

PDB-V609-3

Photovoltaic Solderable Silicon Photodiodes with Buss Wire

The PDB-V609-3 is a 7x6.1mm active area solderable die silicon photodiode designed for applications requiring a large area photodiode with low capacitance and high-speed response time. The device comes with 25mm long buss wire.

Order PDB-V609-1 for solderable die without leads.

Order PDB-V609-2 for solder die with two 32mm flying leads for anode and cathode.

Applications

Optical Encoder

Position Sensor

Industrial Controls

Instrumentation

Features

With 25mm Long Buss Wire

Photoconductive

42.7 mm² Active Area

Absolute Maximum Ratings at $T_A=23\text{ }^\circ\text{C}$

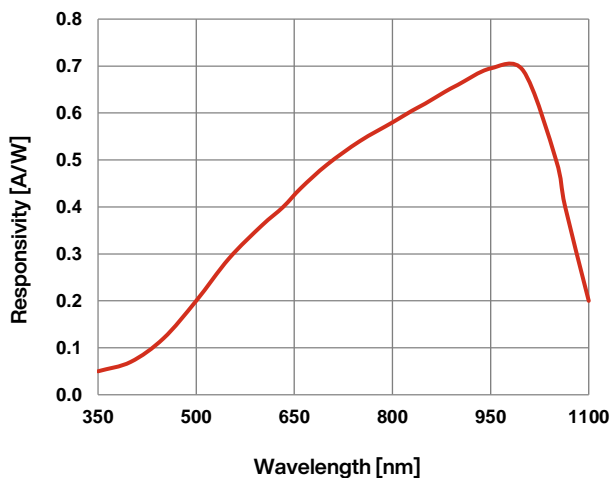
Parameter	Symbol	Min	Max	Unit
Reverse Voltage	V_R	-	25	V
Operating Temperature	T_{OP}	-40	+100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40	+125	$^\circ\text{C}$
Package	Bare Die			

Typical Electro-Optical Specifications at $T_A=23\text{ }^\circ\text{C}$

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Active Area	-	A.A.	-	42.7	-	mm^2
Active Area Dimensions	-	A.A. _D	-	7x6.1	-	mm
Spectral Range	Spot Scan	$\Delta\lambda$	350	-	1100	nm
Short Circuit Current	H=100fc, 2850K	I_{SC}	490	545	-	μA
Breakdown Voltage	I=10 μA	-	5	15	-	V
Capacitance	$V_R=0\text{V}$; f=1MHz	C_J	-	5500	-	pF
Dark Current	$V_R=5\text{V}$	I_D	-	50	100	nA
Shunt Resistance	$V_R=10\text{mV}$	R_{SH}	5	15	-	M Ω
Noise Equivalent Power	$V_R=0\text{V}$ @ λ =Peak	NEP	-	12×10^{-14}	-	W/ $\sqrt{\text{Hz}}$
Rise Time*	$R_L=1\text{K}\Omega$, $V_R=0\text{V}$	t_R	-	1.5	-	μs

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

Typical Spectral Response



Mechanical Specifications

Units are in inches [mm]

