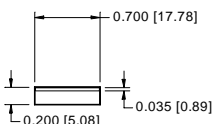
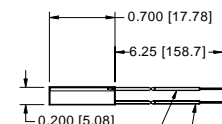


### PACKAGE DIMENSIONS INCH (mm)



BARE CHIP

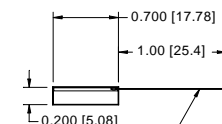
ACTIVE AREA = 68.7 mm<sup>2</sup>  
PDB-C612-1  
PDB-V612-1



ANODE, RED WIRE  
CATHODE, BLACK WIRE

30 GAGE P.V.C. WIRE

PDB-C612-2  
PDB-V612-2



ANODE, BUSS WIRE

30 GAGE BUSS WIRE

PDB-C612-3  
PDB-V612-3

### FEATURES

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

### DESCRIPTION:

Low cost blue enhanced planar diffused silicon solderable photodiode. The **PDB-V612** cell is designed for low noise, photovoltaic applications. The **PDB-C612** cell is designed for low capacitance, high speed, photoconductive operation. They are available bare, PVC or buss wire leads.

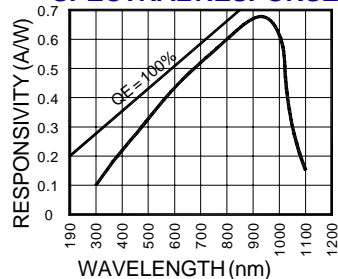
### APPLICATIONS

- Optical encoder
- Position sensor
- Industrial controls
- Instrumentation

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

SYMBOL	PARAMETER	PDB-C612		PDB-V612		UNITS
		MIN	MAX	MIN	MAX	
V <sub>BR</sub>	Reverse Voltage		75		25	V
T <sub>STG</sub>	Storage Temperature	-40	+125	-40	+125	°C
T <sub>O</sub>	Operating Temperature Range	-40	+100	-40	+100	°C
T <sub>S</sub>	Soldering Temperature		+224		+224	°C
I <sub>L</sub>	Light Current		500		500	mA

### SPECTRAL RESPONSE



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	PDB-C612			PDB-V612			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
I <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	810	900		720	800		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 5 V*		75	150		40	80	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	5	10		7	15		MΩ
TC R <sub>SH</sub>	R <sub>SH</sub> Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8			-8		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 5 V**		300			9000		pF
λ <sub>range</sub>	Spectral Application Range	Spot Scan	350		1100	350		1100	nm
λ <sub>p</sub>	Spectral Response - Peak	Spot Scan		940			940		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	25	50		5	15		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 0 V @ Peak	7.0 x 10 <sup>-13</sup> TYP			2.16 x 10 <sup>-13</sup> TYP			W / √Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 5 V**		45			2800		nS

\*V<sub>R</sub> = 100 mV on Photovoltaic type      \*\*V<sub>R</sub> = 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.