1550nm narrow linewidth frequency stabilized laser module 2kHz-5kHz polarization maintaining

Product Description

Idealphotonics' narrow linewidth semiconductor laser module has the characteristics of ultra-low RIN noise and ultra-narrow linewidth, and is currently widely used in automotive lidar and fiber optic sensor detection systems.

- ## Product features

  Linewidth: 2kHz -5kHz、 Optical power: 16dBm、 RIN noise: -165dBc/Hz @100kHz

- ## Part Number

  MP-NL-1550-40-2k-PA-M

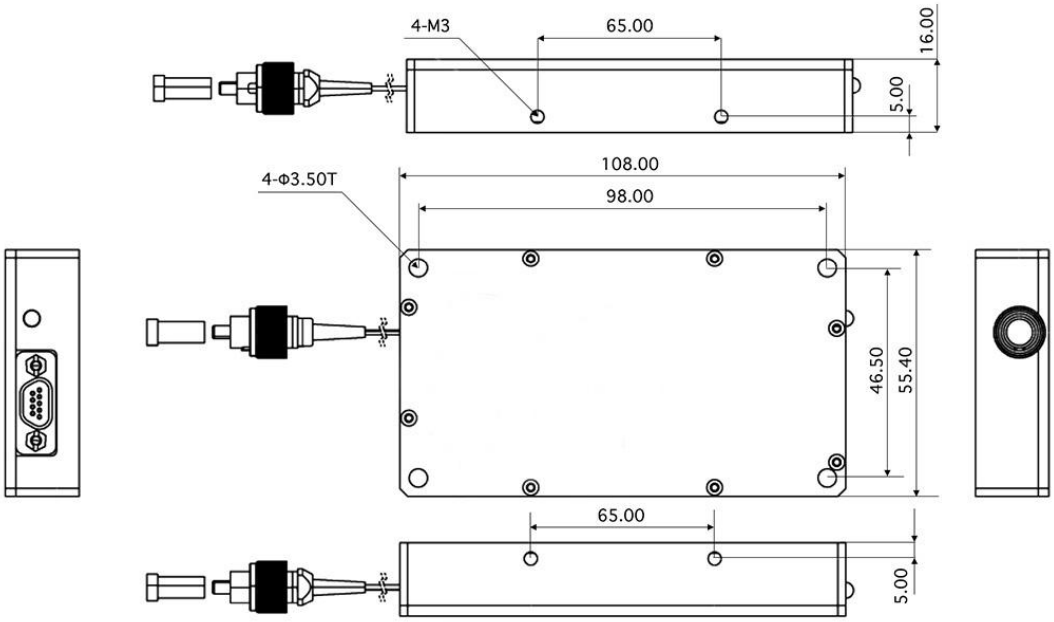
- ## Application area

  Quantum Communication | Fiber Optic Sensing | Coherent Optical Communication | Optical Frequency Standard Transfer | Gravitational Wave Detection

- ## Core parameters

Operating wavelength	Lorentz linewidth	Output power
1550nm	2kHz -5kHz	16dBm

Dimension Drawing



General Parameters

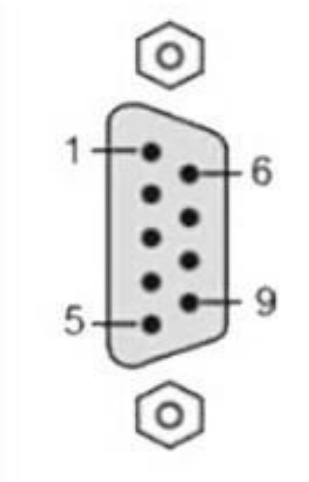
Specifications

Parameter	Min.	Typical	Max.	Unit	Notes
wavelength	1530	1550	1570	Nm	Customizable
Operating temperature	-10		70	℃	
Output power		16	17	dBm	Customizable
RIN noise		-165	-163	dBc/Hz @100kHz	
Operating current		400	2000	mA	
Operating voltage	4.75	5	5.25	V	
Lorentz linewidth [1]		2	5	KHz	Customizable

Side Mode Suppression Ratio		50		dB	
Output method	Optical fiber output（default）				
Connector type	FC/APC（default）				
Fiber type	SM/PM				

Note: The line width test solution is a delayed self-heterodyne beat frequency test

Pin defination



PIN#	Name	Function / specifictaion
1	V_{cc}	Input power 5V/3A, low noise
2	Tx(output)	Data output, RS232/3.3 to5V TTL232 (default)
3	Rx(input)	Data input, RS232/3.3 to5V TTL232 (default)
4	Gnd	Ground
5	Gnd	Ground
6	V_{cc}	Input power 5V/3A, low noise

PIN#	Name	Function / specifictaion
7	Mod+(input)	N/A
8	Mod-(input)	N/A
9	Enable(input)	Laser output enable, low level on (default on)

Ordering information

PL-NLWM-□□□□-☆-▽- XX-XXX

□□□□：Wavelength

530~1565nm ITU-T DWDM,Optional

☆：Output Power

A：5mW

B：10mW

C：20mW

D：40mw

▽：Modulation Mode

1：DM

2：CW

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

PA=PM Fiber+ FC/APC

XXX: Module grade

A:<3KHZ,

B:<5KHZ,

C:<10KHZ,

D:<100KHZ