

OD8613A, OD8613D**Preliminary****1.25Gbps PIN-Preamplifier Receiver Coaxial Module****GENERAL DESCRIPTION**

OD8613 series are optical receiver modules that use an InGaAs PIN photodiode with a low noise Pre-Amplifier. Package style is a hermetically sealed coaxial package with multi mode fiber pigtail. These receiver modules were designed especially for 1.25Gbps SONET/Gigabit Ethernet applications.

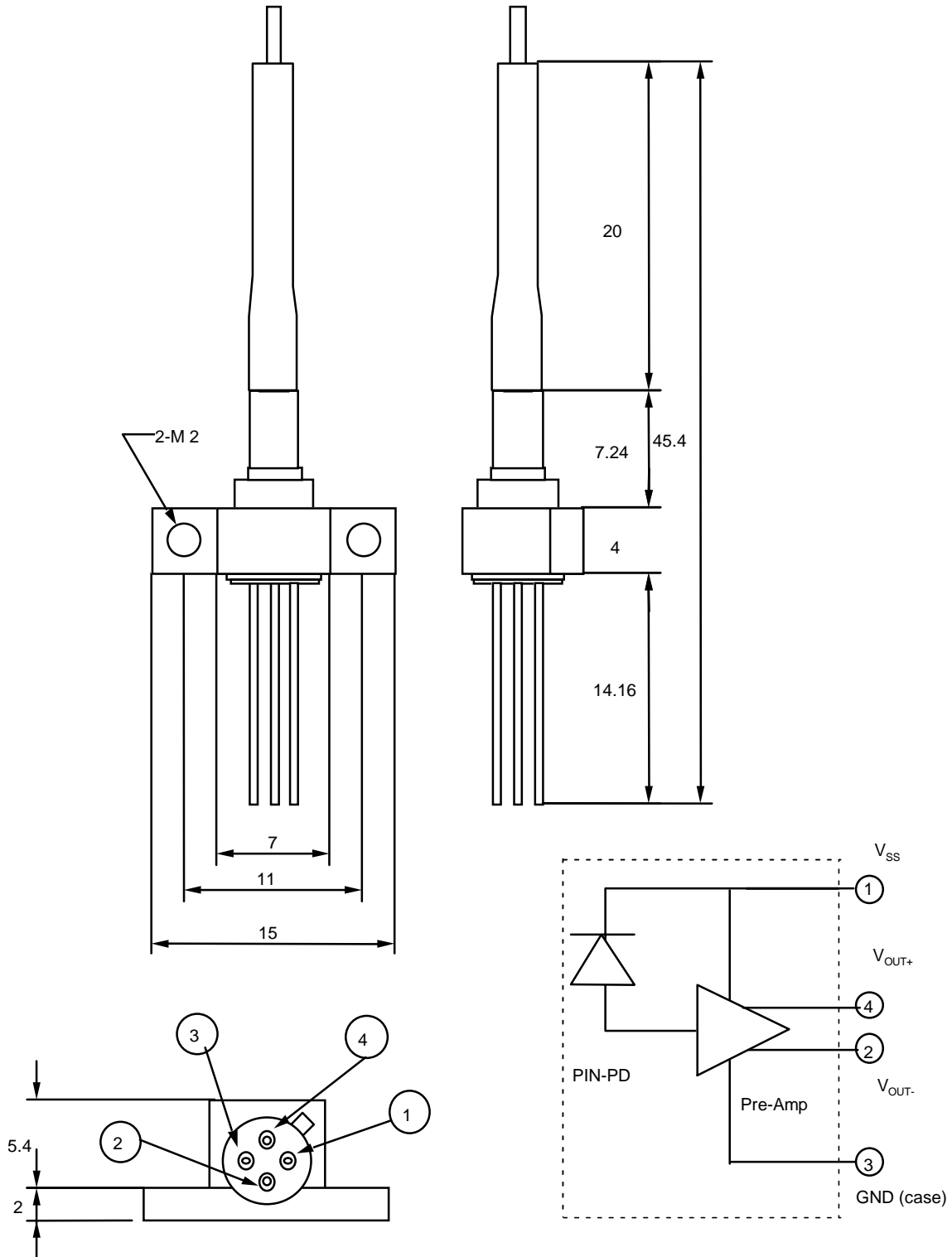
FEATURES

- Single 3.3 V supply
- Low noise: NEPo 0.5 μ Wrms (Max.)
- Automatic gain control
- Sensitivity: -27.5 dBm (Typ.)
- Differential output: 100 Ω Load

APPLICATIONS

- Digital optical transmission receivers
- 1.25Gbps SONET receivers
- Gigabit Ethernet
- Fiber channel

PACKAGE DIMENSIONS



Note 1: Unit = mm
 Note 2: Fiber hood dimension is provisional.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Ratings	Unit
Supply Voltage	V_{SS}	Ta = 25°C	5.5	V
Incident Optical Power	P_O		0	dBm
Operating Case Temperature	T_{OP}	—	-20 to +85	°C
Storage Temperature	T_{STG}	—	-40 to +85	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS(V_{SS} = 3.3 V, Wavelength = 1310 nm & Top = 25°C, unless otherwise noted)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength	λ	—	1270	—	1620	nm
Sensitivity	PRL	RL = 100 Ω , 1250Mb/s, NRZ PRBS2 ³¹ -1, BER10 ⁻¹²	—	-27.5	-26.5	dBm
Dynamic Range	Dr	—	23.5	24.5	—	dB
Bandwidth	BW	RL = 100 Ω , Pin = -22 dBm -3 dB from 10 MHz	630	—	—	MHz
Differential Responsivity	Rd	RL = 100 Ω , Pin = -22 dBm	1.8	2.2	—	kV/W
Input Noise Equivalent Optical Power	NEP _o	BW = 1500 MHz, Pin = 0 mW	—	—	0.5	μ W RMS
Recommended Supply Voltage	V_{SS}	—	3.0	3.3	3.6	V
Supply Current	I_{SS}	Pin = mW	—	—	50	mA

FIBER PIGTAIL SPECIFICATIONS**•OD8613A**

Parameter	Specifications	Unit
Type	MM	---
Mode Field Diameter	62.5	μ m
Cladding Diameter	125	μ m
Jacket Diameter	900	μ m
Length	1 (Min.)	m

•OD8613D

Parameter	Specifications	Unit
Type	MM	---
Mode Field Diameter	50	μ m
Cladding Diameter	125	μ m
Jacket Diameter	900	μ m
Length	1 (Min.)	m

NOTICE

1. The information contained herein can change without notice owing to product and/or technical improvements. Before using the product, please make sure that the information being referred to is up-to-date.
2. The outline of action and examples for application circuits described herein have been chosen as an explanation for the standard action and performance of the product. When planning to use the product, please ensure that the external conditions are reflected in the actual circuit, assembly, and program designs.
3. When designing your product, please use our product below the specified maximum ratings and within the specified operating ranges including, but not limited to, operating voltage, power dissipation, and operating temperature.
4. Oki assumes no responsibility or liability whatsoever for any failure or unusual or unexpected operation resulting from misuse, neglect, improper installation, repair, alteration or accident, improper handling, or unusual physical or electrical stress including, but not limited to, exposure to parameters beyond the specified maximum ratings or operation outside the specified operating range.
5. Neither indemnity against nor license of a third party's industrial and intellectual property right, etc. is granted by us in connection with the use of the product and/or the information and drawings contained herein. No responsibility is assumed by us for any infringement of a third party's right which may result from the use thereof.
6. The products listed in this document are intended for use in general electronics equipment for commercial applications (e.g., office automation, communication equipment, measurement equipment, consumer electronics, etc.). These products are not authorized for use in any system or application that requires special or enhanced quality and reliability characteristics nor in any system or application where the failure of such system or application may result in the loss or damage of property, or death or injury to humans. Such applications include, but are not limited to, traffic and automotive equipment, safety devices, aerospace equipment, nuclear power control, medical equipment, and life-support systems.
7. Certain products in this document may need government approval before they can be exported to particular countries. The purchaser assumes the responsibility of determining the legality of export of these products and will take appropriate and necessary steps at their own expense for these.
8. No part of the contents contained herein may be reprinted or reproduced without our prior permission.

Copyright 2000 Oki Electric Industry Co., Ltd.