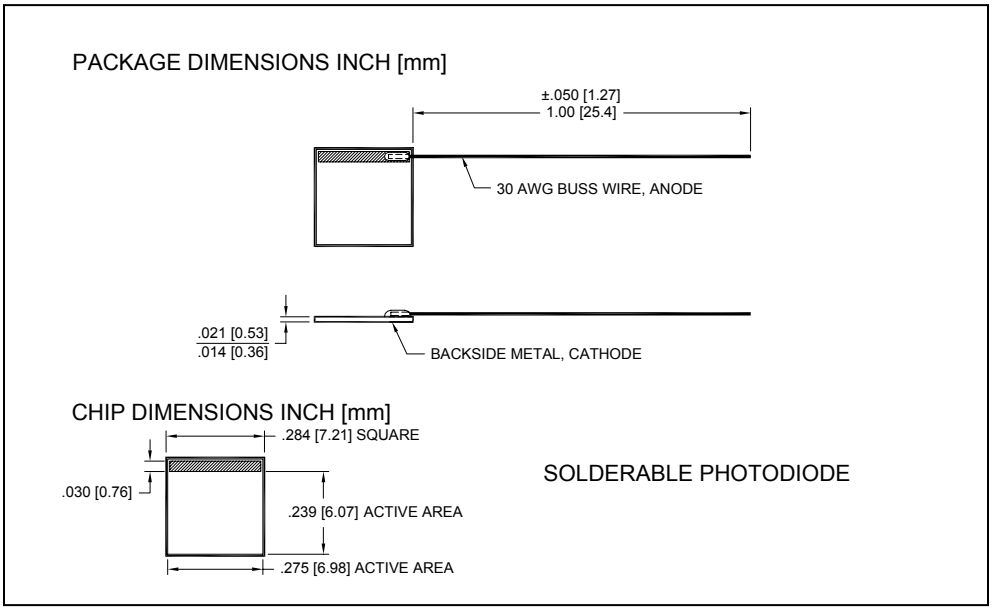
Advanced Photonix, Inc.

Solderable Silicon Photodiodes

PDB-C609-3



FEATURES

- Red enhanced
- Photoconductive
- High quantum efficiency

DESCRIPTION

The **PDB-C609-3** is a silicon red enhanced solderable photodiode designed for low capacitance and high speed for photoconductive applications.

APPLICATIONS

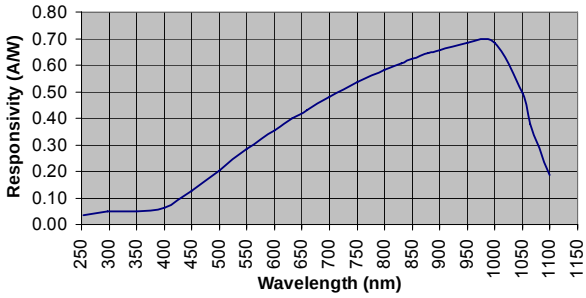
- Optical encoder
- Position sensor
- Industrial controls
- Instrumentation

ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		75	V
T_{STG}	Storage Temperature	-40	+125	°C
T_O	Operating Temperature	-40	+100	°C
T_S	Soldering Temperature*		+224	°C

* 1/16 inch from case for 3 seconds max.

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	490	545		μA
I_D	Dark Current	V_R = 5 V		30	75	nA
R_{SH}	Shunt Resistance	V_R = 10 mV	3	10		MΩ
C_J	Junction Capacitance	V_R = 5 V, f = 1 MHz		240		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
V_{BR}	Breakdown Voltage	I = 10 μA	25	50		V
NEP	Noise Equivalent Power	V_R = 0V @ λ = Peak		$4x10^{-13}$		W/ $\sqrt{}$ Hz
t_r	Response Time	RL = 1KΩ, V_R = 5V		30		nS

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

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REV 4/26/07