

450nm FP Laser diode



Description

The PL-FP-450-A-A81-SA is single mode laser diode module designed for optical measurement and communication. The laser is packaged in 14-pin standard butterfly package with monitor photodiode and thermo-electric cooler (TEC). Coupled with Nufern HP460 fiber. This Module is pigtailed with 0.7-1.0 m of single mode polarization maintaining fiber and connectorized by FC/APC connector.

Features

- Optical output: 30mW
- FC/APC connector
- Efficient coupling into single mode fiber
- 14-pin butterfly package
- CW or pulsed operation
- Internal monitor PD and TEC
- SM or PM Fiber (\varnothing 0.9mm)

Optional

- Fiber transmission systems
- Laser interferometric
- Laser indication
- Testing Light source

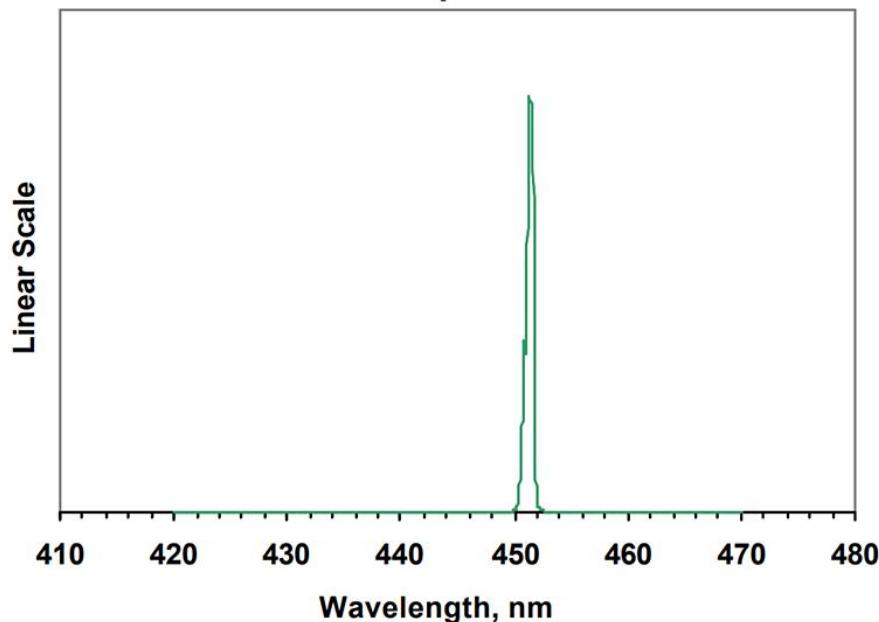
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Laser Specifications

T_{sub}=25°C, CW bias unless stated otherwise

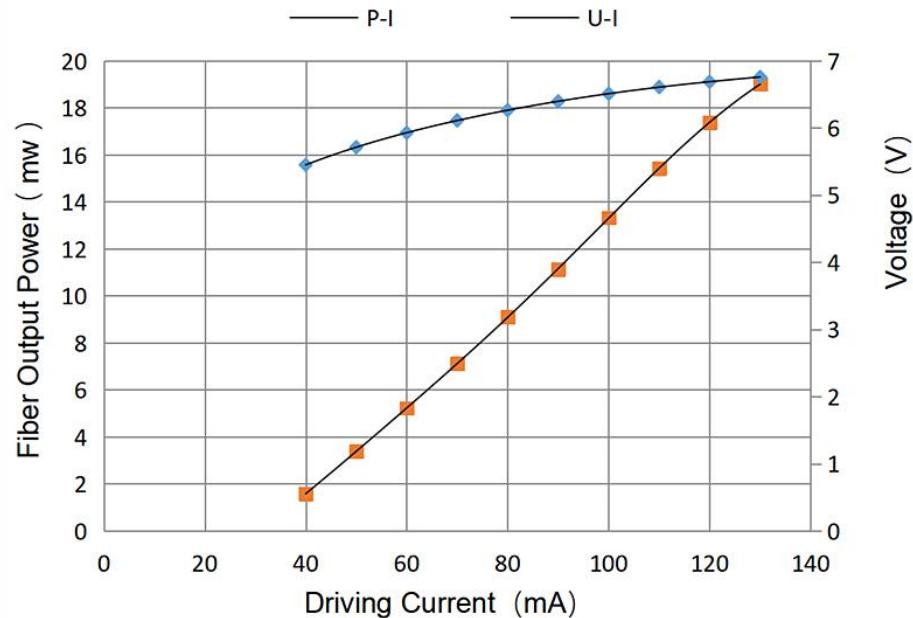
Parameter	Symbol	Min.	Typ.	Max.	Unit
Centre Wavelength	λ	445	450	455	nm
Spectral Width	$\Delta\lambda$	0.6	0.8	1.2	nm
Threshold Current	I _{th}		20	30	mA
Operating Current	I _{op}		120	150	mA
Fiber output Power	P _f	10	20	30	mW
PD Dark Current (VRD=5V)	I _d			0.1	uA
Extinction Ratio (PM VERSION)	PER	17	20		dB
Coupled Fiber Type	Nufern HP460 (NA=0.14)				
Forward Voltage	V _f		6	8	V
Thermistor Resistance	R _T	9.5	10	10.5	KΩ
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

Spectrum

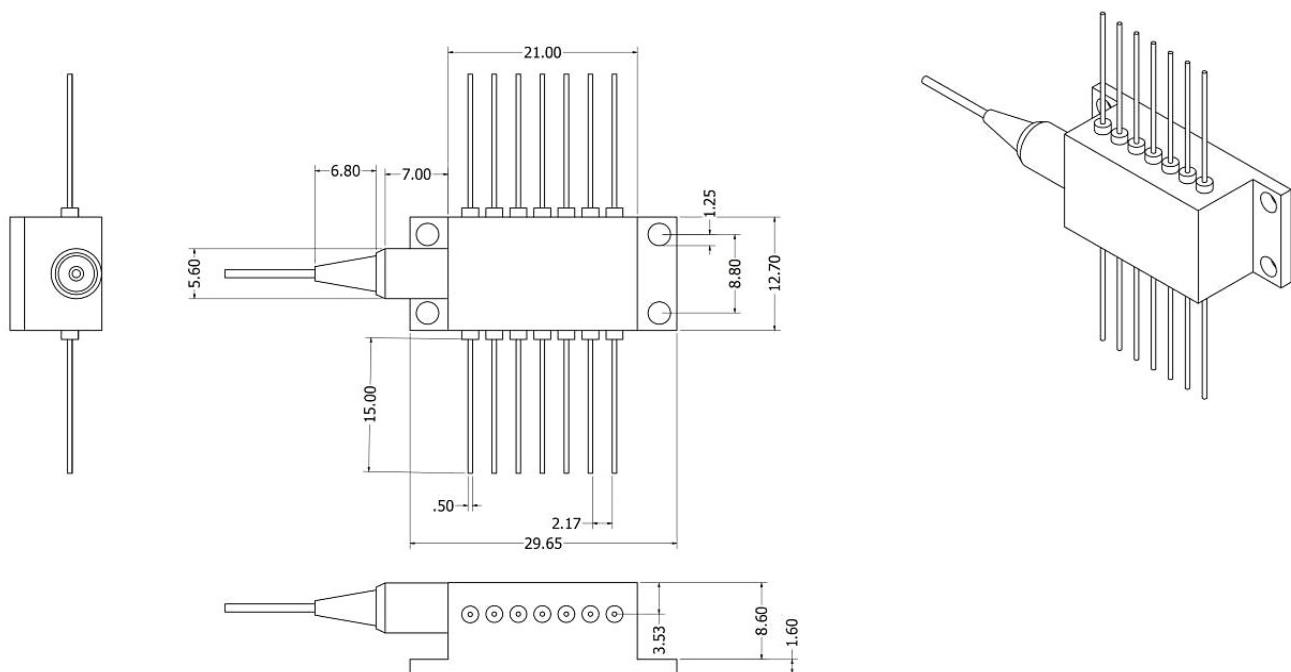


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L-I Curve

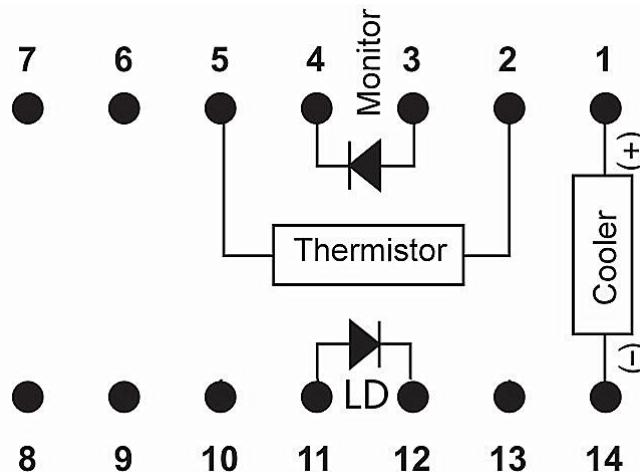


Package Size



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Pin definition



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

Item	Unit	Min	Typ	Max
Case Temperature	°C	-5	25	70
Chip Temperature	°C	+10	25	40
Operating Current	mA	0	120	150
Forward Voltage	V	0.8	1.2	1.8
TEC Current	A	-	1.2	1.4
Reverse Voltage (LD)	V	-	-	1.8
Reverse Voltage (PD)	V	-	-	10

Ordering Info

PL-FP-□□□□-☆-A8▽-XX

□□□□: Wavelength

455:455nm

520:520nm

633:633nm

680:680nm

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850:850nm

1550: 1550nm

☆ : Output Power

A: 20mW

B: 30mW

▽: Wavelength Tolerance

1: $\pm 1\text{nm}$ 2: $\pm 2\text{nm}$

XX: Fiber and Connector Type

SA=HP460+ FC/APC

SP=HP460+ FC/PC

PP=PM Fiber+ FC/PC

PA=PM Fiber+ FC/APC

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