
OD8616A, OD8616B, OD8616D

Preliminary

156Mbps PIN-Preamplifier Receiver Coaxial Module

GENERAL DESCRIPTION

OD8616 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.

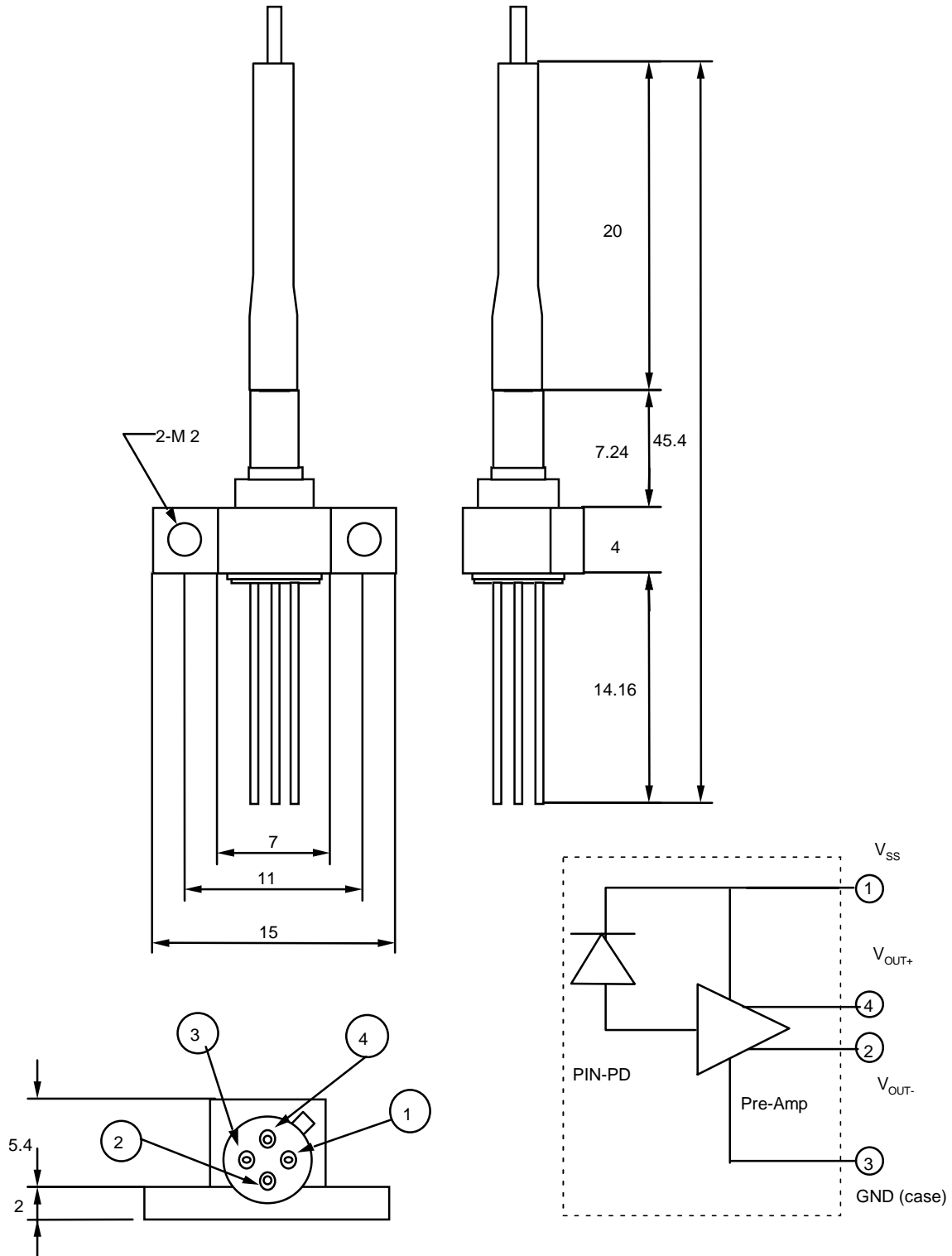
FEATURES

- Single 3.3 V supply
- Low noise : NEPo 12 nWrms (Typ.)
- Automatic gain control
- Sensitivity : -39 dBm (Typ.)
- Differential output : Load > 500 Ω

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
Supply Voltage	V_{SS}	Ta = 25°C	4.5	V
Incident Optical Power	P_O		-3	dBm
Operating Case Temperature	T_{OP}	—	-40 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 > 500 Ω , 156Mb/s, NRZ PRBS2 ³¹ -1, BER10 ⁻¹⁰	—	-39	-37	dBm
Dynamic Range	Dr	—	29	—	—	dB
Bandwidth	BW	RL > 500 Ω , Pin = -31 dBm -3 dB from 10 MHz	115	—	—	MHz
Differential Responsivity	Rd	RL > 500 Ω , Pin = -31 dBm	—	30	—	kV/W
Input Noise Equivalent Optical Power	NEP _o	BW = 117 MHz, Pin = 0 mW	—	12	—	nW RMS
Recommended Supply Voltage	V_{SS}	—	3.0	3.3	3.6	V
Supply Current	I_{SS}	Pin = 0 mW	—	19	24	mA

FIBER PIGTAIL SPECIFICATIONS**•OD8616A**

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

•OD8616B

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

•OD8616D

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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