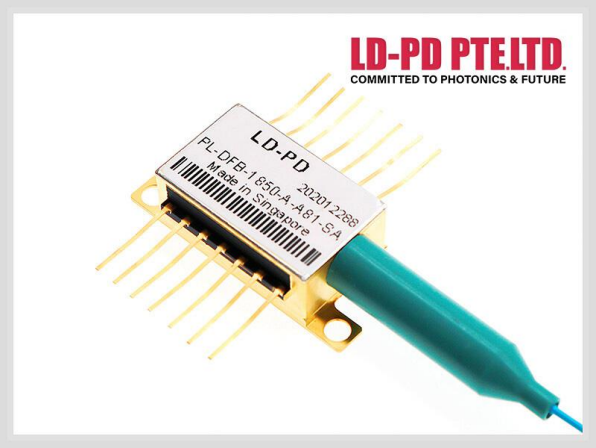
1850nm DFB Laser Diode for Seed laser



Description

The PL-DFB-1850-A-A81 1850nm 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
- Excellant reliability
- Customer specific wavelengths available

Application

- Tunable diode laser absorption spectroscopy
- CH4 Monitoring

Laser Specifications

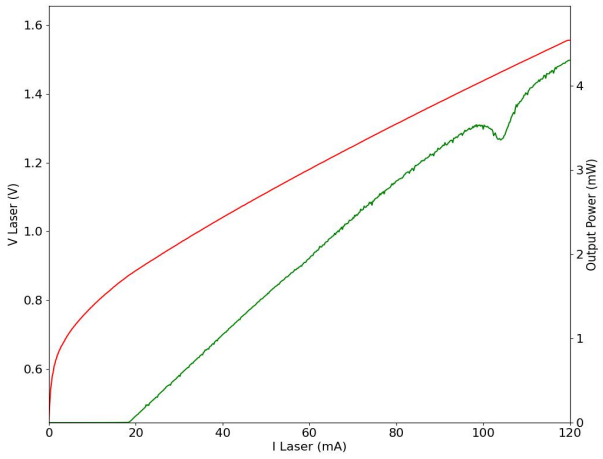
Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	1849	1850	1851	nm
Side Mode Suppression Ratio	SMSR	30	40		dB

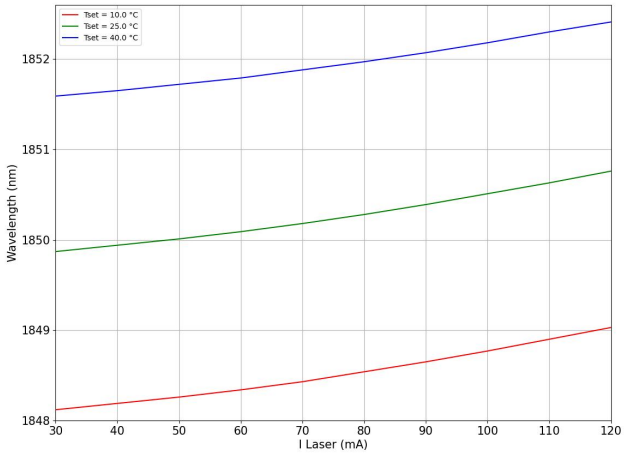
Threshold Current	Ith		20	30	mA
Operating Current	Iop		80	120	mA
Chip output Power	Pf	2	3	5	mW
Quantum Efficiency	η	0.08	0.12		mW/mA
Current Tuning Coefficient	Δλ/ΔI		0.015		nm/mA
Temperature Tuning Coefficient	Δλ/ΔT		0.12		nm/K
Forward Voltage	Vf		1.3	2	V
Thermistor Resistance	RT	9.5	10	10.5	KΩ
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

Optical Spectrum data(Testing Condition@25deg,50mA)

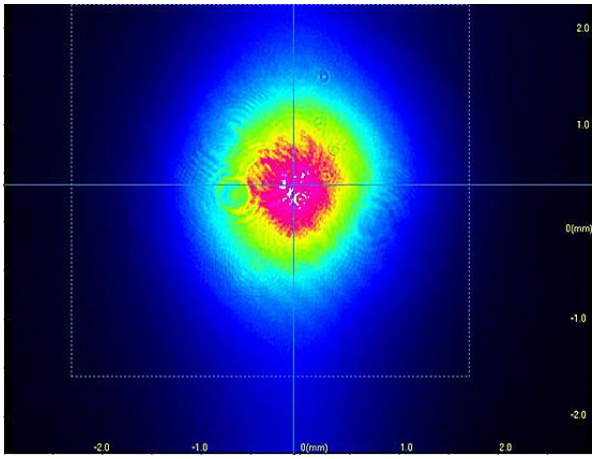
L-I Curve



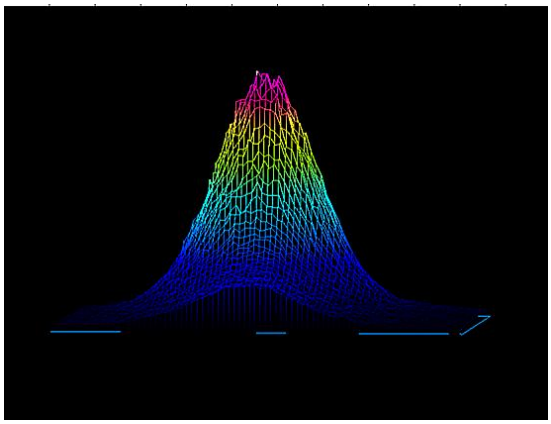
Tuning Characteristics



Beam Quality

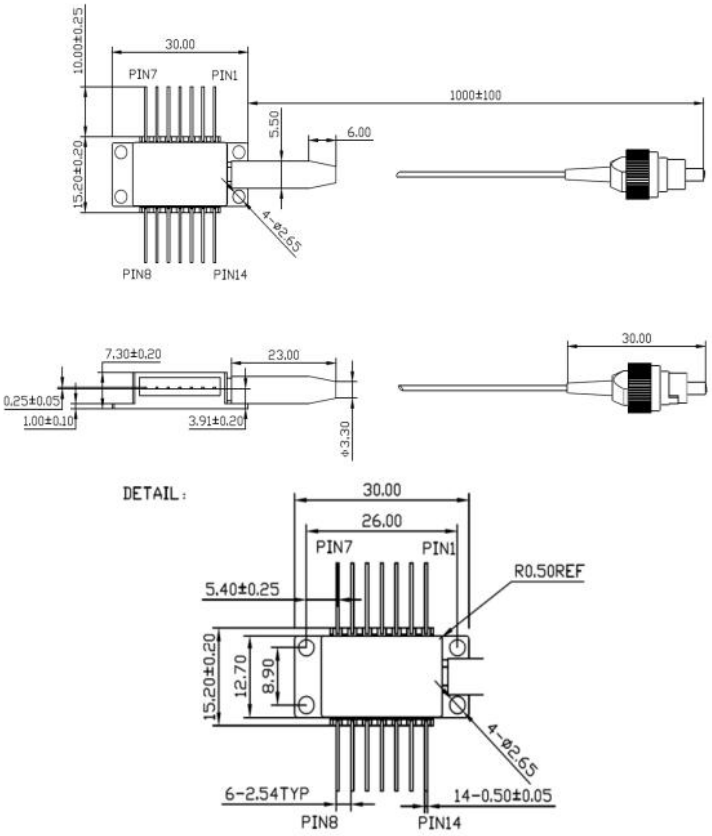


2D

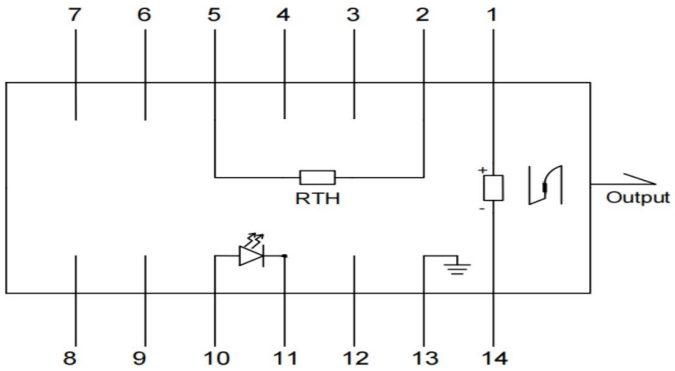


3D

Package Size



Pin definition



Pin Connection

PIN#	Function	PIN#	Function
1	TEC+	8	NC
2	Thermistor	9	NC
3	NC	10	LD+
4	NC	11	LD-

5	Thermistor	12	NC
6	NC	13	Case Ground
7	NC	14	TEC-

Absolute Maximum Ratings

Item	Unit	Min	Typ	Max
Case Temperature	℃	-5	25	70
Chip Temperature	℃	+10	25	40
Operating Current	mA	0	100	120
Forward Voltage	V	0.8	1.2	1.8
TEC Current	A	-	-	1.2
Reverse Voltage（LD）	V	-	-	2.0
Reverse Voltage(PD)	V	-	-	20

Ordering Info

PL-DFB-□□□□-☆-A8▽-XX

□□□□: Wavelength

1512: 1512nm

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1653.7: 1653.7nm

1850: 1850nm

☆ : Output Power

A: 2mW

B: 5mW

▽: Wavelength Tolerance

1: ±1nm

2: ±2nm

XX: Fiber and Connector Type

SA=SMF-28E+ FC/APC

SP=SMF-28E+ FC/PC

PP=PM Fiber+ FC/PC

PA=PM Fiber+ FC/APC