OSI LaserDiode, Inc.
An OSI Systems Company

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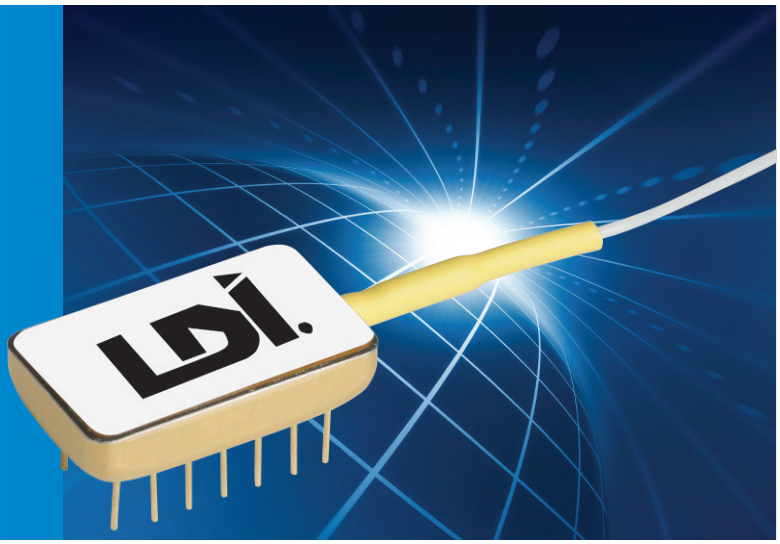
ISO 9001:2008 Certified

PINFET Optical Receiver Modules

- GR-468-CORE Telcoridia Qualified
- High Sensitivity
- High Overload Power
- Wide Dynamic Range
- 850, 1310, 1550nm Operation
- Hermetic Package - Industry Standard 14 Pin DIP Package
- MIL or IEC Screening available upon request



The **OSI Laser Diode Inc. PINFET** provides an excellent solution for optical receiver systems that require both high sensitivity and wide dynamic range. Applications include telecommunications line-terminating equipment or repeaters and optical sensor systems. The receiver package offers high reliability satisfying Telcordia specifications.

Specifications and Limits

Performance @25˚C (+/-5.0 VDC)

		Minimum[1] Bandwidth (MHz)	Suggested[2] Data Rate (Mb/s)	Sensitivity[3] (dBm) max	Sensitivity[3] (dBm) typ	Dynamic Range (dB) typ	Transimpendance (Kohms)
LDPF Series	LDPF 0004	4	6	-54	-56	25	1100
	LDPF 0012	12	17	-51	-53	25	740
(non-AGC)	LDPF 0024	24	34	-48	-50	25	340
	LDPF 0032	32	45	-47	-49	25	210
	LDPF 0065	65	90	-43	-45	25	80
	LDPF 0120	120	168	-40	-42	25	40
	LDPF 0250	250	350	-35	-37	25	10
LDPW Series	LDPW 0001R	1	1	-58	-60	57	1120
	LDPW 0003	3	4	-54	-56	53	1100
	LDPW 0012	12	17	-50	-52	49	350
(AGC)	LDPW 0024	24	34	-48	-50	47	340
	LDPW 0036	36	52	-46	-48	45	210
	LDPW 0065	65	90	-41	-43	40	60
	LDPW 0110	110	155	-38	-40	37	30
LDSF Series	LDSF 0004	4	6	-51	-53	25	1100
	LDSF 0012	12	17	-48	-50	25	740
(non-AGC)	LDSF 0024	24	34	-45	-47	25	340
	LDSF 0032	32	45	-44	-46	25	210
	LDSF 0065	65	90	-40	-42	25	80
	LDSF 0120	120	168	-37	-39	25	40
	LDSF 0250	250	350	-32	-34	25	10

Common Characteristics @ 25°C

		LDSF Series			LDPF Series			LDPW Series		
		min	typ	max	min	typ	max	min	typ	max
Dark Current @ -5V	nA		0.5	1		0.5	1		0.5	1
Maximum Optical Input @ -5V	dBm		Sensitivity Level (dBm) +25dB			Sensitivity Level (dBm) +25dB		-3	0	
Sensitivity Derating Over Temperature	dB		<1			<1			<1	
Detector Responsivity 850nm	A/W		0.5							
1300nm						0.90			0.90	
1550nm						0.95			0.95	
Maximum Output Signal Level	Vpp		2.5			2.5			0.8	
Output Impedance	Ohms		10			10			10	
Load Impedance	Ohms		1000			1000			1000	
Supply Voltage	V	4.5		5.5	4.5		5.5	4.5		5.5
Power Supply Current +5V	mA		25	35		25	35		25	35
Power Supply Current -5V	mA		10	15		10	15		10	15
Fiber - MM Tight Buffer	um		50/125/245/900			50/125/245/900			50/125/245/900	

Absolute Maximum Ratings

	Units	LDPF, LDPW & LDSF Series
Operating Temperature	°C	-40 to +70
Storage Temperature	°C	-40 to +85
Positive Supply Voltage	V	+7
Negative Supply Voltage	V	-7
Detector Bias	V	-10
Soldering time at 260°C	secs	10

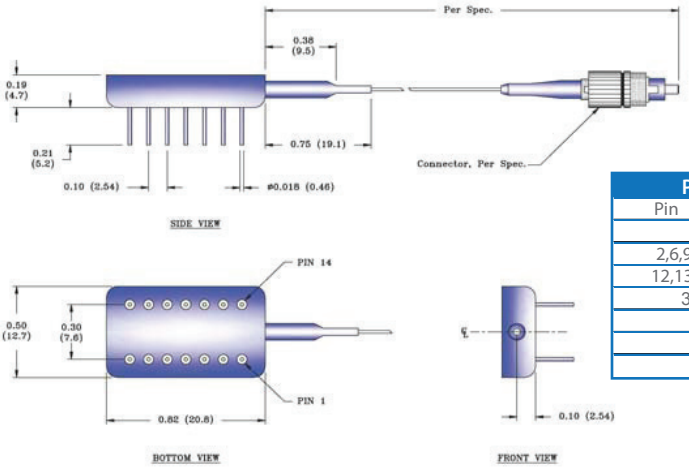
Notes:

1. Bandwidth is measured at the –3dB point.

2. A given bandwidth will typically support an NRZ data rate of 1.4 times the 3dB bandwidth.

3. Sensitivity is calculated using the noise voltage measured at 25˚C and T_a=25°C for a BER of 10^{-9}

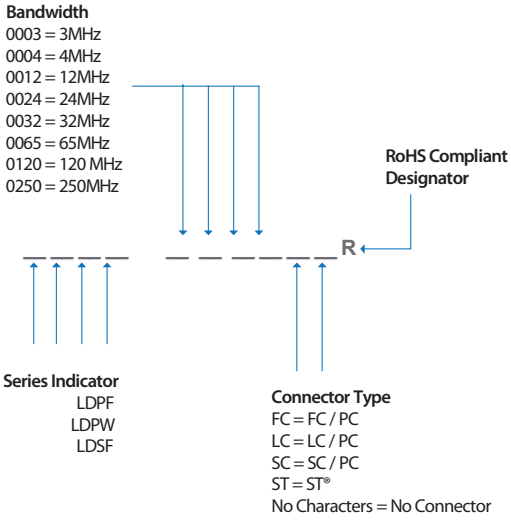
Outline Drawing



PIN ASSIGNMENTS	
Pin	Function
1	-5 V detector bias
2,6,9,11	no connection
12,13,14	no connection
3,5,8	ground
4	-5 volts
7	output
10	+5 volts

Dimensions: Inches [mm]
Detailed package drawings are available upon request.
Standard fiber lengths: 1m min.

Part Numbering Diagram



Personal Hazard and Handling Precautions:

Warranty:

Please refer to your product purchase agreement for complete details or check with your OSI Laser Diode sales representative.

Notice:

OSI Laser Diode, Inc. reserves the right to make changes to the products or information contained herein without notice.
No liability is assumed as a result of their use or application.