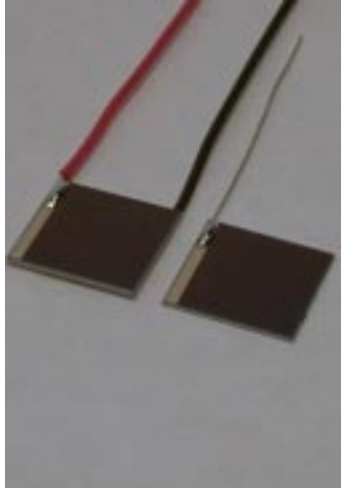
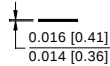
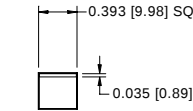


PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Solderable Chips Photoconductive Type PDB-C613 Photovoltaic Type PDB-V613

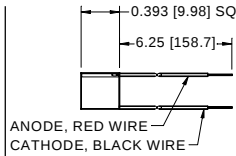


PACKAGE DIMENSIONS INCH (mm)



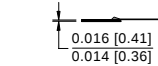
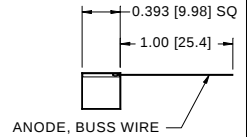
BARECHIP

ACTIVE AREA = 86.4 mm²
PDB-C613-1
PDB-V613-1



30 GAGE P.V.C. WIRE

PDB-C613-2
PDB-V613-2



30 GAGE BUSS WIRE

PDB-C613-3
PDB-V613-3

FEATURES

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

DESCRIPTION:

Low cost blue enhanced planar diffused silicon solderable photodiode. The **PDB-V613** cell is designed for low noise, photovoltaic applications. The **PDB-C613** cell is designed for low capacitance, high speed, photoconductive operation. They are available bare, PVC or buss wire leads.

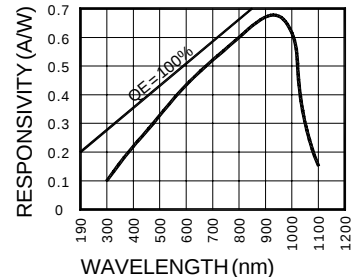
APPLICATIONS

- Optical encoder
- Position sensor
- Industrial controls
- Instrumentation

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

SYMBOL	PARAMETER	PDB-C613		PDB-V613		UNITS
		MIN	MAX	MIN	MAX	
V _{BR}	Reverse Voltage		75		25	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-C613			PDB-V613			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	.90	1.0		.90	1.0		mA
I _D	Dark Current	H = 0, V _R = 5 V*		90	180		50	100	nA
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV	.5	1		1	2		MΩ
TCR _{SH}	R _{SH} Temp. Coefficient	H = 0, V _R = 10 mV		-8			-8		% / °C
C _J	Junction Capacitance	H = 0, V _R = 5 V**		350			10000		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	3.0 x 10 ⁻¹³ TYP			3.0 x 10 ⁻¹³ TYP			W/ √Hz
tr	Response Time	RL = 1 KΩ V _R = 5 V**		50			3000		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-C613-V613 REV A)