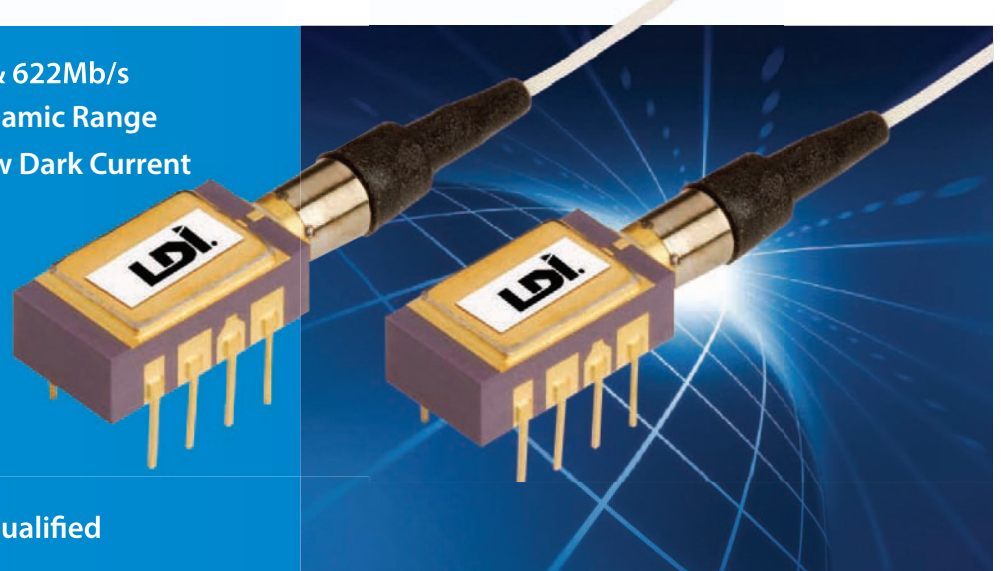


## PINAMP Mini-DIL Optical Receivers

ISO 9001:2008 Certified

- 4Mb/s, 52Mb/s, 155Mb/s & 622Mb/s
- High Sensitivity/Wide Dynamic Range
- High Responsivity and Low Dark Current  
InGaAs Pin Detector

- Single Supply Capable
- Hermetic Package
- GR-468-CORE Telcordia Qualified



**Applications Include:** Supervisory channel • Long haul transmission networks • Short haul transmission networks • **DWDM** transponders • **SDH/SONET** single mode applications • Instrumentation and testing • Data communications.

### Specifications and Limits

#### Performance @25°C (+/-5.0 VDC)

| PARAMETER                             | UNIT | 4 Mb/s |      |      | 52Mb/s |      |      | 155 Mb/s |      |      | 622 Mb/s |      |      |
|---------------------------------------|------|--------|------|------|--------|------|------|----------|------|------|----------|------|------|
|                                       |      | min    | typ  | max  | min    | typ  | max  | min      | typ  | max  | min      | typ  | max  |
| Data Rate                             | Mb/s |        | 4    |      |        | 52   |      |          | 155  |      |          |      | 622  |
| Sensitivity @ 10 <sup>-9</sup> (BER)* | dBm  |        | -50  | -48  |        | -43  | -41  |          | -39  | -37  |          | -33  | -31  |
| Overload @ -5 VDC                     | dBm  |        | -4   |      |        | 0    |      |          | 0    |      |          | 0    |      |
| Transfer Gain @ 1310 nm               | V/W  |        | 40K  |      |        | 25K  |      |          | 12K  |      |          | 4K   |      |
| Dark Current @ -5 VDC                 | nA   |        | 0.5  |      |        | 0.5  |      |          | 0.5  |      |          | 0.5  |      |
| Responsivity @ -5 VDC                 | A/W  |        |      |      |        |      |      |          |      |      |          |      |      |
| @1310 nm                              | A/W  |        | 0.85 |      |        | 0.85 |      |          | 0.85 |      |          | 0.85 |      |
| @1550 nm                              | A/W  |        | 0.9  |      |        | 0.9  |      |          | 0.9  |      |          | 0.9  |      |
| Output Impedance                      | Ohms | 30     |      | 60   | 30     |      | 60   | 30       |      | 60   | 30       |      | 60   |
| Supply Voltage                        | V    | 4.75   |      | 5.25 | 4.75   |      | 5.25 | 4.75     |      | 5.25 | 4.75     |      | 5.25 |
| Supply Current                        | mA   |        | 30   |      |        | 30   |      |          | 30   |      |          | 30   |      |

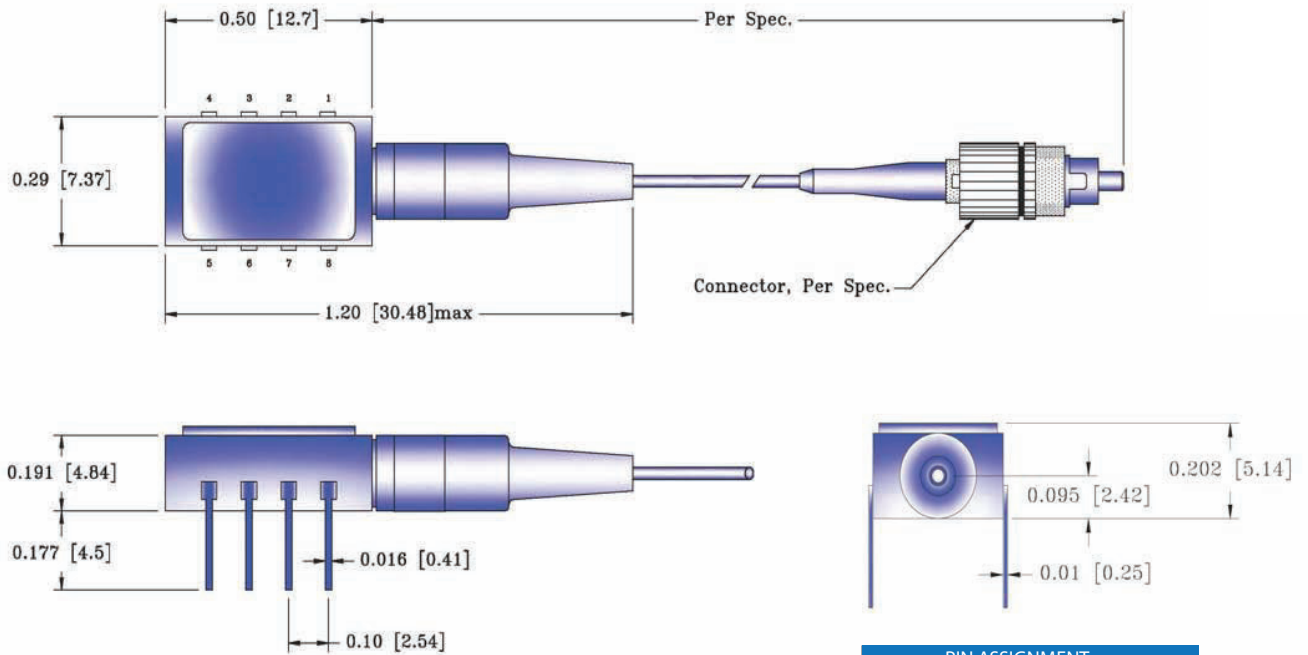
\*Sensitivity is calculated using the noise voltage measured at 25°C at the output of a 3-pole Butterworth filter.  
 Sensitivity is specified as the average optical power in dBm measured at 1310nm and T<sub>a</sub> = 25°C for a BER of 10<sup>-9</sup>.

### Fiber Specifications

| Fiber Type             | Index Profile | N/A | Nominal Size (um) | Cladding Tolerance (um) | 900 um Buffer Material | Fiber Yield Strength (N) | Fiber Bend Radius min. (mm) |
|------------------------|---------------|-----|-------------------|-------------------------|------------------------|--------------------------|-----------------------------|
| Multimode tight buffer | Graded        | 0.2 | 50/125/245/900    | 125+/-2.0               | Hytel                  | 10                       | 30                          |

Other fiber types are available. Please contact the OSI Laser Diode Sales Department or your local LDI representative.

## Outline Drawing



| PIN ASSIGNMENT |                   |
|----------------|-------------------|
| Pin No.        | Description       |
| 1              | -5 Volt Det Bias* |
| 2, 3, 5, 6, 8  | Gnd               |
| 4              | Output            |
| 7              | +5 Volts          |

\*0V Det Bias Capable

## Absolute Maximum Ratings

|                         | Units | LPAD Series |
|-------------------------|-------|-------------|
| Operating Temperature   | °C    | -40 to +85  |
| Storage Temperature     | °C    | -40 to +85  |
| Positive Supply Voltage | V     | +5.5        |
| Detector Bias           | V     | -10         |
| Soldering time at 260°C | secs  | 10          |

Dimensions: inches [mm]

Detailed package drawing is available upon request

Standard fiber lengths: 1m min unconnectorized; 1m +/- 0.1m connectorized

## Part Numbering Diagram

When ordering, refer to the numbering diagram below.

|                                 |              |             |   |                |                 |
|---------------------------------|--------------|-------------|---|----------------|-----------------|
| <b>Mini-DIL Pinamps</b>         | <b>LPAD</b>  | <b>OXXX</b> | - | <b>XX</b>      | <b>R</b>        |
| 4Mb/s, 52Mb/s, 155Mb/s, 622Mb/s | Package Type | Data Rate   |   | Connector Type | RoHS Designator |

**EXAMPLE:** LPAD 0622-FC

Mini-DIL Pinamp at 622 Mb/s with FC connector

Products can be ordered directly from OSI Laser Diode Inc. or its representatives.

For a complete listing of representatives, visit our website at

[www.laserdiode.com](http://www.laserdiode.com)

### Personal Hazard and Handling Precautions:

Handle optical fiber with normal care, avoiding stretch, tension, twist, kink or bend abuse. ESD precautions apply.

### 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.