

Surface Mountable PD Module (OD-8451)

Description

NEC's new surface-mount, low-cost photo diode module is designed for use in fiber optic communications applications such as ATM, FITL and SONET. The photo diode module consists of a photo diode. This module can be used with a detachable pigtail for enhanced flexibility. In addition, the module features a very compact size (7.6 x 12.7 x 3 mm) enabling use in standard surface-mount production processes, thereby reducing costs.

In the past, laser and photo diodes have been expensive and difficult to solder to a board. Because the pigtail detaches, these new devices can be soldered like an ordinary integrated circuit using a standard I.R. reflow process. The photo diode module can be operated at speeds up to 622 Mb/s and can be used with NEC's ATM chip set. The detachable pigtails are available with SCPC, FCPC and ST connectors. The photo diode module is packaged in a 10-pin, surface-mount, ceramic package.

Features

Flat ceramic package (7.6 x 12.7 x 3 mm)

Connector flexibility

Reasonable cost for subscriber loop

Absolute maximum ratings (Ta=+25°C, unless noted)

Item	Symbol	ratings	Unit	notes
Operating Temperature	T _{op}	-40 to +85	°C	
Storage Temperature	T _{stg}	-40 to +85	°C	
Forward Current of PD	I _F	1.0	mA	
Reverse Voltage of PD	V _R	20	V	
Lead Soldering Temperature	T _s	230°C, 30sec.		reflow soldering

Characteristics (Ta=+25°C, unless noted)

Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Dark current	I _D	-	0.1	5	nA	V _R =5V
Quantum efficiency		70	85	-	%	λ=1300nm
		-	75	-		λ=1550nm
Rise/Fall time	t _r /t _f	-	0.5	1	nsec	10-90% λ=1300nm R _L =50Ω; V _R =5V

Module Diagram

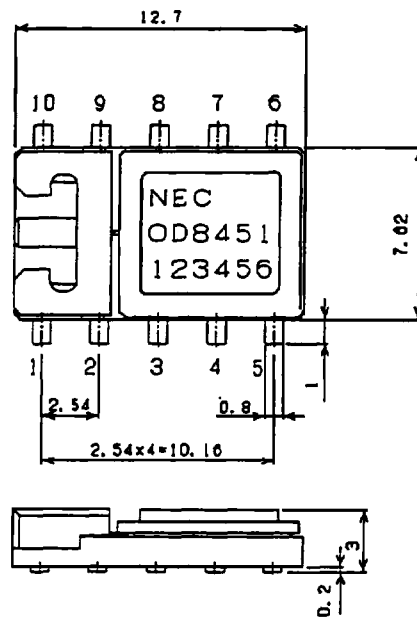


Photo Diode OD-8451			
1	GND	6	NC
2	GND	7	PD Cathode
3	NC	8	NC
4	PD Anode	9	GND
5	GND	10	GND