
OD8614B, OD8614D

Preliminary

1.25Gbps PIN-Preamplifier Receiver Coaxial Module

GENERAL DESCRIPTION

OD8614 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 single or multi mode fiber pigtail. These receiver modules were designed especially for 1.25Gbps SONET/Gigabit Ethernet applications.

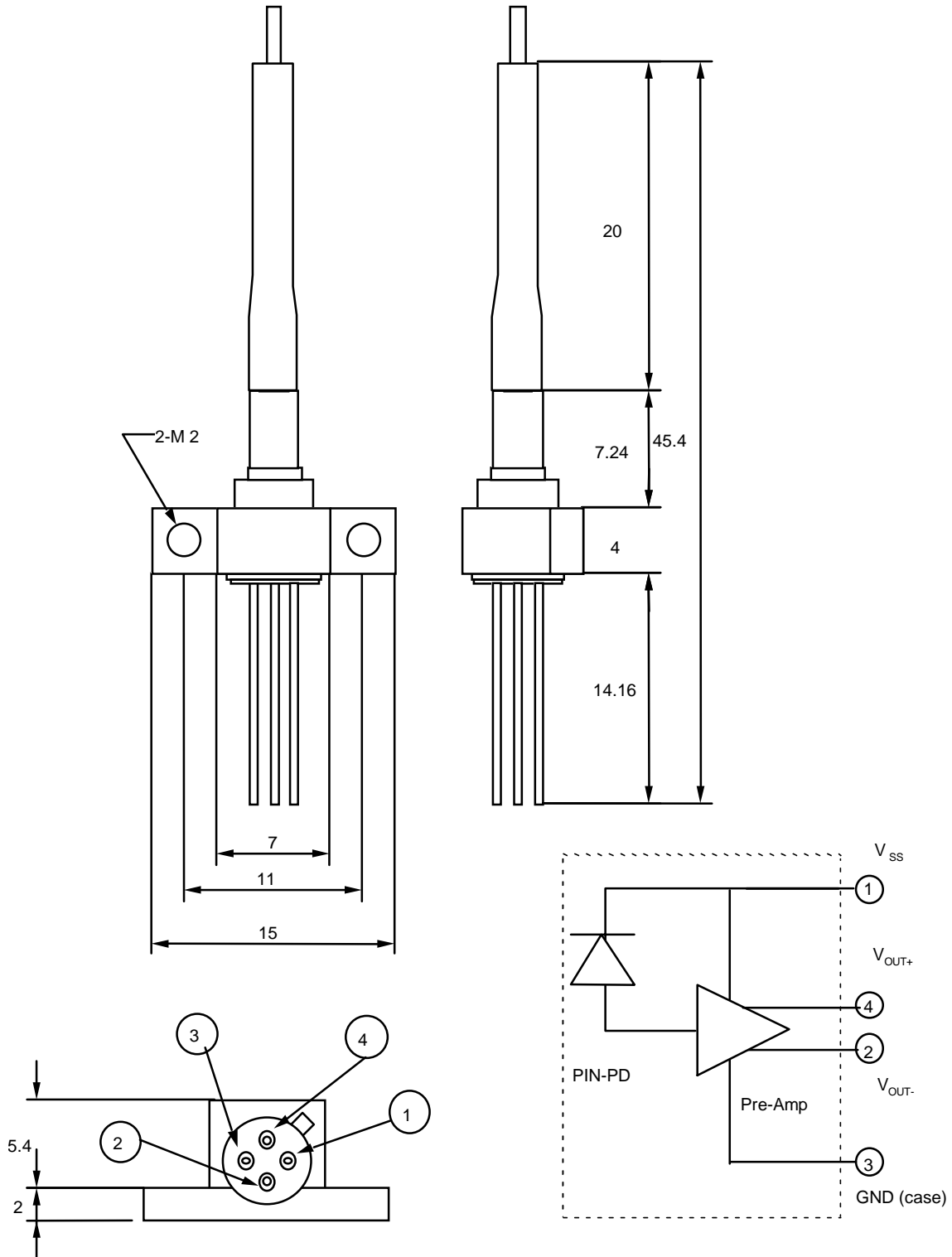
FEATURES

- Single 3.3 V supply
- Low noise: NEPo 0.5 μ Wrms (Max.)
- Automatic gain control
- Sensitivity: -28.5 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	—	-28.5	-27.5	dBm
Dynamic Range	Dr	—	24	25.5	—	dB
Bandwidth	BW	RL = 100 Ω , Pin = -22 dBm -3 dB from 10 MHz	800	—	—	MHz
Differential Responsivity	Rd	RL = 100 Ω , Pin = -22 dBm	1.8 ^{*1} 1.6 ^{*2}	2.2 ^{*1} 2.0 ^{*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 = 0 mW	—	—	50	mA

*1:OD8614B,*2:OD8614D

FIBER PIGTAIL SPECIFICATIONS**•OD8614B**

Parameter	Specifications	Unit
Type	SM	---
Mode Field Diameter	10	μ m
Cladding Diameter	125	μ m
Jacket Diameter	900	μ m
Length	1 (Min.)	m

•OD8614D

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

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