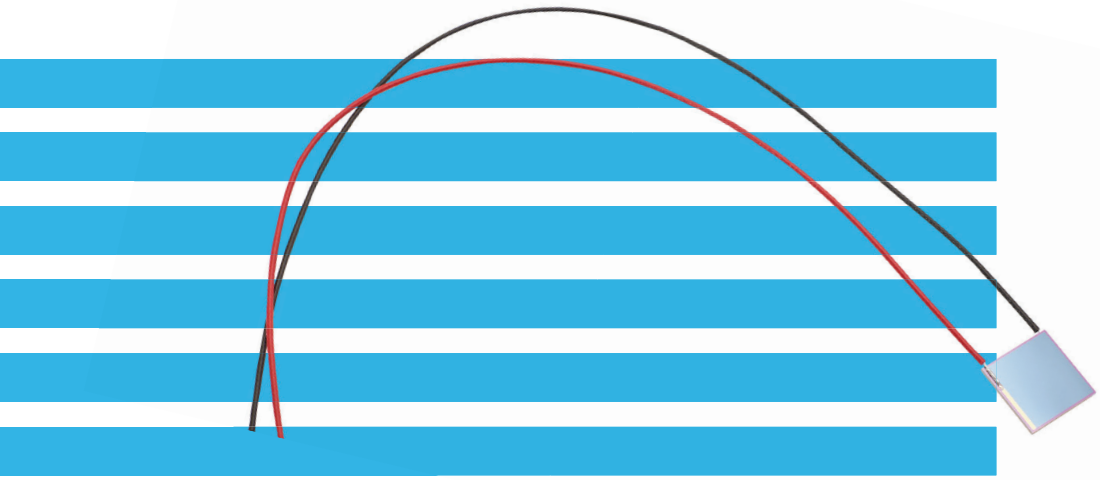
Advanced Photonix
A Division of OSI Optoelectronics



PDB-C609-2

42.4mm² Active Area Solderable Die Silicon Photodiode

The PDB-609-2 is a 7.0x6.1mm active area solderable die silicon photodiode designed for applications requiring a large active area photodiode with low capacitance and high-speed response time. The device is available with and without flying 32mm long leads and 25mm long buss wire.

Order **PDB-C609-1** for solderable die without leads.
Order **PDB-C609-3** for solderable die with 25mm long buss wire.

Applications

- Optical Encoder
- Position Sensor
- Industrial Controls
- Instrumentation

Features

- Available with and without leads
- Photoconductive
- 42.4mm² Active Area

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Absolute Maximum Ratings at T_A=23 ºC

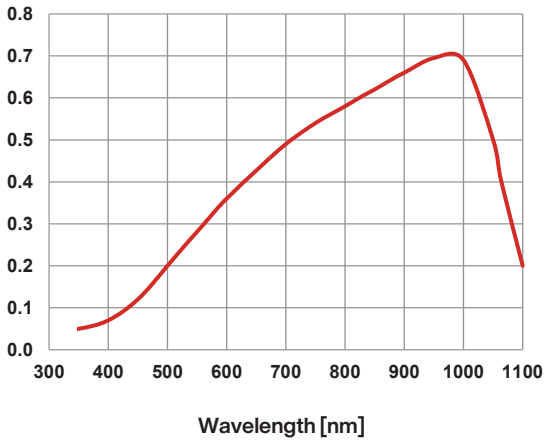
Parameter	Symbol	Min	Max	Unit
Reverse Voltage	V_R	-	25	V
Operating Temperature	T_{OP}	-40	+100	°C
Storage Temperature	T_{STG}	-40	+125	°C
Package	Wire on Die			

Typical Electro-Optical Specifications at T_A=23 ºC

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Active Area	-	A.A.	-	42.4	-	mm^2
Active Area Dimensions	-	$A.A._D$	-	6.99x6.07	-	mm
Spectral Range	Spot Scan	Δλ	350	-	1100	nm
Responsivity	λ=950nm	R_λ	0.50	0.70	-	A/W
Capacitance	V_R=5V, f =1MHz	C_J	-	240	-	pF
Dark Current	V_R=5V	I_D	-	30	75	nA
Shunt Resistance	V_R=10mV	R_{SH}	3	10	-	MΩ
Noise Equivalent Power	V_R=0V, λ=950nm	NEP	-	$4x10^{-13}$	-	W/√ Hz
Rise Time*	R_L= 1KΩ ,V_R=50V	t_R	-	30	-	nS

*Rise time of 10% to 90% is specified at 660nm

Typical Spectral Response



Mechanical Specifications

Units are in inches [mm]