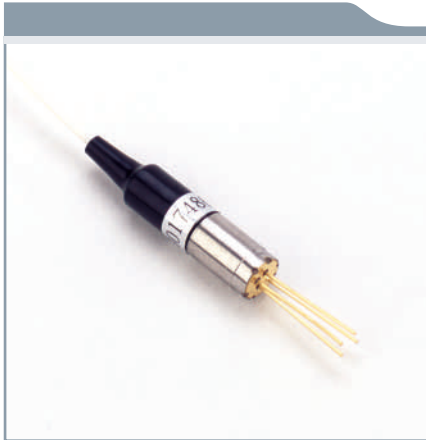


T-11-2500A-R3-SFC/ ST/ SC • T-11-2500A-P3-S/ SFC/ SSC/ SST • T-11-2500A-P3-M/ MFC/ MSC/MST



### Features

- InGaAs/ InP PIN Photodiode with transimpedance amplifier
- High sensitivity with Auto Gain Control (AGC)
- Differential ended output
- Single +3.3 V operation
- -40 to +85°C operating temperature

### Packaging

- FC/ ST/ SC receptacle package
- SM/ MM fiber pigtailed with optional FC/ ST/ SC connector

### Application

- 2.5 Gbps SDH/ SONET/ ATM receivers

#### Absolute Maximum Ratings ( $T_c = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Supply Voltage	$V_{cc}$	4.5	V
Operating Temperature	$T_{opr}$	-40 to +85	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

#### DC Electrical Characteristics ( $T_c = 25^\circ\text{C}$ )

Parameter	Symbol	Min	Typ	Max	Unit
Power Supply	$V_{cc}$	3	3.3	3.6	V
Differential Output Voltage	$V_d$	-	0.6	-	V
Supply Current (no load)	$I_{cc}$	-	34	-	mA

#### AC Optical and Electrical Characteristics ( $T_c = 25^\circ\text{C}$ )

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Detection Range		1100	1310	1650	nm	-
Gain @ 10 Mbps Differential	G	-	27	-	V/ mW	$\lambda = 1310 \text{ nm}$
Bandwidth	BW	1600	1800	2000	MHz	
Saturation Power	$P_{sat}$	-3	0	-	dBm	$\lambda = 1310 \text{ nm}$
Sensitivity	Sens	-	-21	-20	dBm	BER = $10^{-10}$ @ 2.5 Gbps
Output Resistance	$R_{out}$	48	60	72	ohm	

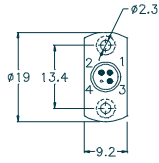
(Operating at  $V_{cc} = 3.3 \text{ V}$ ,  $T_c = 25^\circ\text{C}$ ,  $\lambda = 1310 \text{ nm}$ , 9/125  $\mu\text{m}$  SM fiber)

#### Connector Options

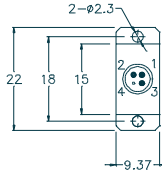
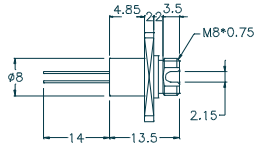
Model	Package	Fiber	Connector
T-11-2500A-R3-SFC	Receptacle	-	FC
T-11-2500A-R3-SST			ST
T-11-2500A-R3-SSC			SC
T-11-2500A-P3-S(M)FC	Pigtailed	SM, MM	FC
T-11-2500A-P3-S(M)ST			ST
T-11-2500A-P3-S(M)SC			SC
T-112500A-P3-S(M)			-

T-11-2500A-R3-SFC/ ST/ SC • T-11-2500A-P3-S/ SFC/ SSC/ SST • T-11-2500A-P3-M/ MFC/ MSC/MST

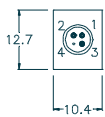
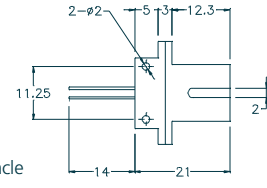
## Outline Drawing Pin-TIA Receiver Modules-receptacle



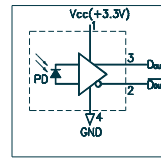
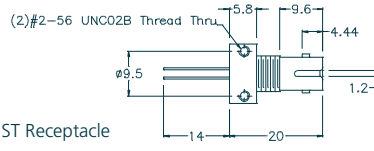
FC Receptacle  
T-11-2500A-R3-SFC



SC Receptacle  
T-11-2500A-R3-SSC



ST Receptacle  
T-11-2500A-R3-SST

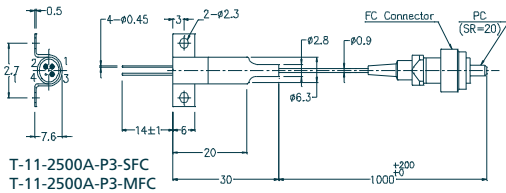


### Pin Assignment

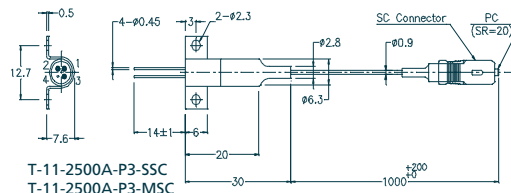
- 1~V<sub>CC</sub>
- 2~D<sub>out</sub>
- 3~D<sub>out</sub>
- 4~GND (case)

Note: Pin assignment can be customized.  
\*Units in mm

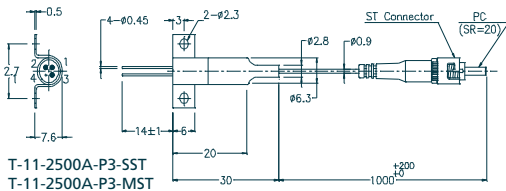
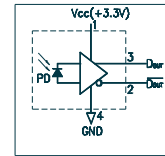
## PIN-TIA Receiver Modules-pigttailed



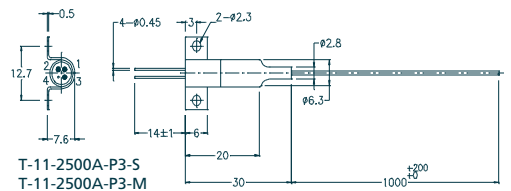
T-11-2500A-P3-SFC  
T-11-2500A-P3-MFC



T-11-2500A-P3-SSC  
T-11-2500A-P3-MSC



T-11-2500A-P3-SST  
T-11-2500A-P3-MST



T-11-2500A-P3-S  
T-11-2500A-P3-M

- ### Pin Assignment
- 1~V<sub>CC</sub>
  - 2~D<sub>out</sub>
  - 3~D<sub>out</sub>
  - 4~GND (case)

\*Units in mm

## Warnings

**Handling Precautions:** This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

## Legal Notice

### IMPORTANT NOTICE!

All information contained in this document is subject to change without notice, at Luminent's sole and absolute discretion. Luminent warrants performance of its products to current specifications only in accordance with the company's standard one-year warranty; however, specifications designated as "preliminary" are given to describe components only, and Luminent expressly disclaims any and all warranties for said products, including express, implied, and statutory warranties, warranties of merchantability, fitness for a particular purpose, and non-infringement of proprietary rights. Please refer to the company's Terms and Conditions of Sale for further warranty information.

Luminent assumes no liability for applications assistance, customer product design, software performance, or infringement of patents, services, or intellectual property described herein. No license, either express or implied, is granted under any patent right, copyright, or intellectual property right, and Luminent makes no representations or warranties that the product(s) described herein are free from patent, copyright, or intellectual property rights. Products described in this document are NOT intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. Luminent customers using or selling products for use in such applications do so at their own risk and agree to fully defend and indemnify Luminent for any damages resulting from such use or sale.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED ON AN "AS IS" BASIS. Customer agrees that Luminent is not liable for any actual, consequential, exemplary, or other damages arising directly or indirectly from any use of the information contained in this document. Customer must contact Luminent to obtain the latest version of this publication to verify, before placing any order, that the information contained herein is current.

© Luminent, Inc. 2002  
All rights reserved