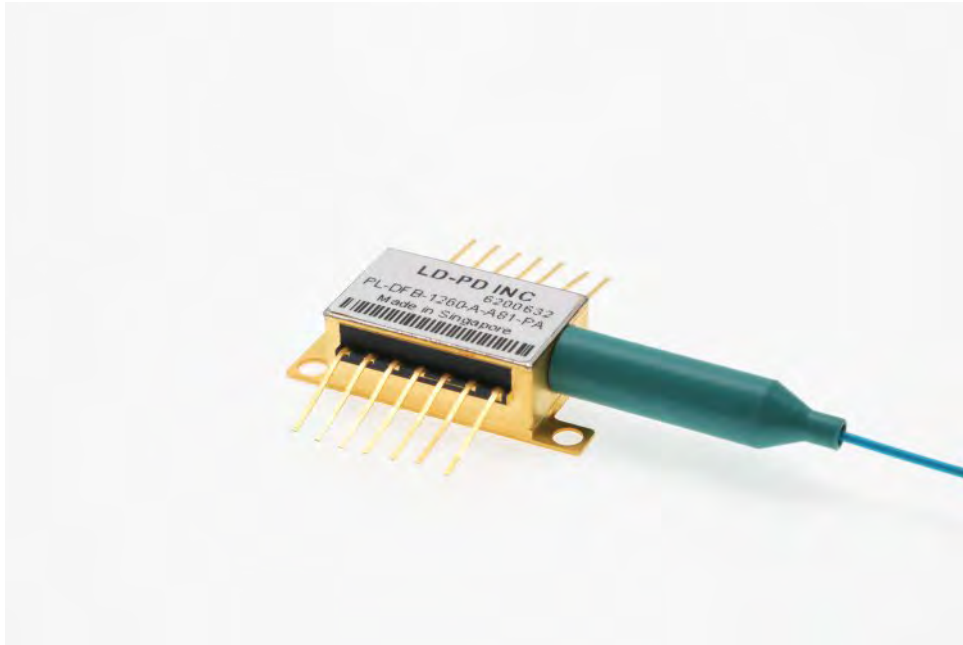


## 1260nm DFB Laser diode for HF SENSING



### Description

The PL-DFB-A1-1260 1260nm 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

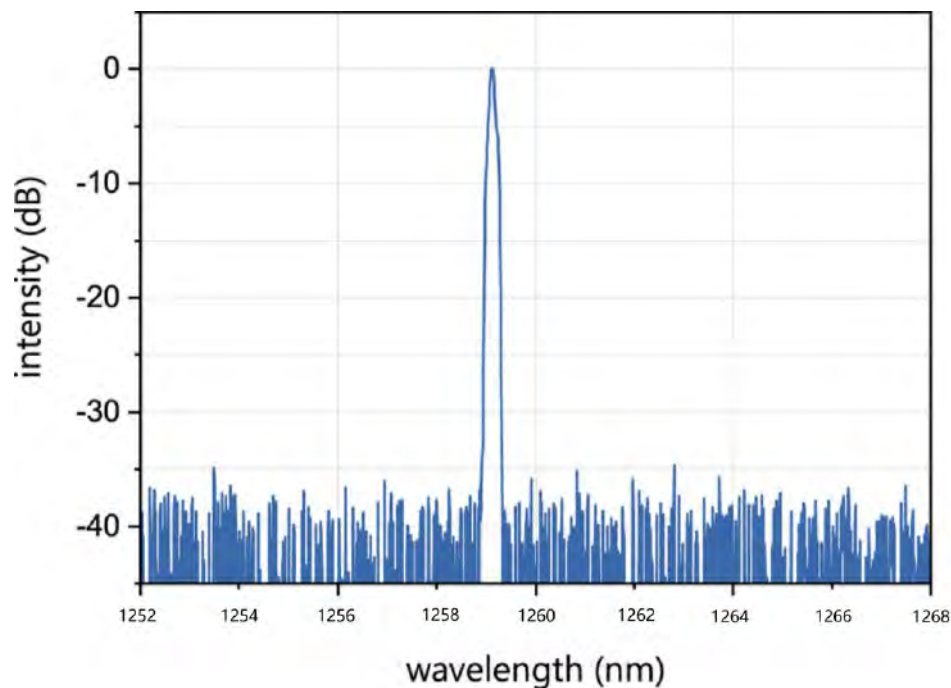
- Tunable diode laser absorption spectroscopy
- Seed laser
- Fiber laser

## E/O Characteristics

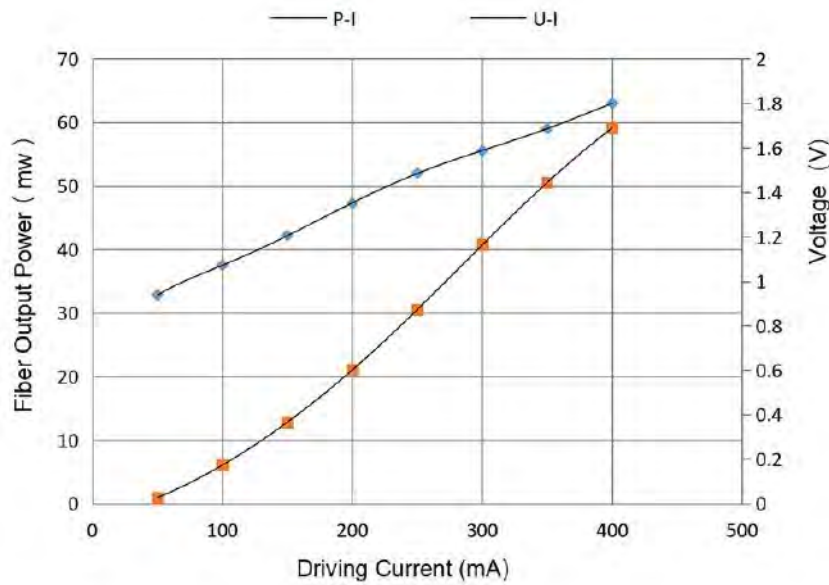
Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	$\lambda$	1259.5	1260.0	1261.5	nm
Side Mode Suppression Ratio	SMSR	30	40		dB
Threshold Current	I <sub>th</sub>		20	30	mA
Operating Current	I <sub>op</sub>		180	250	mA
Chip output Power	P <sub>f</sub>	20	30	50	mW
Quantum Efficiency	$\eta$	0.08	0.12	0.65	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 <sub>f</sub>		1.3	2	V
Thermistor Resistance	R <sub>T</sub>	9.5	10	10.5	K $\Omega$
Thermistor Temp. Coefficient			-4.4		%/°C
Collimation Lense	FC/APC				

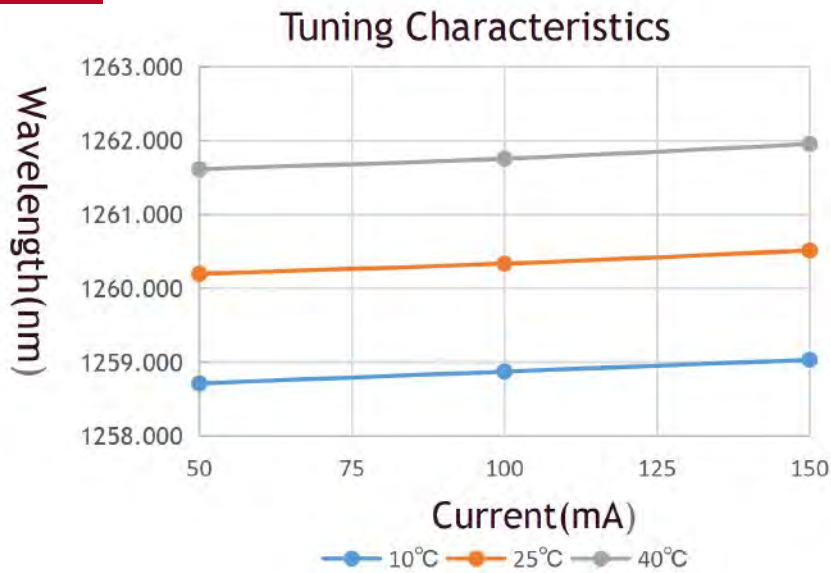
## Spectrum



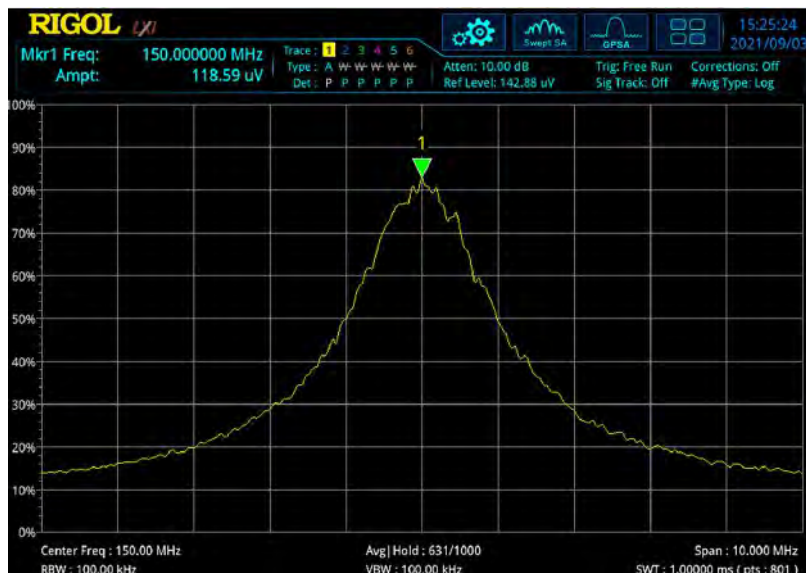
**L-I Curve**



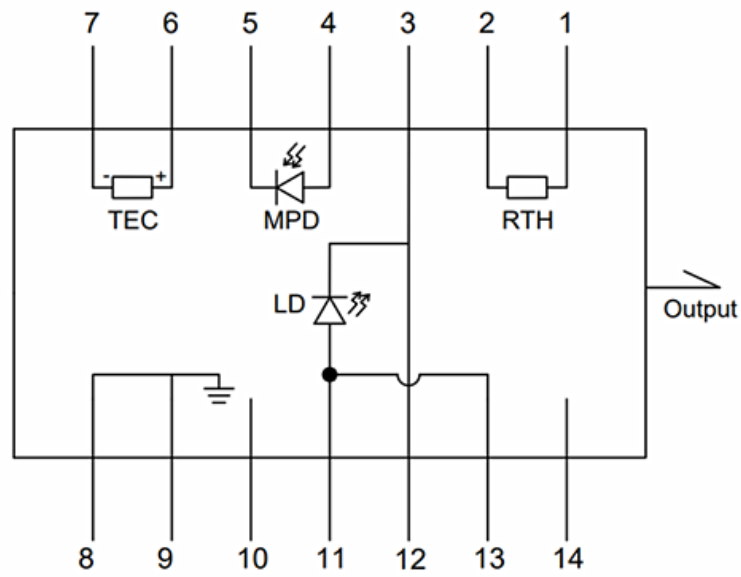
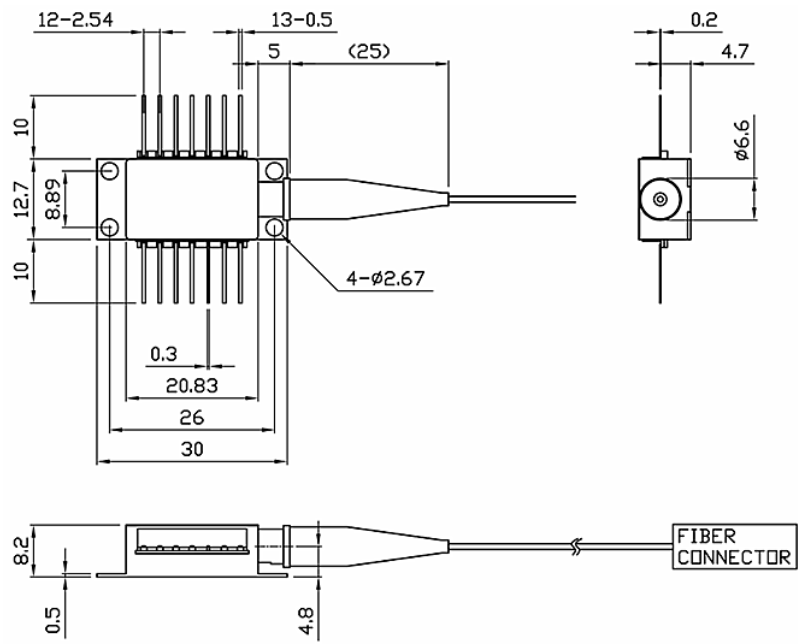
**Tuning characteristics**



**DFB Linewidth Testing Result**



**Package Size**



PIN#	Function	Pin	Definitions
1	Thermistor	8	Case Ground
2	Thermistor	9	Case Ground
3	LD(-)	10	NC
4	Detector (+)	11	LD(+)
5	Detector (-)	12	LD (-), RF
6	TEC (+)	13	LD (+)
7	TEC (-)	14	NC

### Absolute Maximum Ratings

Item	Unit	Min	Typ	Max
Case Temperature	°C	-5	25	70
Chip Temperature	°C	+10	25	40
Operating Current	mA	0	300	500
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

### OEM Info

**PL-DFB- □□□□-☆-A8▽-XX**

□□□□: Wavelength

1200: 1200nm

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=SMF-28E+ FC/APC

SP=SMF-28E+ FC/PC

PA=PM1310 Fiber+ FC/APC

PP=PM1310 Fiber+ FC/PC