

1550nm Distributed Feedback Laser Diode Device

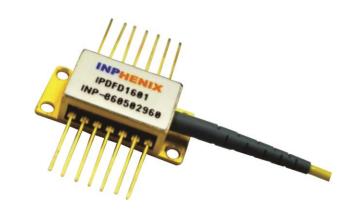
IPDFD1503

Features

- High output power
- Narrow linewidth
- High side mode suppression

Applications

- LiDAR
- Fiber optic sensor
- Metrology

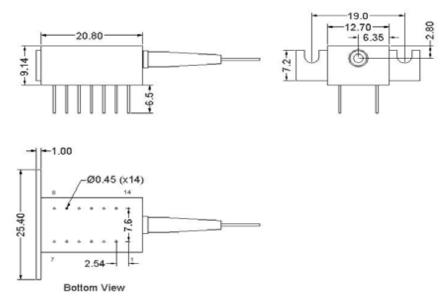


Device Specifications

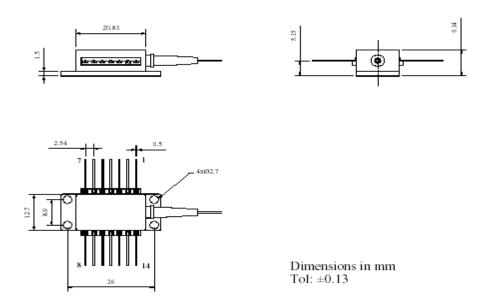
Parameter	Symbol	Min.	Тур.	Max.	Unit	Test Condition
Threshold Current	<i>I</i> th	-	15	-	mA	CW
Operating Current	<i>I</i> op	-	250	-	mA	CW, Pf= Pop
Output Power	Pop	20	30	-	mW	CW, I= <i>I</i> op
Slope Efficiency	Se	-	0.15	-	W/A	CW, Pf= Pop
Forward Voltage	Vf	-	-	2.5	V	CW, Pf= Pop
Peak Wavelength	λр	-	1550	-	nm	CW, Pf= Pop
Linewidth	Δλ	-	50	100	kHz	CW, Pf= Pop
Peak Wavelength Drift	Dλ	-	-	-	nm/°C	CW, Pf= Pop
Side Mode Suppression Ratio	SMSR	35	-	-	dB	CW, Pf= Pop

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Package Dimensions



14-Pin DIL Package



14-Pin BUT Package

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Pin Definition

14-pin DIL package			14-pin BUT package				
Pin	Function	Pin	Function	Pin	Function	Pin	Function
1	TEC(+)	8	PD(+)	1	Thermistor	8	NC
2	NC	9	LD(-)	2	Thermistor	9	NC
3	NC	10	Case	3	LD(-)	10	NC
4	NC	11	Thermistor	4	PD(+)	11	NC
5	LD(+)	12	Thermistor	5	PD(-)	12	LD (-)
6	NC	13	NC	6	TEC (+)	13	LD (+) Case GND
7	PD(-)	14	TEC (-)	7	TEC (-)	14	NC

Absolute Maximum Ratings

Parameter	Min.	Max.	Unit	
Operating Temperature	- 20	70	°C	
Storage Temperature	- 40	85	°C	
TEC Drive Current	-	1.5	A	
TEC Drive Voltage	-	3.6	V	
Maximum Current	3	mA		
Thermistor Resistance	10kΩ @ 25°C			
SLD Chip Temperature Setting	25°C			
Fiber Type	SMF			
Fiber Jacket	900 μm or 250 μm tight buffer			
Package	14-pin DIL/14-pin BUT, Others available			



Part Numbering Structure

	IPD	FD150X		
Model: IPDFD1503: 1550n	m DER Lacer De	evice		
H DPD1303, 1330h	iiii DI D Lasci Do	CVICC		
Package:				
1: 14-pin DIL				
3: 14-pin Butterfly				
Fiber Type:				
1: SM Fiber				
2: PM Fiber				
Jacket Type:				
1: 900μm				
2: 250µm tight buff	er			
Connector Type:			 	
0: No Connector	3=FC/APC	6= Deleted		
1=Deleted	4=FC/UPC	7=SC/APC		
2- Deleted	5– Deleted	8-SC/LIPC		

Example: IPDFD1503-1110: 1550nm DFB LD in 14-pin DIL with 900 μm SM fiber,without connector.

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