



DATA SHEET

Preliminary

O K I O P T I C A L C O M P O N E N T S

OD8220N

Photo Diode Preamp Module

February 2001

Oki Semiconductor

DESCRIPTION

Oki Semiconductor's OD8220N surface mount type Photo Diode Preamp module is a 1.3 μm , InGaAs PIN photo diode coupled to a single mode fiber with a pigtail. The OD8220N is designed for STM-1 I-1, S-1.1, S-1.2, L-1.1, L-1.2, L-1.3 (OC-3 IR-1, SR, IR-2, LR-1, LR-2, LR-3) compliant optical systems.

FEATURES

- 1.3 μm InGaAs PIN photo diode
- Surface mount PhotoDiode Preamp module
- Coupled to a single mode fiber with a pigtail

APPLICATION

- Optical receivers
- Optical transmission modules (receiver section)
- Inter-office interconnection
- Ethernet



ABSOLUTE MAXIMUM RATINGS

(Ta=25°C, unless otherwise specified)

Absolute Maximum Ratings

Parameter	Ratings	Unit
Supply Voltage	5	V
Optical Input Power	1	mW
Operating Temperature (Ta)	-40 to 85	°C
Storage Temperature	-40 to 85	°C
Lead Soldering Temperature (10 sec)	260	°C

ELECTRICAL CHARACTERISTICS

(Condition: Ta=25°C, Vcc= +5.0V, C_{EXTERNAL}= 0.85 pF)

Electrical Characteristics

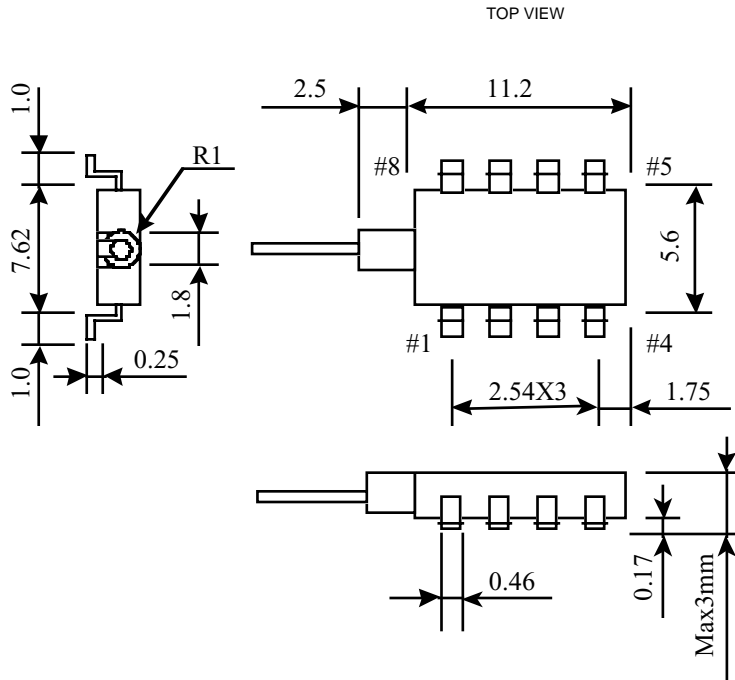
Parameter	Conditions		Min	Typ	Max	Unit
Power Supply Voltage	-		3.1	3.3	3.5	V
Consumption Current	Vcc = 3.3 V, Pin = 0				14	mA
Cut-off Frequency	-3 dB point		100			MHz
Conversion gain	Vcc = 3.3 V $\lambda = 1.31 \mu\text{m}$	Pin = 1 mW	32			KV / W
		Pin = 0.16 mW AGC	0.53			
Input Referred Noise Spectral Density	Vcc = 3.3 V, @ 100 MHz			1.65		pA / $\sqrt{\text{Hz}}$

Connector and Fiber Specifications

Connector	FC-PC, SC-PC, MUJ-PC, etc.
Fiber	1.31 μm Single Mode Fiber Code Diameter : 0.9 mm Color : Dark Blue Bending Radius : 20 mm (min) Heat-resistant Length : Options

PACKAGE DIMENSIONS

(Units: mm)



Pin Configuration

Pin No.	Description	Pin No.	Description
01	Vcc	05	OUTN (-)
02	GND	06	NC
03	GND	07	APD-Vias
04	OUTP (+)	08	GND



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