

OD8612B/D

2.5Gbps PIN-preamplifier coaxial module with single/Multi mode fiber

1. DESCRIPTION

OD8612 is an optical receiver module for digital transmission systems up to 2.5Gbps. It uses an InGaAs PIN photodiode with a low noise preamplifier. It operates from +3.3V to +5.0V TIA supply voltage. Package style is a hermetically sealed coaxial package with single or multi mode fiber pigtail.

2. FEATURES

Data rate up to 2.5Gbps
 High responsivity InGaAs PIN PD : 0.85A/W
 Typical sensitivity : -24dBm
 Low noise
 Differential output
 Small coaxial package



3. APPLICATION

SONET OC-48/SDH STM-16 applications

4. OPTICAL AND ELECTRICAL CHARACTERISTICS

(Wavelength=1310nm, Ta =25°C, VDD=3.3V, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Wavelength	λ	-	1250	--	1620	nm	
PD Responsivity	RPD	$\lambda=1.55$ m	0.80	0.85	--	A/W	
		$\lambda=1.31$ m	0.75	0.80	--		
Responsivity	R	RL=100 Ω , Pin=-17dBm, Differential, AC	1.5 ^{*1}	2.0 ^{*1}	--	kV/ W	
			1.3 ^{*2}	1.8 ^{*2}	--		
Bandwidth	BW	f3dB, RL=100 Ω	1550	1850	--	MHz	
Sensitivity	Prmin	2.488Gbps, NRZ, BER=10 ⁻¹⁰ , PRBS2 ²³ -1	--	-24	-22.5	dBm	
Overload	Prmax	2.488Gbps, NRZ, BER=10 ⁻¹⁰ , PRBS2 ²³ -1	-3	0	--	dBm	
Output Impedance	Zout	Pin = 0mW, Single ended	45	50	60	Ω	
Supply Current	IDD	Pin = 0mW	VDD=3.3V	--	30	63	mA
			VDD=5.0V	--	40	73	mA
Recommended TIA Supply Voltage	VDD	-	3.0	3.3	3.6	V	
Optical Return Loss	ORL	-	--	--	-27	dB	

*1: OD8612B, *2: OD8612D.

5.ABSOLUTE MAXIMUM RATING

(Ta = 25 °C, unless otherwise specified)

Parameter	Symbol	Rating	Unit
TIA Supply Voltage	VDD	6.0	V
PD Reverse Current	IR	2(cw)	mA
Operating Temperature	Top	-40 to +85	°C
Storage Temperature	Tstg	-40 to +85	°C

6. CONNECTOR AND FIBER SPECIFICATIONS**-OD8612B**

Parameter	Specifications	Unit
Type	SM	--
Mode Field Diameter	10	μm
Cladding Diameter	125	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC/PC or SC/PC	--

-OD8612D

Parameter	Specifications	Unit
Type	MM	--
Mode Field Diameter	50	μm
Cladding Diameter	125	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC/PC or SC/PC	--

7.ORDERING INFORMATION

OD8612_ - _ _ _

<u>Fiber</u>	<u>Flange</u>	<u>Connector</u>
B: SM	AF: Angled	FC
D:MM	SF: Straight	SC

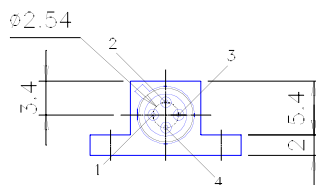
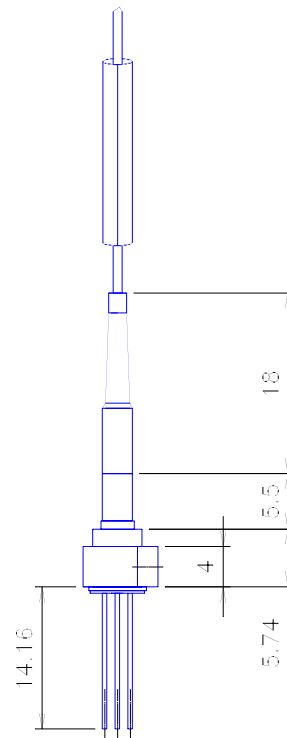
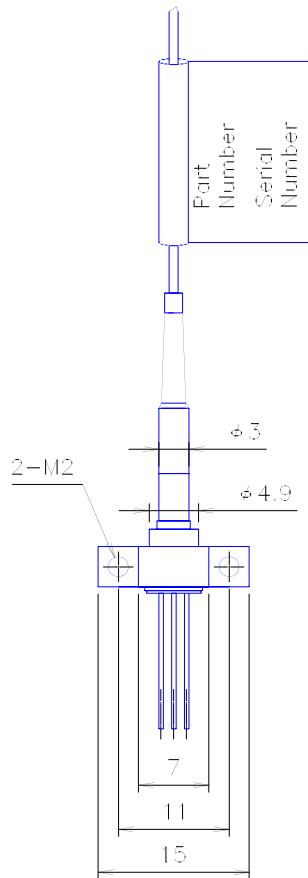
ex.) OD8612B- AFFC

OD8612 with SM fiber, angled flange,
and FC connector.

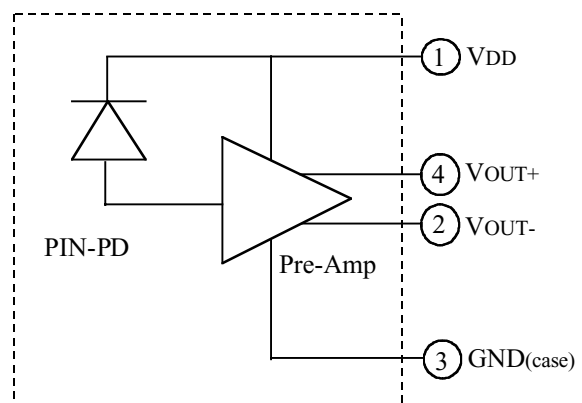
8.Outline Drawing

All dimensions in millimeters

Package No. OD8612B/D-AF__ (Unit: mm)



Pin Connection	
1	VOUT+
2	VDD
3	VOUT-
4	GND(case)



All dimensions in millimeters
 Package No. OD8612B/D-SF__ (Unit: mm)

