

795nm DFB Laser diode



Description:

The PL-DFB-A1-795-R 795nm 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. We special design the area only work in room Temperature. Our diode has good performance from 20-30°C.

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:

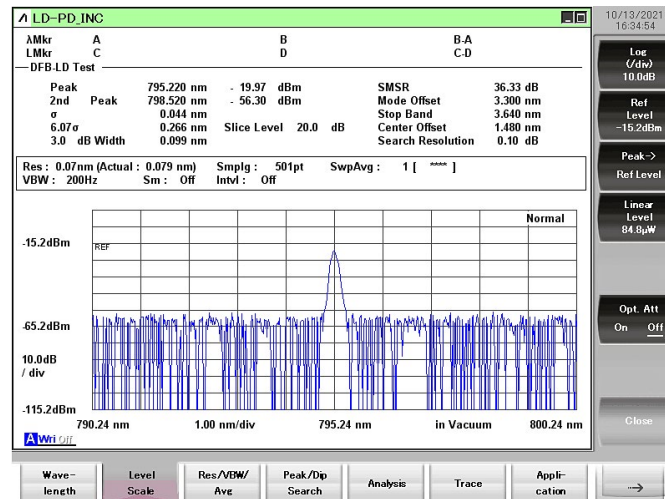
- Tunable diode laser absorption spectroscopy
- Seed laser
- Fiber laser

Laser Specifications:

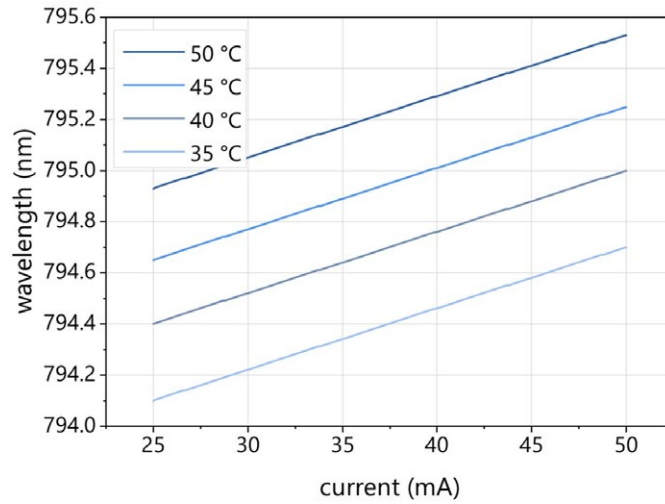
Electrical/Optical Characteristics (Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	794.5	795.0	795.5	nm
Side Mode Suppression Ratio	SMSR	30	40		dB
Threshold Current	I _{th}		20	30	mA
Operating Current	I _{op}		150	250	mA
Operation Temperature	T _{op}	15	25	45	°C
Chip output Power	P _f	30	40	50	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				

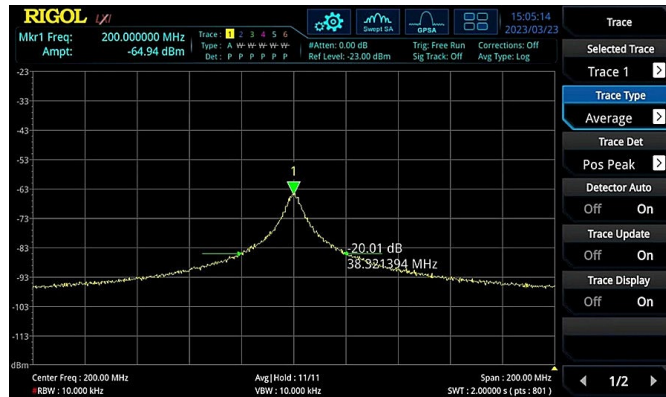
Spectrum:



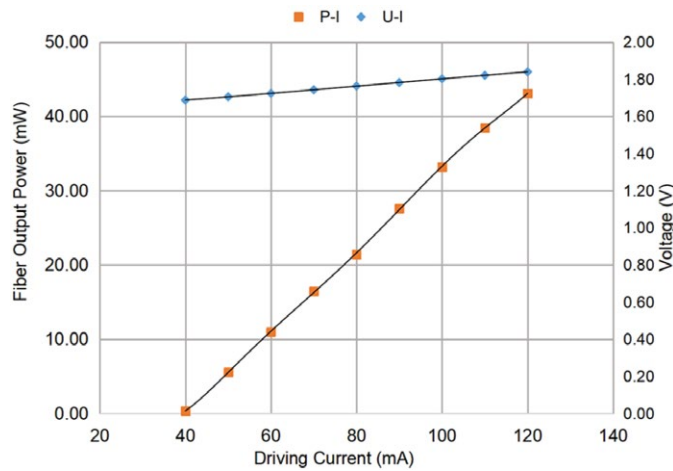
Tuning Characteristics:



DFB Linewidth Testing Result:



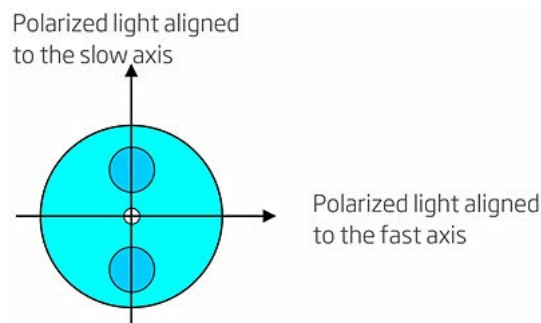
L-I Curve:



Panda PM980 Fiber Nominal Characteristics and Tolerances:

Parameters	Specification
Fiber Bend Radius	3cm
Max Attenuation	2.1dB/km
Cladding Diameter	125um
Coating Diameter	250um
Core Cladding Concentricity	≤0.5um
Mode Field diameter	6.6um

NA=0.12;FC/APC (narrow key)

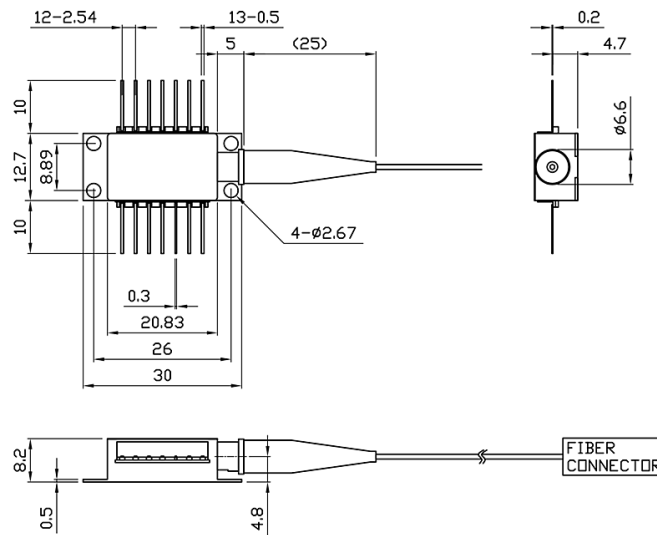


Note: The PM fiber and the connector key are aligned to the slow axis, fast axis is blocked.

Thermistor specs:

Parameters	Value	Unit
Thermistor Type	NTC	
Resistance@25deg	10000	ohm
Resistance Tol.±	1	%
Beta 0-50 deg	3375	K

Package Size:



Pin definition:

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	30
Operating Current	mA	0	120	250
Diode Forward Current in Pulse operation	mA		450	600
Forward Voltage	V	0.8	1.2	2.0
TEC Current	A	-	-	3
TEC Voltage	V			4
Reverse Voltage(LD)	V	-	-	2.0
Reverse Voltage(PD)	V	-	-	20

Ordering Info:

PL-DFB-□□□□-☆-A8▽-XX

□□□□: Wavelength

795: 795nm

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=HI780+ FC/APC

SP=HI780+ FC/PC

PA=PM980 Fiber+ FC/APC

PP=PM980 Fiber+ FC/PC