OKI Electronic Components **OD9604N**

1310 nm SMT Photo Diode Module with Single Mode Fiber

GENERAL DESCRIPTION

The surface mount type PD-Preamp module is a $1.3 \,\mu m$ InGaAs PIN photo diode coupled to a single mode fiber with a pigtail. It is designed for STM16/OC48.

ABSOLUTE MAXIMUM RATINGS

| | | (Ta = 25°C, unless otherwise noted) | | |
|----------------------------|-----------------|-------------------------------------|------|--|
| Parameter | Symbol | Rating | Unit | |
| Supply Voltage | V _{cc} | +6 | V | |
| Maximum Input Power | Pomax | -3 | dBm | |
| Operating Case Temperature | Тор | -40 to +85 | °C | |
| Storage Temperature | Tstg | -40 to +85 | °C | |
| Lead Soldering Temperature | — | 260(10sec.) | °C | |

OPTICAL AND ELECTRICAL CHARACTERISTICS

(Ta = -40 to 85°C, V_{cc} = +3.3 V, λ = 1310 nm, unless otherwise specified)

| | ``` | , , | | , | | • |
|------------------------|--------|-------------------------------------|------|------|------|-------------------|
| Parameter | Symbol | Test Conditions | Min. | Тур. | Max. | Unit |
| Supply Current | lcc | — | _ | 26 | 50 | mA |
| Sensitivity | | 10 ⁻¹² BER (Note 1) | _ | -23 | _ | dBm |
| Over Load | | | -3 | | _ | dBm |
| Bandwidth | BW | -3 dB, Pin =- 22 dBm, Fr = 3 MHz | 1.5 | _ | _ | GHz |
| Responsivity | | Differential, Pin = -22 dBm | 1230 | 1520 | _ | V/W |
| Maximum Output Voltage | | Differential | 185 | 250 | 415 | mV_{pp} |
| Output Noise Voltage | | BW = 1100 MHz, RL = 50 ohm | _ | _ | 1.1 | mV _{rms} |

Note:1)Data rate:2.5G bps;data sequence:PRBS 2²³-1

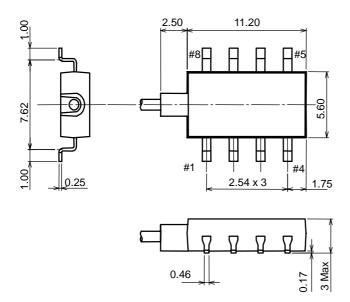
OD9604N

CONNECTOR AND FIBER SPECIFICATIONS

| Parameter | Specifications | Unit |
|---------------------|-------------------|------|
| Туре | SM | — |
| Mode Field Diameter | 9 ±1 | mm |
| Code Diameter | 0.9 | mm |
| Bending Radius | 20 (min) | mm |
| Length | Options | — |
| Connector | FC, SC, MUJ, etc. | _ |
| Color | Blue | _ |

OUTLINE DRAWING

All dimensions in millimeters Package No. (Unit: mm)



Pin Description

| No. | Function |
|-----|-----------------|
| 1 | V _{CC} |
| 2 | GND |
| 3 | GND |
| 4 | OUTP(+) |
| 5 | OUTN(-) |
| 6 | NC |
| 7 | GND |
| 8 | GND |
| | |

NOTICE

- 1. The information contained herein can change without notice owing to product and/or technical improvements. Before using the product, please make sure that the information being referred to is up-to-date.
- 2. The outline of action and examples for application circuits described herein have been chosen as an explanation for the standard action and performance of the product. When planning to use the product, please ensure that the external conditions are reflected in the actual circuit, assembly, and program designs.
- 3. When designing your product, please use our product below the specified maximum ratings and within the specified operating ranges including, but not limited to, operating voltage, power dissipation, and operating temperature.
- 4. Oki assumes no responsibility or liability whatsoever for any failure or unusual or unexpected operation resulting from misuse, neglect, improper installation, repair, alteration or accident, improper handling, or unusual physical or electrical stress including, but not limited to, exposure to parameters beyond the specified maximum ratings or operation outside the specified operating range.
- 5. Neither indemnity against nor license of a third party's industrial and intellectual property right, etc. is granted by us in connection with the use of the product and/or the information and drawings contained herein. No responsibility is assumed by us for any infringement of a third party's right which may result from the use thereof.
- 6. The products listed in this document are intended for use in general electronics equipment for commercial applications (e.g., office automation, communication equipment, measurement equipment, consumer electronics, etc.). These products are not authorized for use in any system or application that requires special or enhanced quality and reliability characteristics nor in any system or application where the failure of such system or application may result in the loss or damage of property, or death or injury to humans. Such applications include, but are not limited to, traffic and automotive equipment, safety devices, aerospace equipment, nuclear power control, medical equipment, and life-support systems.
- 7. Certain products in this document may need government approval before they can be exported to particular countries. The purchaser assumes the responsibility of determining the legality of export of these products and will take appropriate and necessary steps at their own expense for these.
- 8. No part of the contents contained herein may be reprinted or reproduced without our prior permission.

Copyright 2000 Oki Electric Industry Co., Ltd.