

preliminary

**156Mbps
PIN Photodiode – Preamplifier Coaxial Module
with Single/Multi Mode Fiber**

OD8616A/B/D

2nd Issued: JUN. / 30/ 01
1st Issued: JAN. / 24/ 00

| Receipt |
|---------|
| |

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Oki Electric Industry Co.,Ltd.

1. Description

OD8616A/B/D is an optical receiver module for digital transmission systems up to 156Mbps. It uses an InGaAs PIN photodiode with a low noise Pre-Amplifier. Package style is a hermetically sealed coaxial package with single/multi mode fiber pigtail.

2. Absolute Maximum Ratings

(Ta=25 °C,unless otherwise noted)

| Parameter | Symbol | Ratings | Unit |
|------------------------|------------------|------------|------|
| Supply Voltage | V _{SS} | 4.5 | V |
| Incident Optical Power | P _o | 0 | dBm |
| Operating Temperature | T _{op} | -40 to +85 | °C |
| Storage Temperature | T _{stg} | -40 to +85 | °C |

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3. Optical and Electrical Characteristics

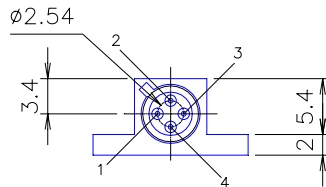
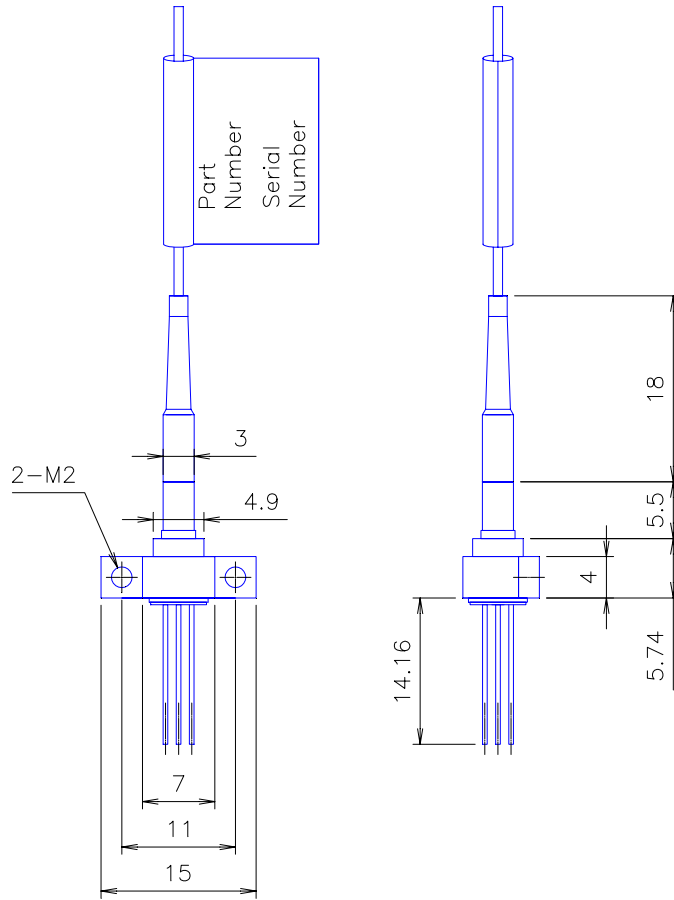
(V_{ss}=3.3 V, Wavelength=1310 nm & Top=25°C, unless otherwise noted)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------------|------------------|-----------------------------------|------|------|------|----------|
| Recommended Supply Voltage | V _{ss} | | 3.0 | 3.3 | 3.6 | V |
| Wavelength | λ | | 1200 | -- | 1350 | nm |
| Low Frequency Cutoff | f _c | -3 dB, Pin=-25dBm | -- | -- | 100 | kHz |
| Sensitivity | P _{RL} | BER 10 ⁻¹⁰ , 156 Mb/s | -- | -39 | -37 | dBm |
| Overload | P _{RH} | BER 10 ⁻¹⁰ , 156 Mb/s | -8 | -- | -- | dBm |
| Single Ended Output Impedance | Z _{out} | | -- | 50 | -- | Ω |
| Bandwidth | BW | -3dB, Pin=-31dBm, RL>500 Ω | 115 | -- | -- | MHz |
| Differential Output Voltage | V _d | Pin=-8dBm, RL>500 Ω | -- | -- | 800 | mV |
| Differential Responsivity | R _d | Pin=-31dBm, RL>500 Ω | -- | 30 | -- | kV/W |
| RMS Noise Referred to Input | I _n | BW=117MHz, Pin=0mW | -- | 11 | 20 | nA RMS |
| Supply Current | I _{ss} | Pin=0mW | -- | 19 | 24 | mA |

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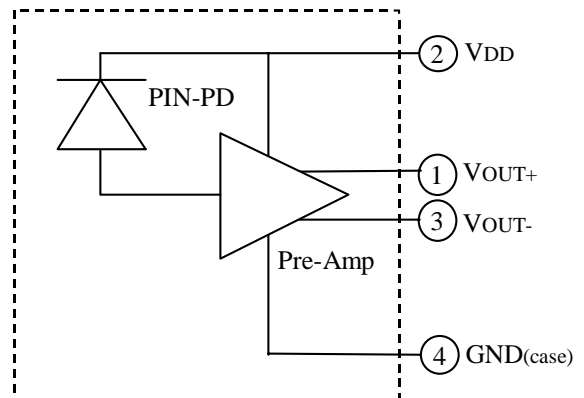
7. Package Outline Drawing

(1)OD8616B - AF



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

note 1: Unit = mm



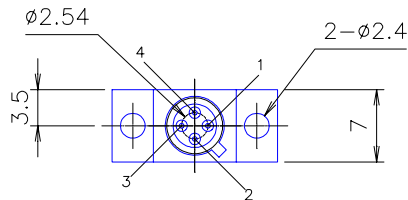
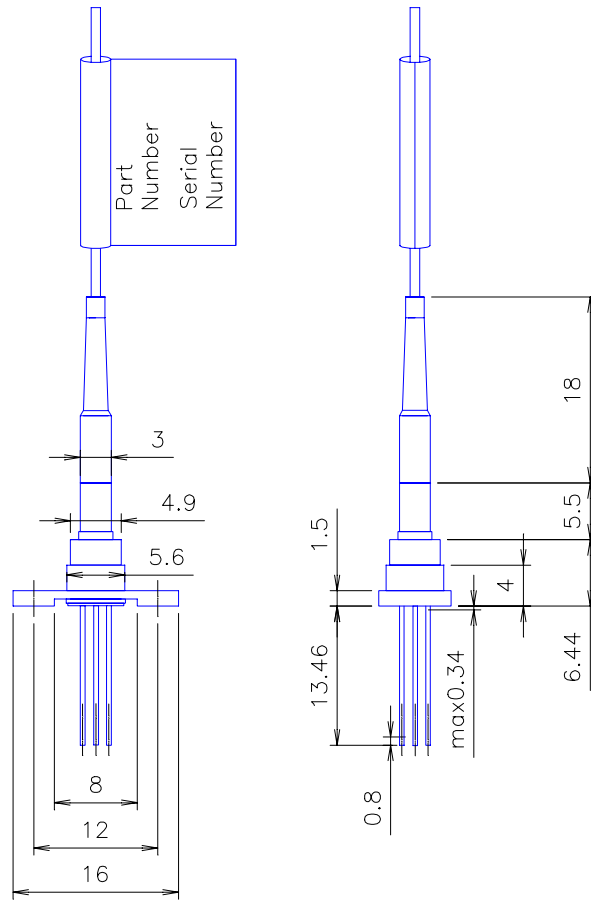
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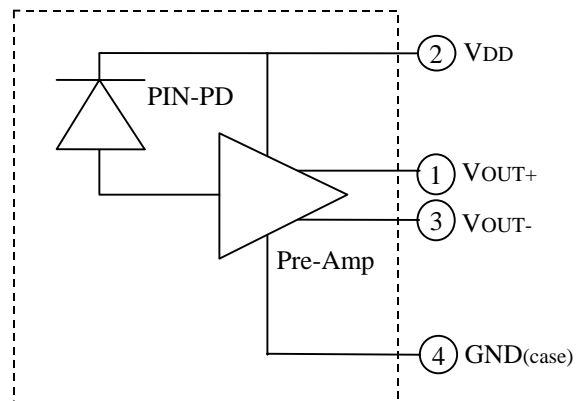
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(2)OD8616B - SF



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

note 1: Unit = mm



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