

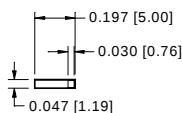
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Solderable Chips

Photoconductive Type PDB-C604 Photovoltaic Type PDB-V604



PACKAGE DIMENSIONS INCH (mm)

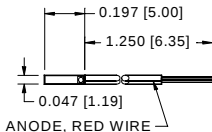


BARECHIP

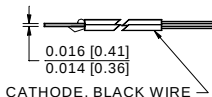
ACTIVE AREA = 4.34 mm²

PDB-C604-1

PDB-V604-1



ANODE, RED WIRE

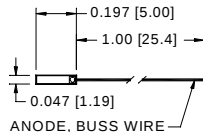


CATHODE, BLACK WIRE

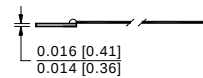
30 GAGE P.V.C. WIRE

PDB-C604-2

PDB-V604-2



ANODE, BUSS WIRE



34 GAGE BUSS WIRE

PDB-C604-3

PDB-V604-3

FEATURES

- Blue enhanced
- Photovoltaic type
- Photoconductive type
- High quantum efficiency

DESCRIPTION:

Low cost blue enhanced planar diffused silicon solderable photodiode. The **PDB-V604** cell is designed for low noise, photovoltaic applications. The **PDB-C604** cell is designed for low capacitance, high speed, photoconductive operation. They are available bare, PVC or buss wire leads.

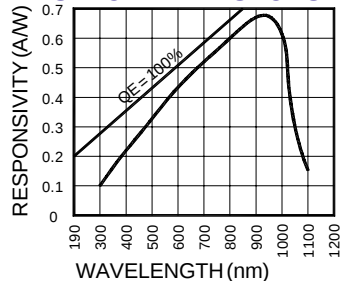
APPLICATIONS

- Optical encoder
- Position sensor
- Industrial controls
- Instrumentation

ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	PDB-C604		PDB-V604		UNITS
		MIN	MAX	MIN	MAX	
V _{BR}	Reverse Voltage		25		75	V
T _{STG}	Storage Temperature	-40	+125	-40	+125	°C
T _O	Operating Temperature Range	-40	+100	-40	+100	°C
T _S	Soldering Temperature		+224		+224	°C
I _L	Light Current		500		500	mA

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	PDB-C604			PDB-V604			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	50	68		45	58		μA
I _D	Dark Current	H = 0, V _R = 5 V*		6	10		12	25	nA
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV	12	30		20	50		MΩ
TC R _{SH}	R _{SH} Temp. Coefficient	H = 0, V _R = 10 mV		-8			-8		% / °C
C _J	Junction Capacitance	H = 0, V _R = 5 V**		30			600		pF
λ _{range}	Spectral Application Range	Spot Scan	350		1100	350		1100	nm
λ _p	Spectral Response - Peak	Spot Scan		940			940		nm
V _{BR}	Breakdown Voltage	I = 10 μA	25	50		5	15		V
NEP	Noise Equivalent Power	V _R = 0 V @ Peak	8 x 10 ⁻¹⁴ TYP			6 x 10 ⁻¹⁴ TYP			W/ √Hz
tr	Response Time	RL = 1 KΩ V _R = 5 V**		15			500		nS

*V_R = 100 mV on Photovoltaic type

**V_R = 0 V on Photovoltaic type

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.

[FORM NO. 100-PDB-C604-V604 REV B]