

General Description

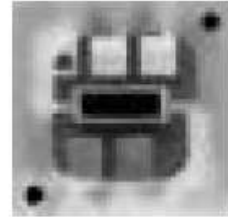
Optical device consisting of one silicon N/P photodiode chip with high uniformity for the output signal.

The active area of the silicon die is 2.2 x 0.7 mm².

The high optical responsivity is due to the antireflective coating deposited on the photodiode active area.

The low dark current is good for high temperature applications.

The package type is intended for direct mounting on ceramic or PC boards by manual soldering or SMT.



Applications

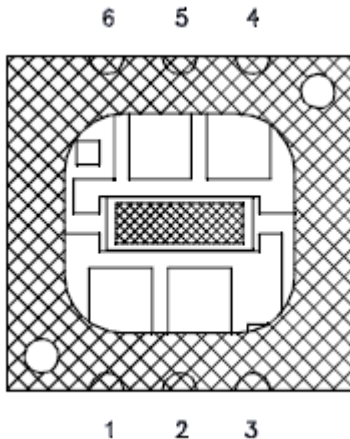
Optical Sensors
General Purpose

Features

- High Responsivity = 0.65 A/W (@ $\lambda = 880 \text{ nm}$)
- Low Dark Current
- High Response Speed
- Available in SMT Suitable Version

Pin Functions

No.	Name	Function
1	KK	Photodiode Cathode
2		N.C.
3	AA	Photodiode Anode
4		N.C.
5		N.C.
6	AB	Photodiode Anode



Ordering Information

OID10S01 1 Silicon N/P Photodiode Chip with Active Area of the Silicon Die 2.2 x 0.7 mm².

OID10S01

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Min	Max	Unit
T _A	Operating Temperature Range	-40	100	°C
T _S	Storage Temperature	-40	100	°C
T _{Sol}	Lead Temperature (solder) 3s		230	°C
V _{R(BR)}	Reverse Breakdown Voltage @ T _A =25°C I _R =100μA	70		V
P _D	Power Dissipation @ T _A =25°C		150	mW

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rated conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
I _D	Dark Current	V _R =10V		40		pA
R _λ	Responsivity	V _R =10V λ=880nm Φ=10μW	0.5	0.65		A/W
λ _p	Peak Responsivity	V _R =10V		900		nm
Δλ	Spectral Bandwidth @ 50%	V _R =10V	600		1000	nm

AC SWITCHING CHARACTERISTICS

T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
BW	Bandwidth (@ -3dB)	V _R =10V	3			MHz
C	Capacitance	V _R =10V f=1MHz Φ=0			70	pF

MECHANICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
A	Active Area			1.54		mm ²
L	Length of the Active Area			2.2		mm
W	Width of the Active Area			0.7		mm

MECHANICAL DIMENSIONS

Units=mm Mechanical tolerance=±0.2mm Die positioning tolerance=±0.030mm

