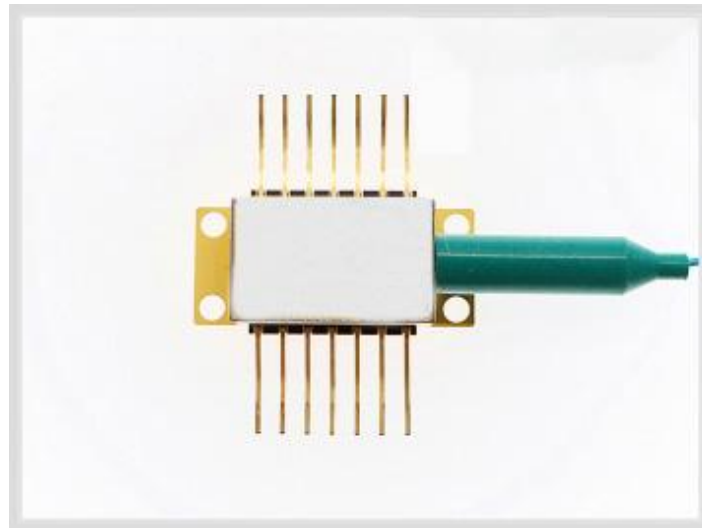


1550nm 450mW SM FP Laser Diode



● Product Description

The 1550nm single-mode laser module adopts a 14-pin butterfly package. All chips are mounted on a 2.1mm COS (Chip on Submount) inside the package, and it comes standard with a built-in thermistor, TEC, and photodiode. Our 1550nm single-mode product line is widely used in applications such as optical data storage, printing, laser ranging, illumination, defense, spectral analysis, and graphics processing.

● Product features

Stable output; FP single-mode laser; Low noise; Wide operating temperature range

● Part Number

MP-FP-1550-450-14BF-SA

● Application area

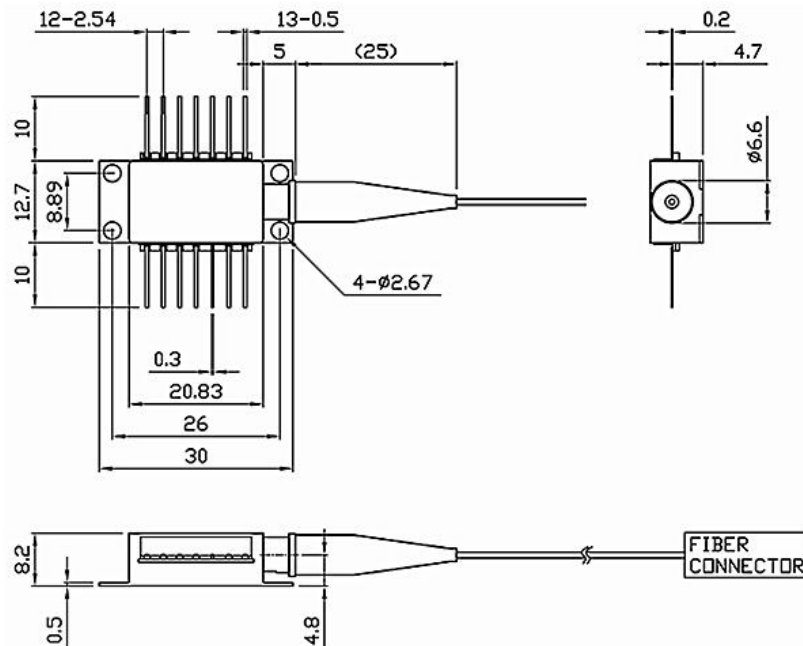
Fiber optic communication systems | Optical sensing | Laser ranging |

Laboratory research | Industrial inspection equipment

● Core parameters

Central Wavelength	Spectral Width	Output Power
1540 nm - 1560 nm	3 nm - 9 nm	450mW

● Dimension Drawing





● General Parameters

Detailed Parameters

Specification Table

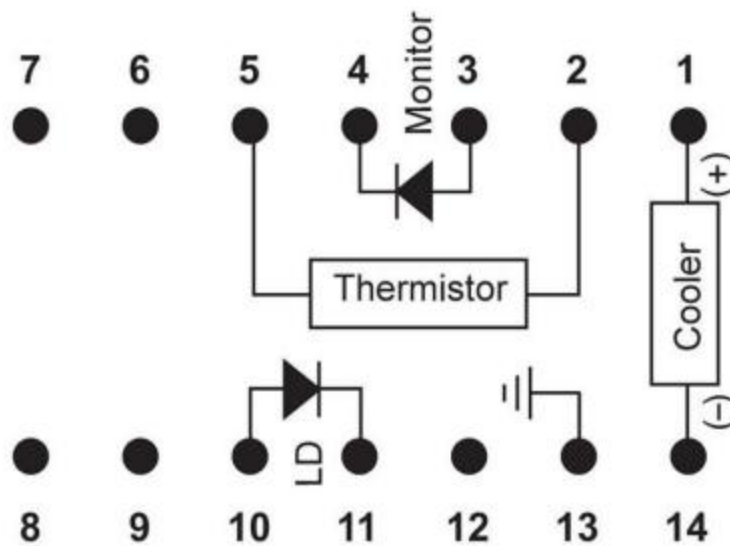
Electrical / Optical Characteristics (Tsub = 25 °C, CW bias, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit
Central Wavelength	λ	1540	1550	1560	nm
Spectral Width	$\Delta\lambda$	3	6	9	nm
Threshold Current	Ith	—	80	100	mA
Operating Current	Iop	—	1650	2000	mA
Fiber Output Power	Pf	—	450	500	mW
PD Dark Current (VRD=5V)	Id	—	—	0.1	μ A
Polarization Extinction Ratio (PM version)	PER	17	20	—	dB
Coupled Fiber Type	SMF-28E/PM1550				
Forward Voltage	Vf	—	1.8	2.5	V
Thermistor Resistance	RT	9.5	10	10.5	k Ω



Thermistor Temperature Coefficient	—	—	-4.4	—	%/°C
Connector	FC/APC				

Pin Definition:



PIN#	Function	PIN#	Function
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 (-)

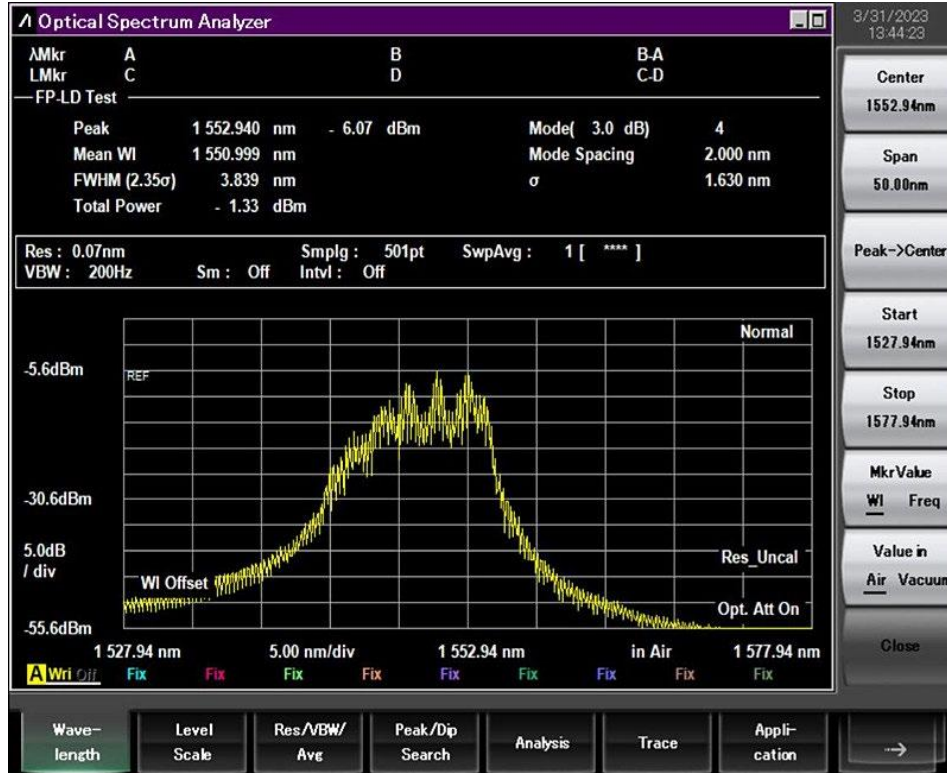
Absolute Maximum Ratings

Parameter	Unit	Min	Typ	Max
Case Temperature	°C	-5	25	70
Chip Temperature	°C	+10	25	40
Operating Current	mA	0	1800	2500
Forward Voltage	V	0.8	1.2	2.1
TEC Current	A	—	1.5	2.0
Reverse Voltage (LD)	V	—	—	2.0
Reverse Voltage (PD)	V	—	—	20

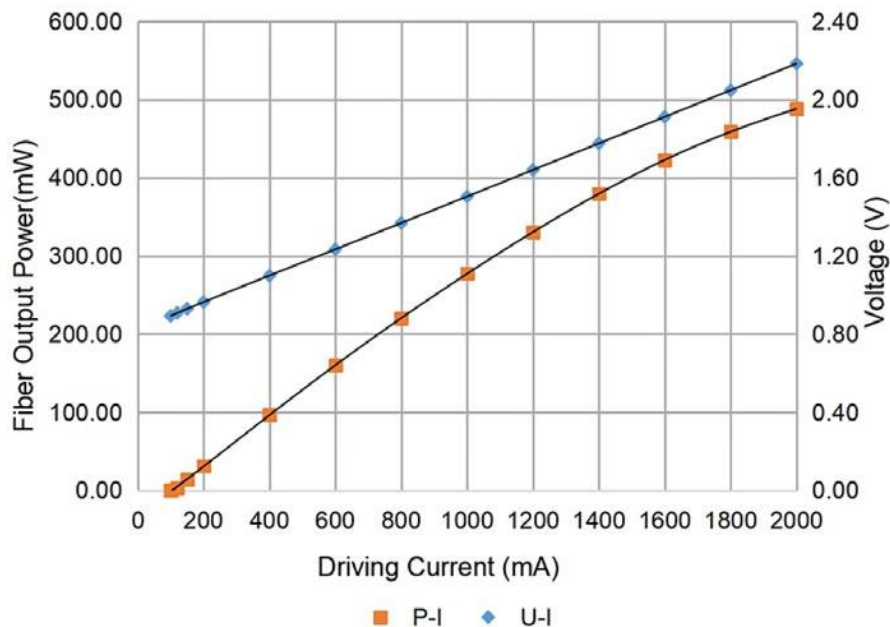


Characteristic Curves

Spectrum Diagram:



L-I Curve:





Ordering Information:

MP-FP-□□□□-☆-A8▽-XX

□□□□: Wavelength

1091: 1091nm

1532: 1532nm

1392: 1392nm

1512: 1512nm

1567: 1567nm

1653.7: 1653.7nm

1950: 1950 nm

☆: Output Power

A: 20 mW

B: 150 mW

C: 300 mW

D: 400mW

▽: Wavelength Tolerance

1: ±5 nm

2: ±10 nm



XX: Fiber Type & Connector

SA = SMF-28E + FC/APC

SP = SMF-28E + FC/PC

PP = PM Fiber + FC/PC

PA = PM Fiber + FC/APC