

InGaAs PIN Photodiode

Features:

- I Planar semiconductor design and dielectric passivation
- I 2-pin coaxial mini packaging ,SM pigtail without connector
- I Superior noise and photoelectric performance
- I Hermetical packaging and 100% purge burn-in
- I Applied for optical fiber communication system.

ELECTRO-OPTICAL CHARACTERISTICS(T=25°C):

PARAMETERS	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Wavelength	λ		1000		1650	nm
Dark Current	ID	Ee=0, VR =5V		0.2	1	nA
Responsivity	Re	VR =5V, λ =1310nm	0.85	0.90		A/W
Responsivity	Re	VR =5V, λ =1550nm	0.90	0.95		A/W
Capacitance	C	f=1MHz,case grounded VR=5V Ee=0		7	8	pF
Operating voltage	Vopr			-5	-15	V
Rise & fall time	Tr、Tf	-5V			3	ns

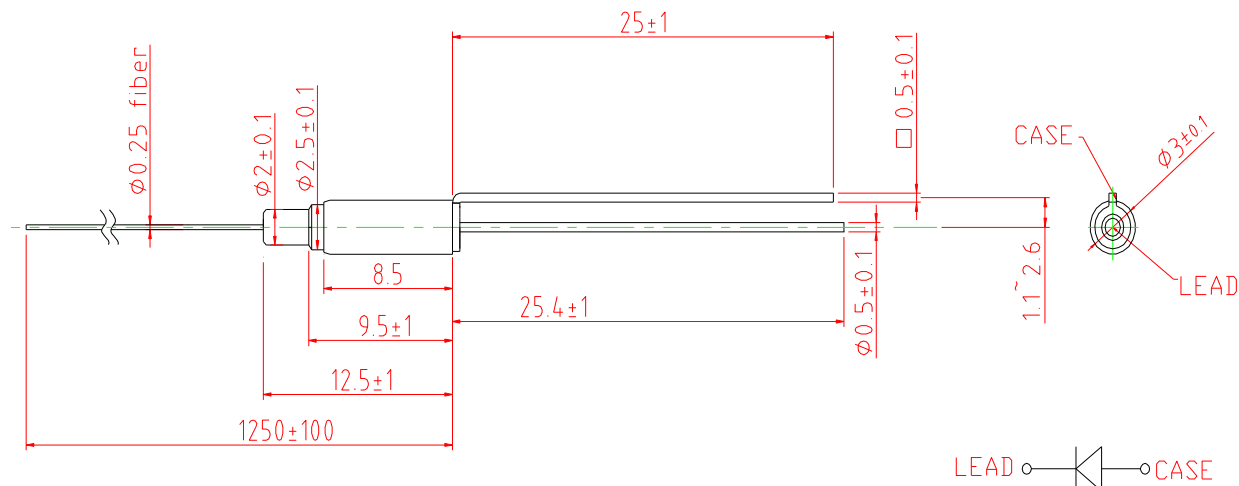
ABSOLUTE MAXIMUM RATINGS(T=25°C):

PARAMETERS	MIN	MAX	UNIT
Reverse Voltage		25	V
Forward Current		10	mA
Operating Temperature	-40	+85	°C
Storage Temperature	-40	+85	°C
Lead Solder Temperature		260	°C
Lead soldering duration		10	s

PRECAUTIONS:

- a .ESD protection is imperative. Use of grounding straps, anti-static mats, and other ESD protective equipment is recommended when handling or testing an InGaAs PIN photodiodes.
- b.Fiber pigtails should be handled with less than 10N pull and with a bending radius greater than 15 mm.

Dimension:



DFB Laser For Gas Detection

Temperature-controlled pigtail laser series, using DFB laser with quantum well structure, built-in semiconductor refrigerator, standard package technology to realize butterfly tail fiber package, compact structure, small size, widely used in optical fiber communication field; semiconductor refrigeration Under the high-precision temperature control, the laser has high power stability and high wavelength stability, which makes the laser widely used in the field of optical fiber sensors.

Below Wavelengths Available (and we can provide more wavelengths):

Gas	Absorption wavelength	Gas	Absorption wavelength
HF	1268.7nm / 1273nm / 1278nm	H ₂ S	1578nm
H ₂ O	1368.59nm / 1392nm	CO ₂	1572.3nm / 1580nm / 2004nm
HBr	1343nm	C ₂ H ₄	1620nm / 1627nm
NH ₃	1512nm / 1531nm	CH ₄	1647nm / 1650.9nm / 1653.7nm / 1660nm
C ₂ H ₂	1532.68nm	HCl	1742nm
CO	1567nm	O ₂	764nm VCSEL

Features:

- I Using quantum well structure DFB semiconductor laser chip with stable wavelength and high output power
- I Hermetic temperature control package Package: BF14 pigtail, TF8 space, TO39 and other customization

Applications:

- I Fiber gas detection system
- I Passive device production testing for gas detection

Rated working conditions:

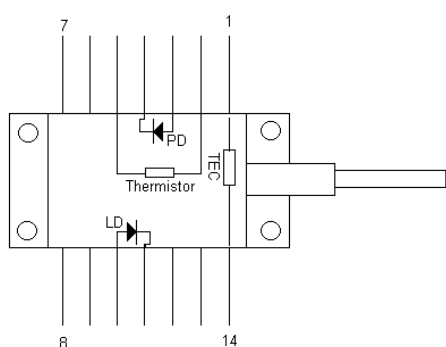
Parameter	Symbol	Value	Unit
Laser diode forward current	I _f (LD)	100	mA
Laser diode reverse voltage	V _r (LD)	2	V
Backlight detector operating current	I _f (PD)	2	mA
Backlight detector reverse voltage	V _r (PD)	20	V
Cooler operating current	I _{TEC}	2.4	A
Cooler operating voltage	V _{TEC}	2.9	V
Operating Temp.	T _{opr}	-20 ~ +70	°C
Storage Temp.	T _{stg}	-40 ~ +85	°C
Lead soldering Temp./time	T _{sl} d	260/10	°C/s

Technical Parameter:

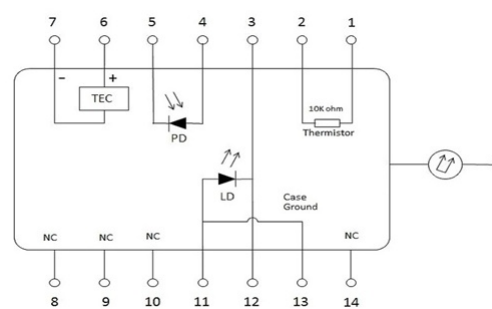
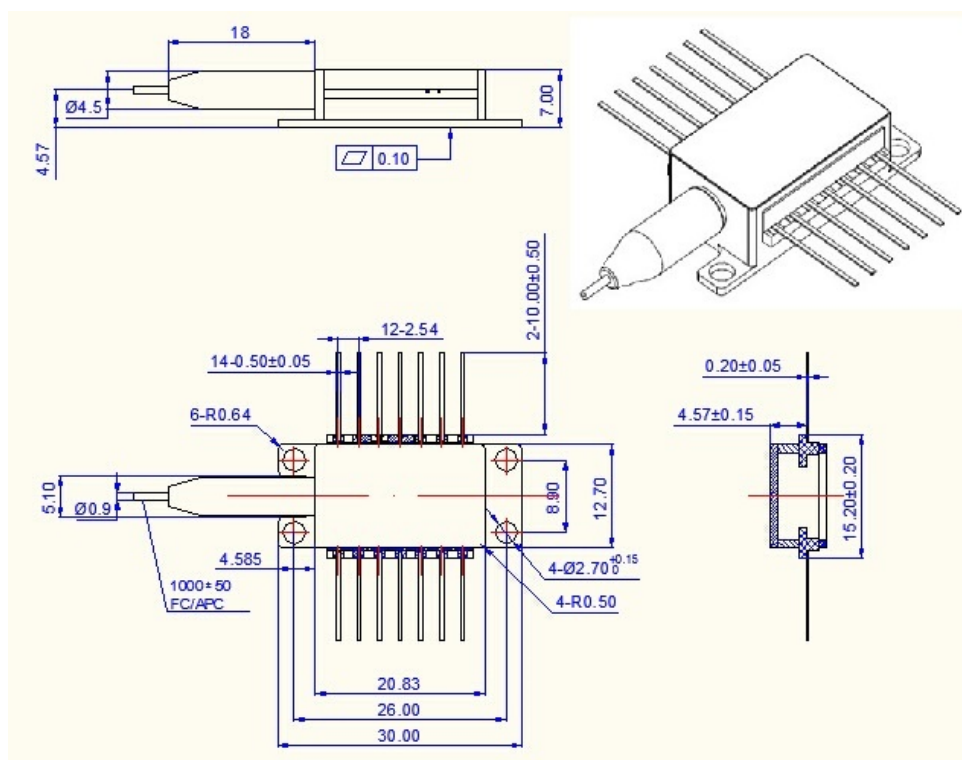
Parameter	Symbol	Testing Condition	Min	Typ	Max	Unit
Light output power	P _O	CW	3	5	-	mW
Threshold current	I _{th}	CW	-	12	18	mA
Working current	I _{op}	CW,5mW	-	-	50	mA
Operating Voltage	V _{op}	CW,5mW	-	1.5	2	V
Slope efficiency	η	CW,5mW	0.05	0.1	-	mW/mA
Peak wavelength	λ _c	CW,5mW,25°C	λ _c -1	λ _c	λ _c +1	nm
Side mode suppression ratio	SMSR	CW,5mW	35	-	-	dB
Spectral width (20dB)	Δλ	CW,5mW	-	0.2	-	nm
Wavelength stability	λ _s	CW,5mW,25°C	-0.1	-	+0.1	nm
Wavelength drift coefficient with temp.	Δλ/T	Stable operating current	-	0.1	-	°C
Wavelength drift coefficient with current	Δλ/I	Stable operating current	-	0.01	-	nm/mA
Thermistor	R _{th}	T _{therm} = 25°C	9.5	10	10.5	kΩ

Pin definition:**General pin definition (N type)**

Pin No.	Function	Pin No.	Function
1	Refrigerator positive	8	NC
2	Thermistor	9	NC
3	Backlight detector	10	Laser positive
4	Backlight detector negative	11	Laser negative
5	Thermistor	12	NC
6	NC	13	NC
7	NC	14	Refrigerator negative

Top view:**Special pin definition (S type)**

Pin No.	Function	Pin No.	Function
1	Thermistor	8	NC
2	Thermistor	9	NC
3	Laser negative	10	NC
4	Backlight detector	11	Laser positive / receiver shell
5	Backlight detector negative	12	Laser negative
6	Refrigerator positive	13	Laser positive / receiver shell
7	Refrigerator negative	14	NC

Top view:**Dimension:**

High Power EDFA Fiber Amplifier - C Band

High Power EDFA Fiber Amplifier applied in the optical fiber amplifier, Television and fiber-optic Laser etc.

Features:

- I High reliability
- I High output power
- I High stability
- I low noise index
- I LCD display, easy to operate

Applications:

- I Nonlinear research
- I Optical fiber sensing
- I High-speed fiber-optic communication
- I High power amplification
- I Other laboratory applications

Specifications:

Specifications	Unit	Min.	Typical	Max.
Wavelength range	nm	1530		1560
Input optical power range	dBm	-10		+10
Saturated output power @0dBm signal input	dBm	-	33	
Noise index @0dBm signal input	dB	-		6.5
Input/output isolation	dB	30		-
Output power stability (8 hours)	%	-		2
Output power adjustable range	%	10		100
range of working temperature	℃	0		40
Storage temperature range	℃	-40		+85
Operating Voltage	V	220V/50Hz		
rated power	W	100		
Pigtail connector type		FC/APC Connector		
Input and output pigtail type		SMF28		
Standard sizes		2U-B Rack Mount 420*485*105		

SOA Optical Amplifier

Features:

- I 1310/1550 band light
- I Wide spectral range
- I Maximum rate supports 160G/s
- I High output power
- I Good temperature adaptability

Applications:

- I 40G/100G transmission system
- I Loss compensation
- I Line upgrade
- I Wavelength division multiplexing device test
- I Optical communication system

Specifications:

Specifications	Unit	Min.	Typical	Max.
Wavelength range (upstream)	nm	1290		1310
Wavelength range (downstream)	nm	1530		1570
Saturated output power	dBm	8		
Peak gain	dB	18.5		
Gain ripple	dB		0.2	
Drive current	mA		300	450
Thermistor	kΩ		10	
range of working temperature	°C	-20		65
Operating humidity range	%			90
Storage temperature range	°C	-40		85
Power supply type		DC+5V GND		
Pigtail connector type		FC/APC		
Input and output pigtail type		SMF28		