
OD8602A, OD8602B, OD8602D

Preliminary

156Mbps PIN-Preamplifier Receiver Coaxial Module

GENERAL DESCRIPTION

OD8602 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 156Mbps SONET/SDH applications.

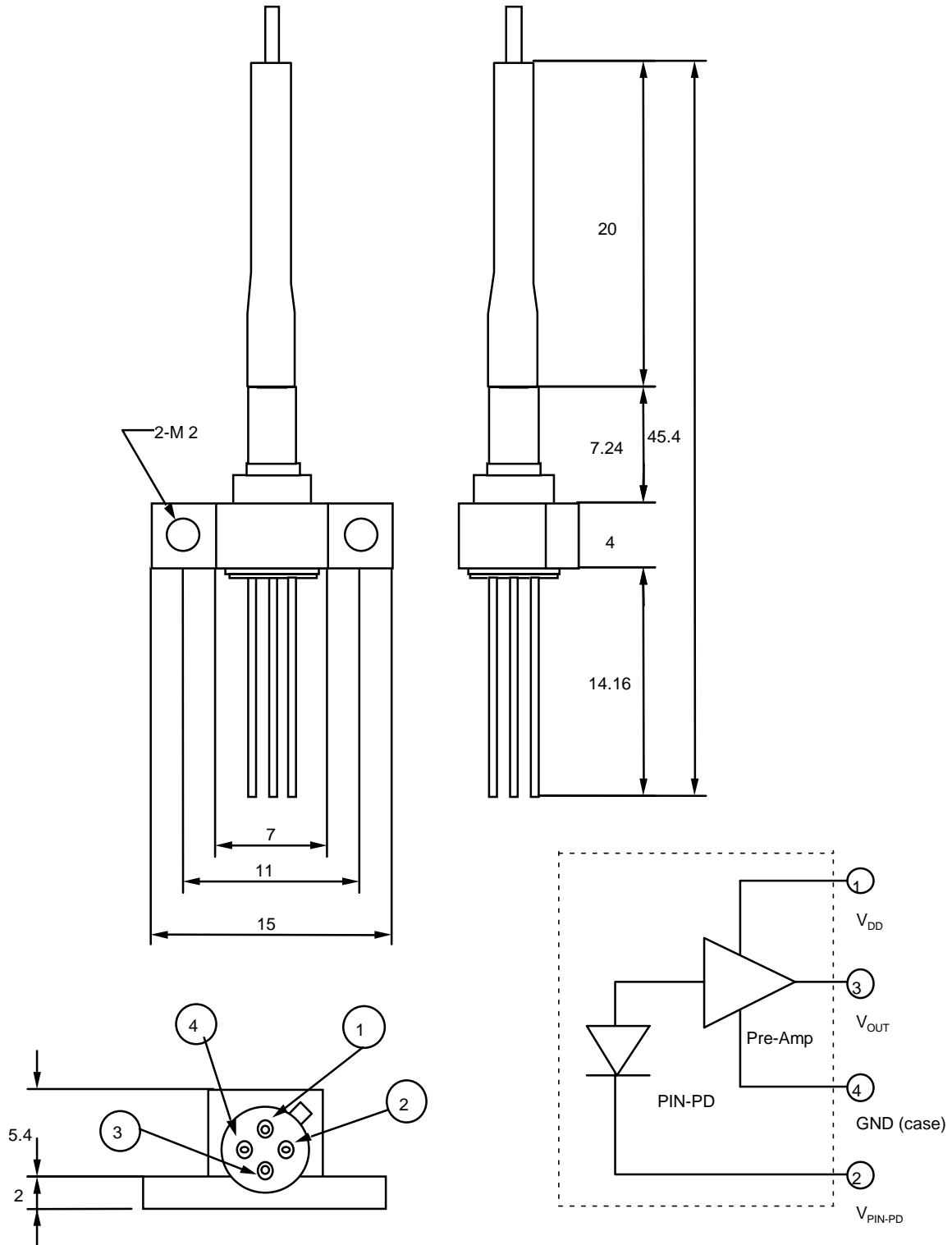
FEATURES

- Single 3.3 V supply
- Low noise: NEPo 13.9 nWrms (Typ.)
- Automatic gain control
- Sensitivity: -37.5 dBm (Typ.)
- Single output

APPLICATIONS

- Digital optical transmission receivers
- 156Mbps SONET/SDH receivers

PACKAGE DIMENSIONS



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

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Ratings	Unit
TIA Supply Voltage	V_{DD}	Ta = 25°C	5	V
PIN-PD Supply Voltage	V_{PD}		8	V
Incident Optical Power	P_O		-3	dBm
Operating Case Temperature	T_{OP}	—	-20 to +85	°C
Storage Temperature	T_{STG}	—	-40 to +85	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS(V_{DD}, V_{PD} = 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	156Mb/s, NRZ PRBS2 ³¹ -1, BER10 ⁻¹⁰	—	-37.5	-36	dBm
Dynamic Range	Dr	—	30	—	—	dB
Bandwidth	BW	Pin = -30 dBm -3 dB from 10 MHz	100	130	—	MHz
Responsivity	R	Pin = -30 dBm	30	45	—	kV/W
Input Noise Equivalent Optical Power	NEPo	BW = 117 MHz, Pin = 0 mW	—	13.9	—	nW RMS
Recommended Supply Voltage	V_{DD}, V_{PD}	—	3.0	3.3	3.6	V
Supply Current	I_{SS}	Pin = 0 mW	5	10	17	mA

FIBER PIGTAIL SPECIFICATIONS**•OD8602A**

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

•OD8602B

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

•OD8602D

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

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