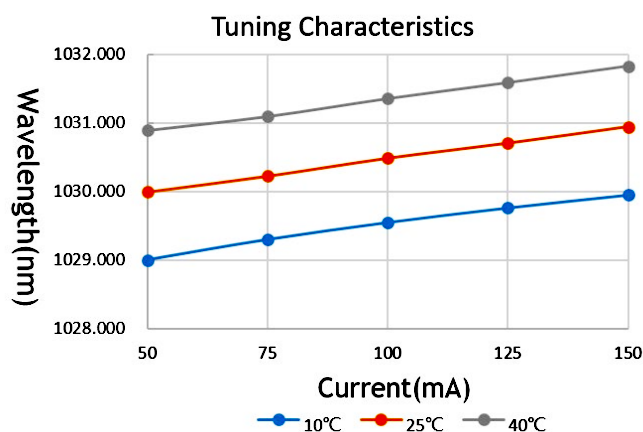
Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	1029.5	1030.0	1030.5	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	R _T	9.5	10	10.5	K Ω
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

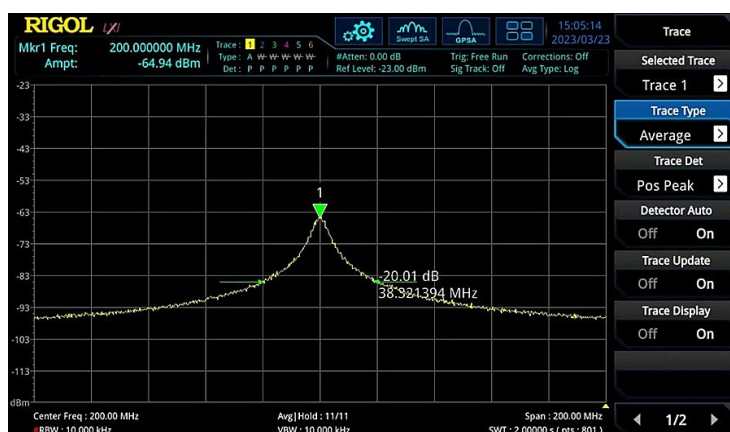
Spectrum:



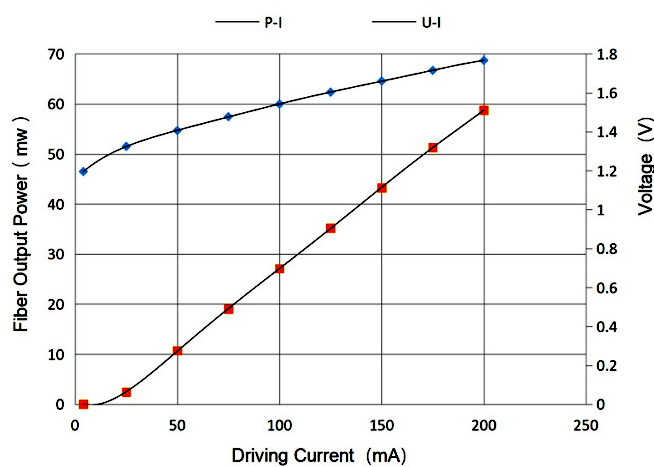
Tuning Characteristics:



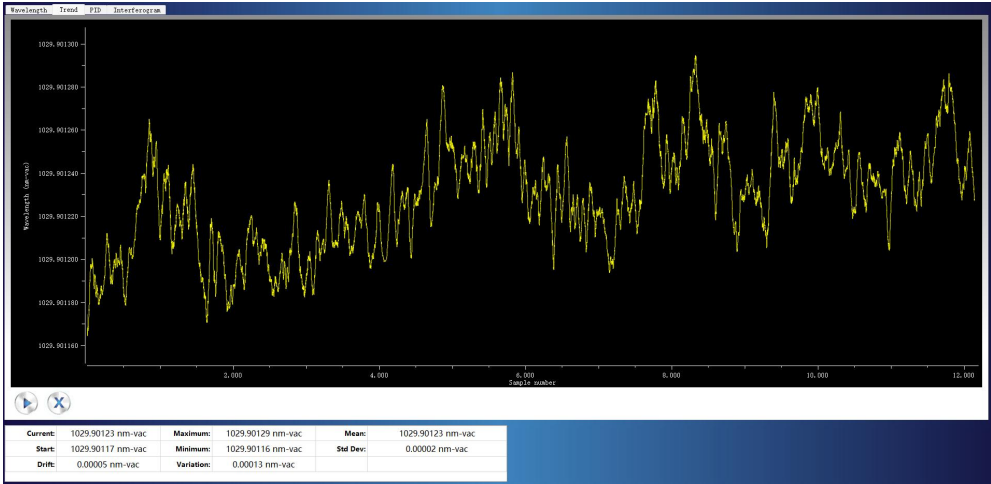
DFB Linewidth Testing Result:



L-I Curve:



Wavelength Stability Test Result:



Mode Hope Free Tuning Range:

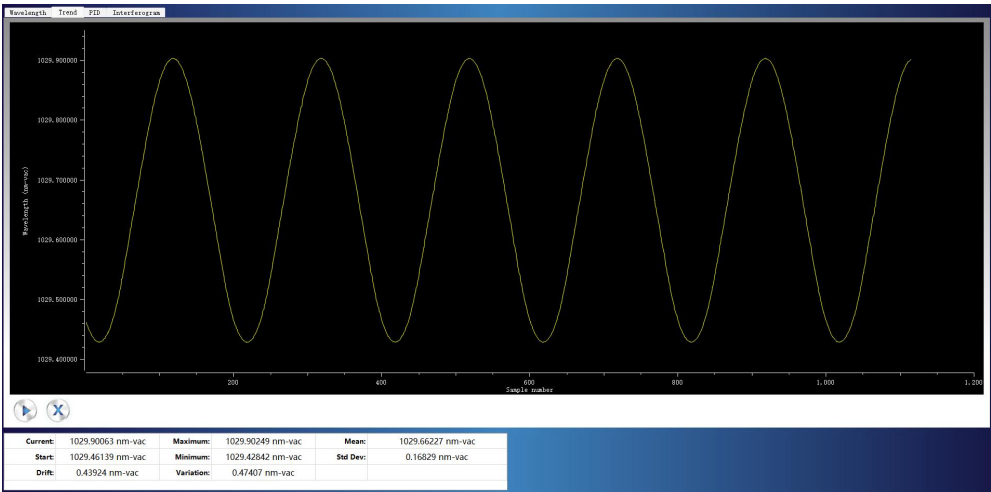


Diagram illustrating the TOP View of the device. The device is a rectangular package with pins labeled #7, #1, #8, and #14. Internal components include a Thermistor, a Laser Diode (LD), a Photodiode (PD), and a Cooler. The Thermistor is connected to pins #7 and #1. The LD is connected to pins #8 and #14. The PD is connected to pins #7 and #1. The Cooler is connected to pins #1 and #14. An Output Fiber is connected to the Cooler.

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

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

OEM Info:

PL-DFB- □□□□- -A8▽- XX

□□□□: Wavelength

0976: 976nm

1030: 1030nm

1532: 1532nm

1392: 1392nm

1512: 1512nm

1567: 1567nm

1653.7: 1653.7nm

: Output Power

A: 40mW

B: 70mW

▽: Wavelength Tolerance

1: ±1nm

2: ±2nm

XX: Fiber and Connector Type

SA=HI1060+ FC/APC

SP=HI1060+ FC/PC

PA=PM980 Fiber+ FC/APC

PP=PM980 Fiber+ FC/PC