

## T-11-2500-G-B-C



## Features

- InGaAs/InP PIN Photodiode with transimpedance amplifier
- High sensitivity with AGC
- Differential ended output
- Single +3.3V/5V operation
- -40 to 85°C operating temperature
- Integrated 4-pin TO-46 ball lens cap package
- 2.5 Gbps SDH/SONET/ATM receiver application

Absolute Maximum Rating (T<sub>c</sub>=25°C)

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V <sub>cc</sub>	-	6	V
Operating Temperature	T <sub>opr</sub>	-40	+85	°C
Storage Temperature	T <sub>stg</sub>	-40	+85	°C

DC Electrical Characteristics( T<sub>c</sub>=25°C )

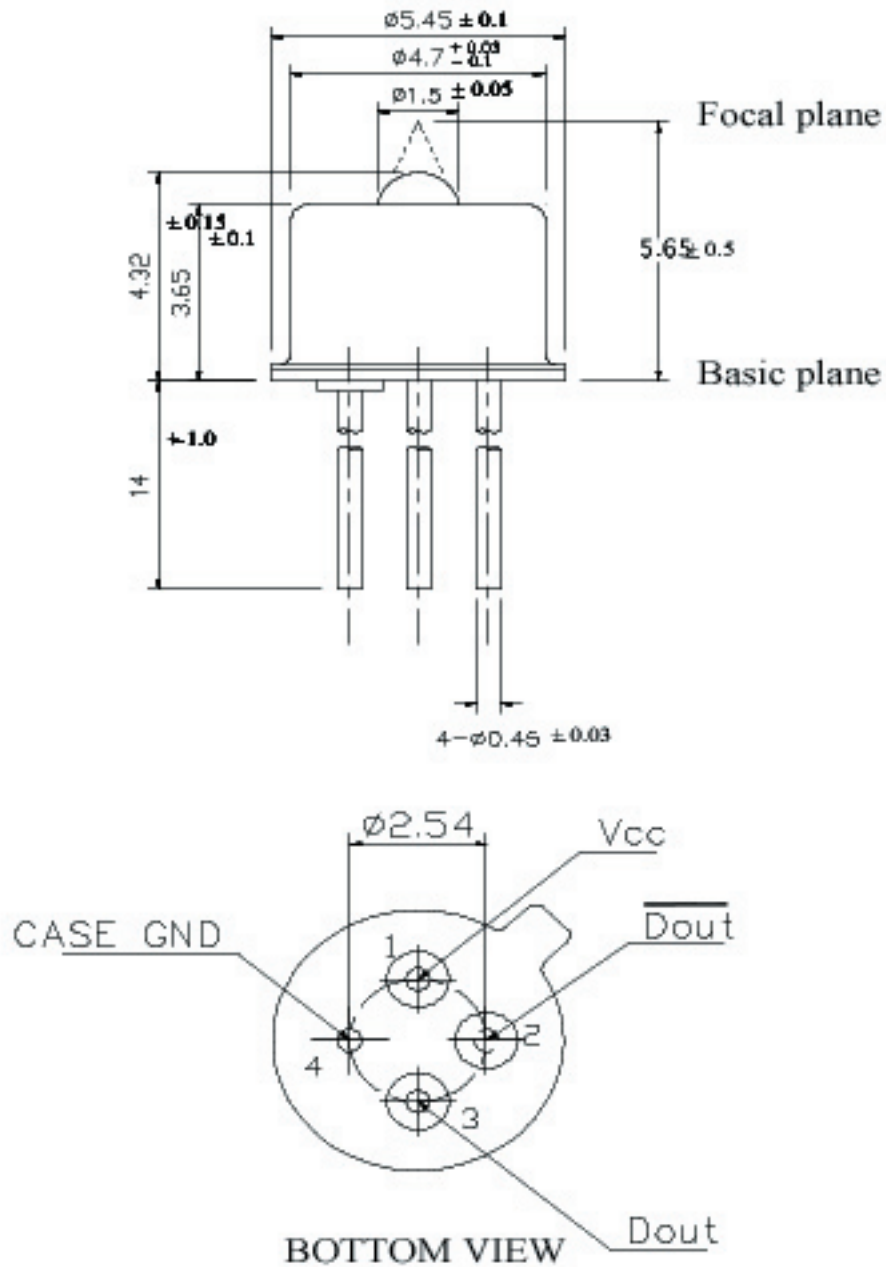
Parameter	Symbol	Min	Typical	Max	Unit
Power Supply	V <sub>cc</sub>	3.0	-	5.5	V
Differential Output offset Voltage	V <sub>d</sub>	0.22	0.38	0.57	V
Supply Current (no load)	I <sub>cc</sub>	-	34	63	mA

V<sub>cc</sub> = +3.0 to 5.5V, Typical values are at V<sub>cc</sub> = 3.3V, T<sub>c</sub> = 25°C, λ=1310 nm, 9/125μm SM fiber

AC/Optical and Electrical Characteristics( T<sub>c</sub>=25°C )

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Detection Range	-	1100	1310	1650	nm	
Gain @ 10 Mbps Differential	G	1.5	2.3	3.2	V/mW	Measure differentially AC coupled RL = 50 Ω
Bandwidth (to -3dB point)	BW	1500	2000	-	MHz	
Saturation Power	P <sub>sat</sub>	-3	0	-	dBm	1310 nm
Sensitivity	Sens	-	-21	-18	dBm	BER= 10 <sup>-10</sup> @ 2.5 Gbps, PRBS 2 <sup>23</sup> -1
Output Resistance	R <sub>out</sub>	48	50	52	Ω	

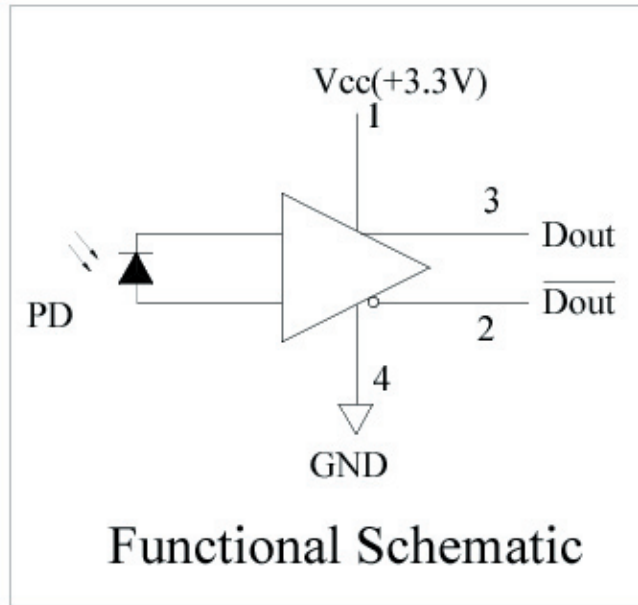
Package Diagram



# TO-46 Package With Ball Lens Cap

All Dimensions In mm

## Functional Schematics



#### 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.

**Laser Safety:** Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

#### 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.

© LuminentOIC, Inc. 2003  
All rights reserved