Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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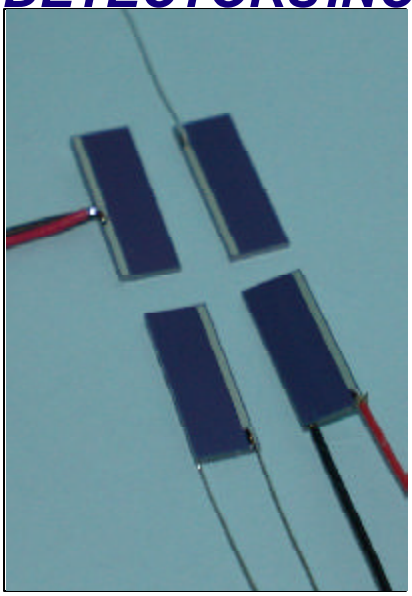
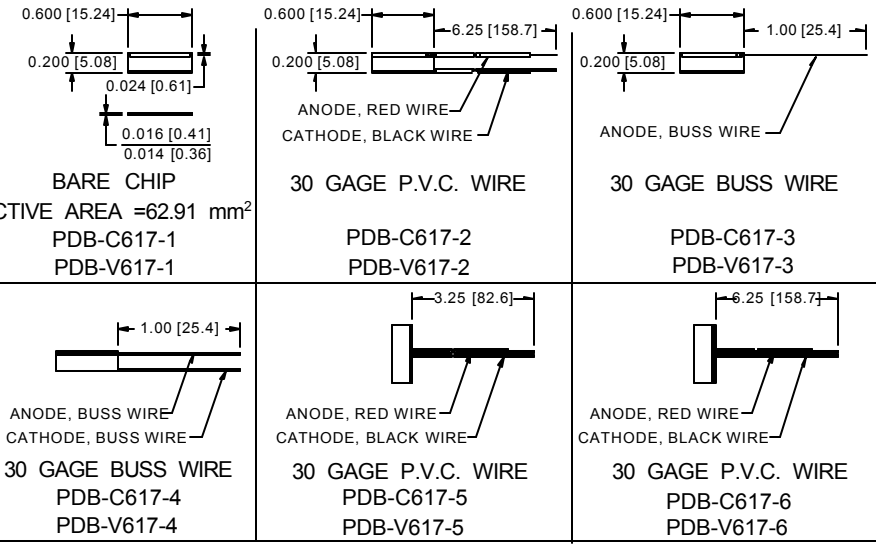
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Solderable Chips

Photoconductive Type PDB-C617 Photovoltaic Type PDB-V617



PACKAGE DIMENSIONS INCH (mm)



FEATURES

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

DESCRIPTION: Low cost blue enhanced planar diffused silicon solderable photodiode. The **PDB-V617** cell is designed for low noise, photovoltaic applications. The **PDB-C617** cell is designed for low capacitance, high speed, photoconductive operation. They are available bare, PVC or buss wire leads.

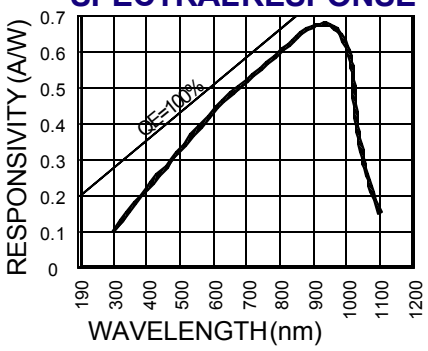
APPLICATIONS

- Optical encoder
- Position sensor
- Industrial controls
- Instrumentation

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

SYMBOL	PARAMETER	PDB-C617		PDB-V617		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-C617			PDB-V617			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	625	650		615	640		μA
I_D	Dark Current	H = 0, V_R = 5 V*		65	135		35	75	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	4.5	9		6.5	13.5		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**		285			8500		pF
λrange	Spectral Application Range	Spot Scan	350		1100	350		1100	nm
λp	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		7.0×10^{-13} TYP			2.16×10^{-13} TYP		W/ $\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 5 V**		40			2500		nS

*VR=100mV on Photovoltaic type **VR=0V on Photovoltaic type