DRP2ED-43T2
DRP2EE-43T2

# PIN Photodetector for L-Band Amplifiers

## Features

Proven high reliability

InGaAs Planar PIN Detector

Dielectric passivated chip for low dark current

Anti-reflection optical coating optimized for high responsivity

Product designed for low back reflections and low polarization sensitivity of responsivity

Hermetically sealed components

Single-mode fiber, 245 μm nominal coating diameter, pigtailed package

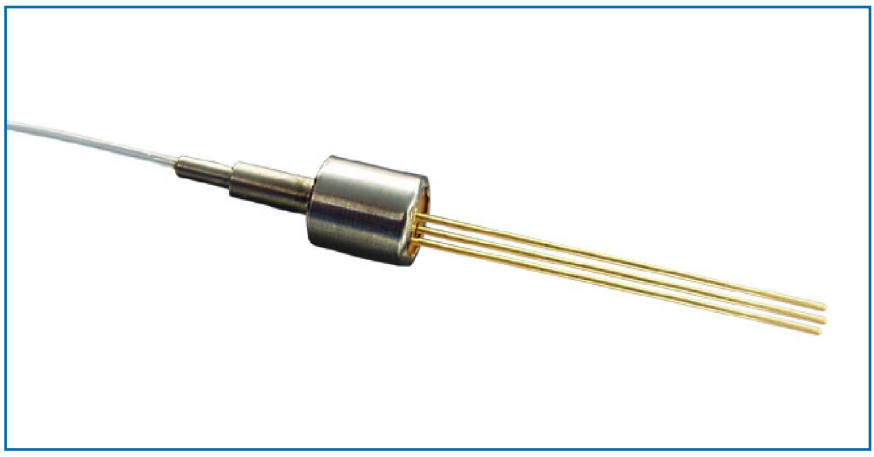
## Applications

Optical amplifier power monitoring

WDM Optical channel equalization

## Description

*This PIN photodetector has been specifically designed for use in the L-Band telecommunications window. It is ideally suited as a detector for the input and output taps in fiber amplifier applications and single-mode fiber optic networks where components with low optical reflections are of prime importance. It has a combination of high responsivity, low capacitance, and low dark current, together with a high optical return loss fiber pigtail. The optical component is hermetically sealed to ensure a reliable product and is actively aligned to the single-mode fiber pigtail.*



NORTEL NETWORKS™

## Absolute Maximum Ratings

| Parameter | Min | Max | Unit |
|---|---|---|---|
| Operating temperature | -20* | +75 | °C |
| Storage temperature | -40 | +85 | °C |
| Radiant input power | | 5 | dBm |
| Forward current | | 1 | mA |
| Bias voltage | | -20 | V |
| Fiber bend radius | 30 | | mm |

* In a non-condensing atmosphere

## Package Outline Drawing and Dimensions

Dimensions in mm.
Lower device drawing shows universal clamp fitted.

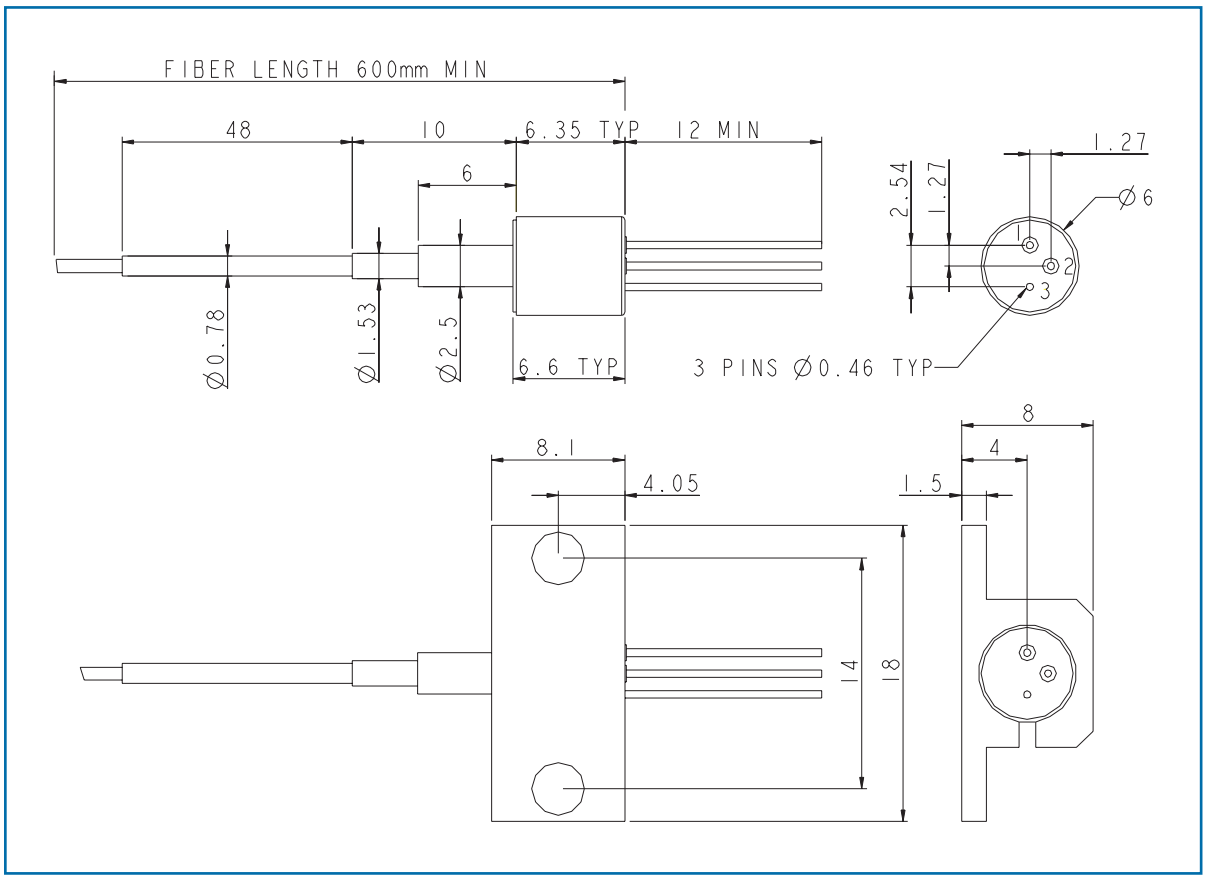



*Figure 1: Package Outline Drawing and Dimensions*

## Connections

DRP2E* - 43T2 Pin 1 Detector anode
2 Detector cathode
3 Case

## Characteristics

Case temperature: 25°C
Bias voltage: 5.0 V
Wavelength: 1565nm – 1605nm

ESD precautions apply for a Class 2 device as defined in Belcore TR-NWT-000870.

| Parameter | Min | Typ | Max | Unit |
|---|---|---|---|---|
| Responsivity @ 1605 nm | 0.80 | 0.95 | | A/W |
| Dark current | | 0.1 | 0.5 | nA |
| Bandwidth (-3dB) | 800 | >1000 | | MHz |
| Capacitance at leads | | | 1.3 | pF |
| Optical return loss - DRP2ED-43T2<br>- DRP2EE-43T2 | | | -30<br>-40 | dB<br>dB |
| Polarization dependence of responsivity (PDR) | | 0.03 | 0.1 | dB |
| Linearity | | 0.5 | 3 | % |
| Wavelength dependence of responsivity | | 0.1 | 0.15 | dB |
| Temperature dependence of responsivity | | 0.1 | 0.15 | dB |

## Reliability/Quality

Qualified to Telcordia GR-468-CORE.

## Ordering Information

Please order either DRP2ED-43T2 (H) or DRP2EE-43T2 (H) depending on the Optical Return Loss required where H signifies universal clamp fitted.

A full range of connector options are available.




NORTEL NETWORKS™

**Nortel Networks**
**Optical Components**
185 Corkstown Road
Ottawa, Ontario
Canada K2H 8V4

**www.nortelnetworks.com/opticalcomponents**

© 2001 Nortel Networks. All rights reserved.
© Nortel, Nortel Networks, the Nortel Networks corporate logo, and the globemark design are trade-marks of Nortel Networks Corporation. Any third-party trademarks are the property of their respective owners.

The information contained in this document is considered to be accurate as of the date of publication. No liability is assumed by Nortel Networks for use of any information contained in this document, or for infringement of any patent rights or any other proprietary rights of third parties that may result from such use.

No license is granted by implication or otherwise under any patent right or any other proprietary right of Nortel Networks. Nortel Networks reserves the right to change at any time the information contained in this document, including specifications and prices, without notice and without liability.

For more information, please contact your local Nortel Networks representative.
Tel: 800.4.NORTEL/800.466.7835
or outside North America 506.674.5471
Email:
sales-opticalcomponents@nortelnetworks.com

Publication # 84123.02/12-01 Dated 12/04/01