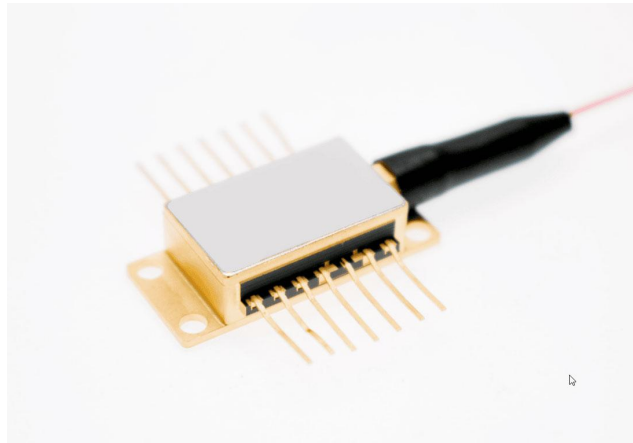


1550nm High Power DFB Narrow Linewidth Laser Diode 50mW



● Product Description

Idealphotonics PHX-C-F-D-C34 DFB laser has the advantages of ultra-low RIN noise, ultra-narrow linewidth and high output optical power. It is currently widely used in applications such as vehicle-mounted laser radar, fiber optic sensor detection systems and high-precision measurement. We can provide customized services according to customer needs and provide corresponding technical support.

● Part Number

PL-DFB-1550-200-50-A81-PA-NL

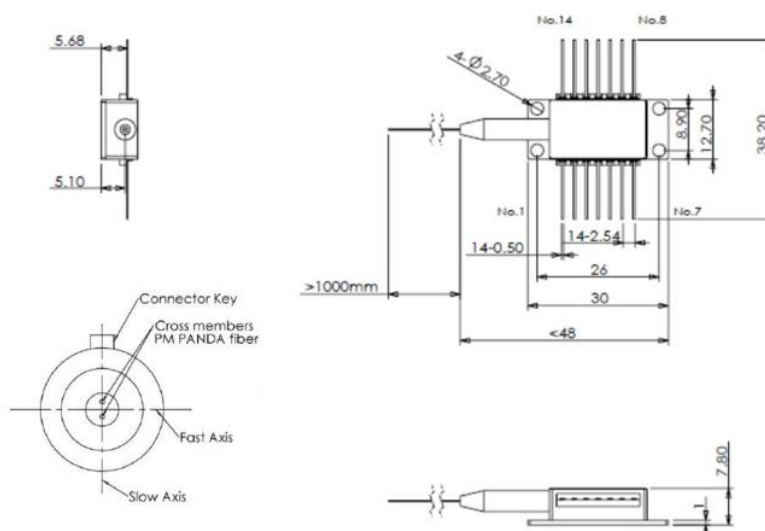
● Product features

Linewidth: 70KHz - 100KHz 、 Output power: 70 - 90mW 、 RIN noise:
-163dBc/Hz @100KHz

● Application area

Tunable diode laser absorption spectroscopy、 LiDAR、 Long-distance fiber optic communications

Dimensional Drawing



Parameters

Performance characteristics

Line width: 70KHz -200KHz

Optical power: 80mW

RIN noise: -163dBc/Hz @100KHz

Specifications	symbol	Min.	Typical	Max.	Unit	Condition
Output power	Po	60	80		mW	CW
Center wavelength	λ_c	λ I-0.5	* λ I	λ I+0.5	nm	T=25℃
Spectral linewidth (FWHM)	$\Delta \nu_L$		200	300	KHz	Lorentz linewidth
Edge mode suppression ratio	SMSR	40			dB	CW, @Po
Polarization extinction ratio	PER	20			dB	Applicable to polarization maintenance, along the slow axis

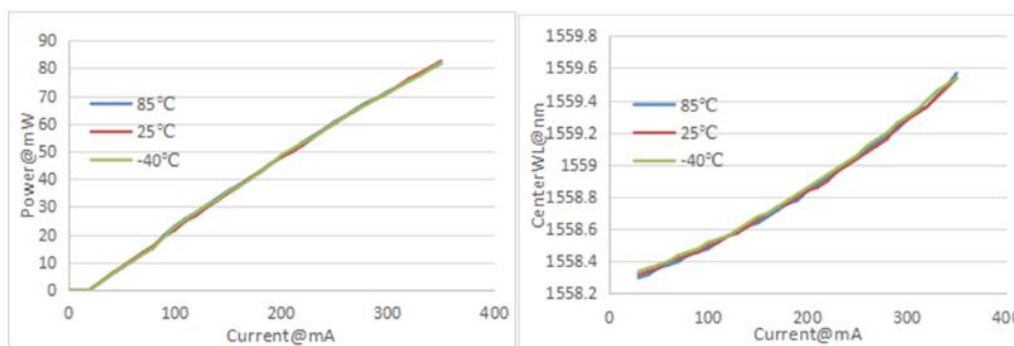
Relative intensity noise	RIN		-163	-155	dB/Hz	
Optical isolation	ISO	40			dB	
TEC setting temperature	TTEC	15		40	°C	
Threshold current	I _{th}		15	30	mA	@TTEC
LD operating current	I _b			400	mA	CW, Po
LD operating voltage	V _f		1.5	1.8	V	CW, Po
PD bias voltage	V _R	4.75	5	5.25	V	Cathode to anode
PD current	I _{mc}			2	mA	@Po
PD dark current	I _{md}			1	nA	V _R =5V
Operating temperature	T _o	-40	25	80	°C	
Storage temperature	T _s	-40		80	°C	

* λ I: C Band ITU Standard optional ITU-CXX (XX= 24, 28, 32, 36, 44)

Dimensions and pin definitions

PN#	describe	PN#	dscribe
1	Thermistor	8	NC
2	Thermistor	9	NC
3	LD cathode (-)	10	NC
4	PD anode (-)	11	LD Anode (+)
5	PD cathode (+)	12	NC
6	TEC anode (+)	13	Shell
7	TEC cathode (-)	14	NC

Typical photoelectric curve



Central wavelength

Ordering Information

PL-DFB-□□□□ - △-☆-A8▽-XX-NL

□□□□: **Wavelength**

1550: 1550nm

1560: 1560nm

△: **Narrow linewidth**

70: 70KHz

☆: **Output power**

50: 50mW

100: 100mW

150: 150mW

▽: **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

NL: Narrow linewidth@70KHZ