
OD8615B, OD8615D

Preliminary

622Mbps PIN-Preamplifier Receiver Coaxial Module

GENERAL DESCRIPTION

OD8615 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 622Mbps SONET/SDH applications.

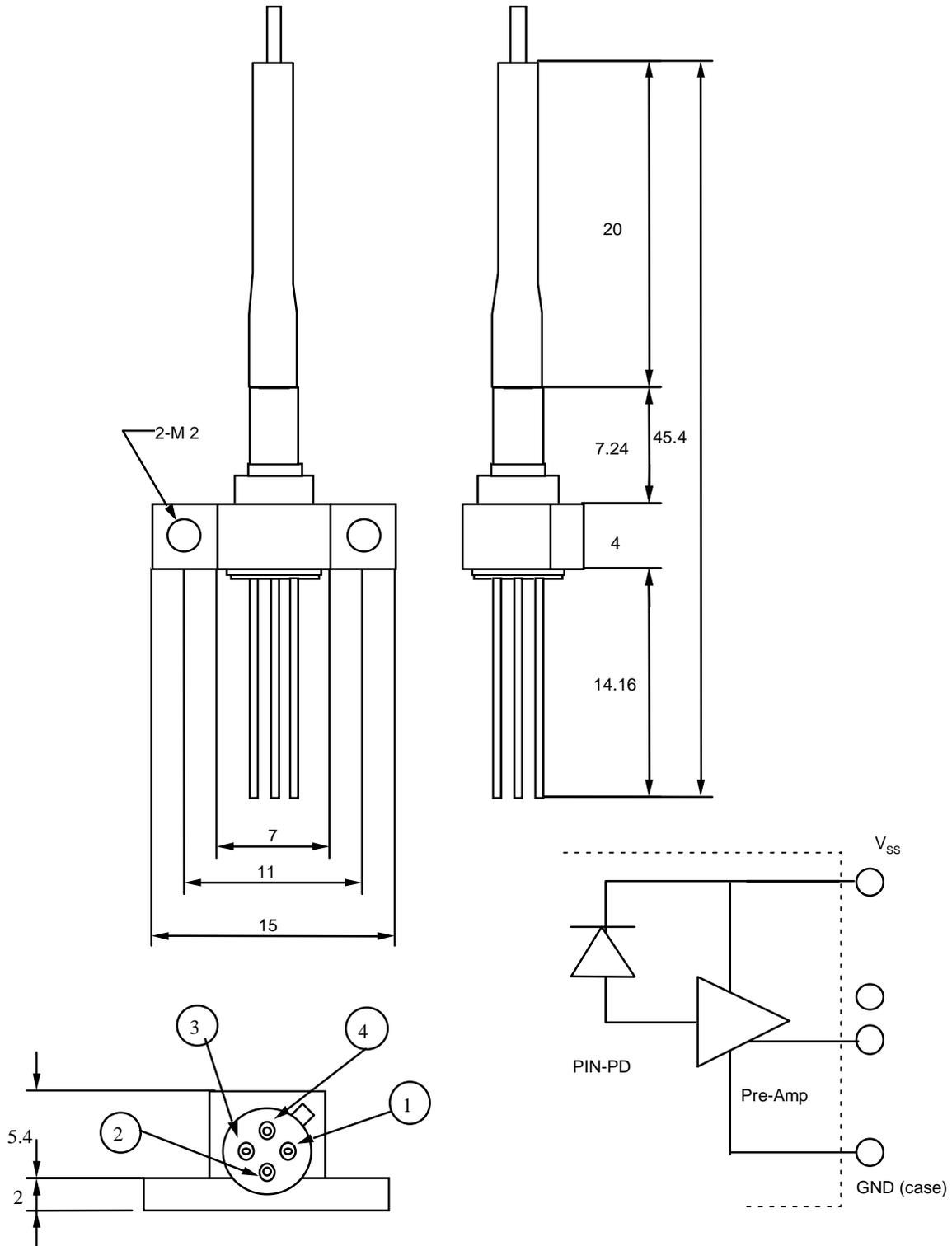
FEATURES

- Single 3.3 V supply
- Low noise : NEPo 73 nWrms (Typ.)
- Automatic gain control
- Sensitivity : -32 dBm (Typ.)
- Differential output : 100 Ω Load

APPLICATIONS

- Digital optical transmission receivers
- 622Mbps SONET/SDH receivers

PACKAGE DIMENSIONS



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Ratings	Unit
Supply Voltage	V_{SS}	Ta = 25°C	5.5	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 = 100 Ω , 622Mb/s, NRZ PRBS2 ³¹ -1, BER10 ⁻¹⁰	—	-32	-30	dBm
Dynamic Range	Dr	—	22	—	—	dB
Bandwidth	BW	RL = 100 Ω , Pin = -25 dBm -3 dB from 10 MHz	450	530	—	MHz
Differential Responsivity	Rd	RL = 100 Ω , Pin = -25 dBm	3.5 ^{*1} 3.15 ^{*2}	5 ^{*1} 4.5 ^{*2}	—	kV/W
Input Noise Equivalent Optical Power	NEPo	BW = 470 MHz, Pin = 0 mW	—	73	—	nW vRMS
Recommended Supply Voltage	V_{SS}	—	3.0	3.3	3.6	V
Supply Current	I_{SS}	Pin = 0 mW	10	25	37	mA

*1:OD8615B,*2:OD8615D

FIBER PIGTAIL SPECIFICATIONS**•OD8615B**

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

•OD8615D

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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