T-41-91

LDPM-XXXX SERIES
ADVANCE SPECIFICATION

WIDE BANDWIDTH PINAMP

APPLICATIONS:

- o Fiber Optic Digital Systems
- o Fiber Optic Analog Systems
- o Measurement Systems
- o Sensor Systems

FEATURES:

- o Wide Bandwidths
- o Low Noise
- o Wide Dynamic Range
- o Direct 50 Ohm Output

DESCRIPTION:

Laser Diode's Model LDPM-XXXX is a wide bandwidth fiber-optic preamplifier module for use in long wavelength systems. The receiver utilizes a transimpedance preamplifier configuration to provide high sensitivity, wide dynamic range, and a flat frequency response.

The LDPM-XXXX uses a high performance InGaAs pin-diode which has a spectral response from 1100nm to 1600nm, extremely low dark current and very low capacitance. This detector is coupled to a low noise GaAs integrated circuit which provides excellent sensitivity and dynamic range. Bandwidths up to 700 MHz are available.

Applications for these low-noise, wideband optical preamplifiers include high speed digital transmission systems and analog multichannel FDM transmission systems (i.e. CATV trunking systems).

PERFORMANCE SPECIFICATIONS (T=25 deg. C)

Model No.	Bandwidth (MHz)	Data Rate (Mbps-NRZ)	Sensitivity (dBm) Min.	Sensitivity (dBm) Typ.	Transfer Gain (V/W)	Dynamic Range (dB)
LDPM 0400	400	620	-30	-32	8500	20
LDPM 0700	700	1100	-25	-27	850	25

Notes: (1) Receiver sensitivity is quoted as the average optical power in dBm at 1300nm and Ta=25 deg. C for (10^-9) BER and is calculated from measured output noise power. Noise filter bandwidth is equal to the desired bandwidth of optical preamplifier.

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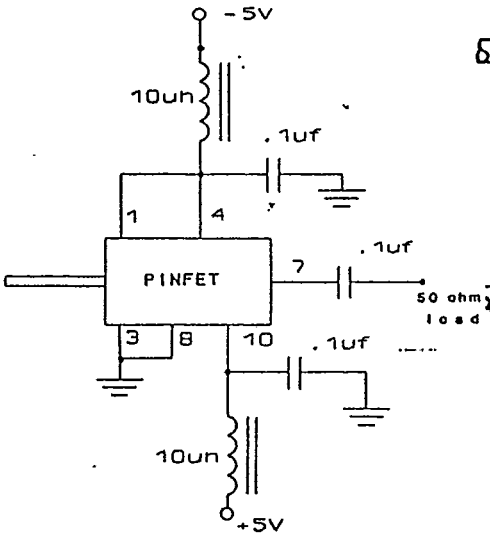
PERFORMANCE SPECIFICATIONS (T=25 deg. C) Continued

	Min.	Typ.	Max.	Units
Dark Current		5	20	nA
Diode Capacitance VR= -5V		0.5		pF
Spectral Responsivity (1300nm)		.85		A/W
Load Impedance		50		ohm
Power Supply Current				
+5 Volts		30	45	mA
-5 Volts		30	45	mA
Fiber Pigtail				
- Core			50	um
- Cladding			125	um
- Buffer			900	um

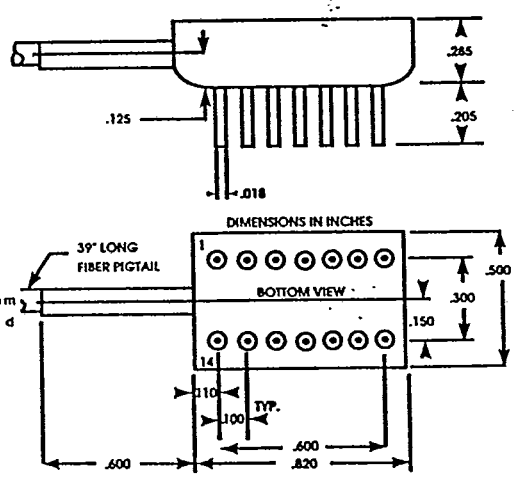
Absolute Maximum Ratings:

	Min.	Typ.	Max.	Units
Operating Temperature	-20		+65	deg. C
Storage Temperature	-40		+85	deg. C
Lead Soldering Time (at 260 deg. C)			10	secs.
Positive Supply			+7	volts
Negative Supply			-7	volts
Photodiode Bias			-20	volts

RECOMMENDED PINFET OUTPUT INTERFACE CIRCUIT



MECHANICAL DIMENSIONS



PIN ASSIGNMENT

PIN	FUNCTION
1	-5V DET. BIAS
2	NC
3	GND
4	-5V VEE
5	NC
6	NC
7	OUTPUT
8	GND
9	NC
10	+5V VCC
11	NC
12	NC
13	NC
14	NC

*For further information on this product or others of LASER DIODE, Inc., please call:

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