

## 445nm SM Pigtailed FP Laser Diode

445nm SM Pigtailed FP ( Fabry-Perot) Laser Diode is a semiconductor optoelectronic product which can output stable laser light. It features low threshold current and high quality laser output, it's widely used in Laser imaging, fiber optic sensor and VIS Application, the Laser Diode also with PD built in to monitor the optical signal power, the pigtail also can be customized to MM, PM type upon request.

### Application:

Data Transmission  
Fiber Optic Sensor  
Laser Imaging  
Testing System

### Features:

Low Threshold Current  
High Output Power  
PD Built In  
High Reliability



### Absolute Maximum Ratings:

Parameter	Symbol	Value	Unit
LD Forward Current	If	140	mA
LD Reverse Voltage	Vr	2	V
PD Forward Current	If(PD)	2	mA
PD Reverse Voltage	Vr(PD)	15	V
Operating Temperature	T	-10~+70	°C
Storage Temperature	T	-40~+85	°C
Solder Temperature	T	260	°C
Lead Solder Time		10	S

Notice: Above specifications should not be exceeded, or the LD will be seriously damaged.

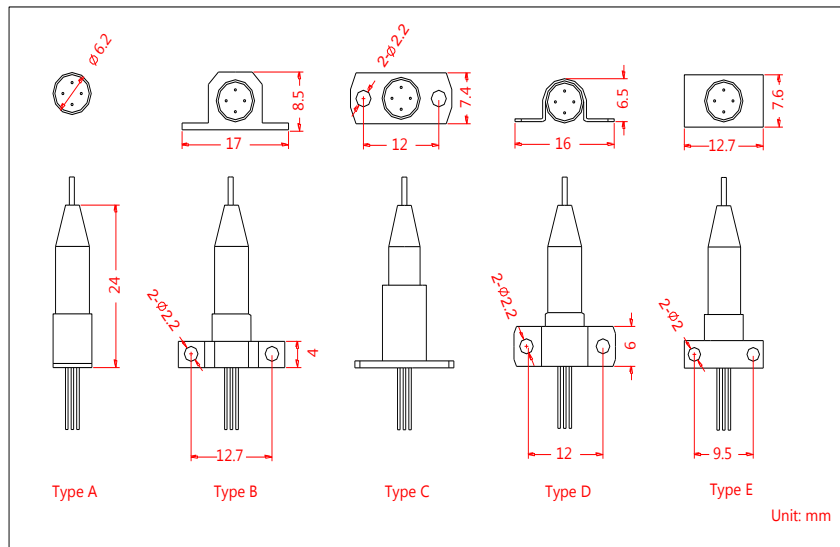
### Optical and Electrical Specification:

Parameter	Symbol	Min.	Tpy.	Max.	Unit	Test Condition
Center Wavelength	$\lambda_0$	440	445	450	nm	
Optical Power	Po	5		20	mW	CW
Spectral Width @20dB	$\Delta\lambda$		2	3	nm	CW
Threshold Current	Ith		40	50	mA	CW
LD Operating Current	If		80	120	mA	CW, Po=5mW
LD Forward Voltage	Vf		5.5	6.5	V	
PD Dark Current	Id			1000	nA	Vr(PD)=5V
PD Monitor Current	Im	0.1		0.5	mA	
Fiber Type		4/125 or 9/125 SM Fiber				

Notice: Above specifications are tested with 9/125 SM fiber in room temperature at 23°C.

Specifications may change without notice.

**Drawing:**



**Pin Information:**

	Type A		Type B		Type C	
	Pin 1	PD (+)	Pin 1	PD (-)	Pin 1	PD (-)
	Pin 2	LD (+), PD (-)	Pin 2	PD (+)	Pin 2	LD (-)
	Pin 3	Case	Pin 3	LD (+), Case	Pin 3	LD (+), Case
	Pin 4	LD (-)	Pin 4	LD (-)	Pin 4	PD (+)

**Ordering Information (Part Number):**

SMFPLD- <b>WWW</b> - <b>OO</b> - <b>S</b> - <b>P</b> - <b>FF</b> - <b>J</b> - <b>LL</b> - <b>CC</b>							
<b>WWW</b>	<b>OO</b>	<b>S</b>	<b>P</b>	<b>FF</b>	<b>J</b>	<b>LL</b>	<b>CC</b>
Wavelength	Optical Power	Saddle Type	Pin Assingment	Fiber Type	Fiber Jacket	Fiber Length	Connector
445 - 445nm	05 - 5mW 10 - 10mW 20 - 20mW SS - Specify	A - Type A B - Type B C - Type C D - Type D E - Type E	A - Type A B - Type B C - Type C	S4 - SM 4/125 S9 - SM 9/125	B - 250um Bare Fiber L - 900um Loose Tube	05 - 0.5m 10 - 1.0m 15 - 1.5m 20 - 2.0m SS - Specify	NE - None FA - FC/APC FU - FC/UPC LA - LC/APC LU - LC/UPC SA - SC/APC SU - SC/UPC SS - Specify

**Notification:**

1. The Semiconductor Optoelectronic products are particulary sensitive of ESD (electro-static discharge), it's recommended to use grounded anti-static wrist straps and grounded anti-static mats before handling the products.
2. Never plug or unplug the products under a living circuit, setting the current supply to zero before switching on or switching off the laser diode.
3. Always take anti-static measures to storage the products when not in use.

