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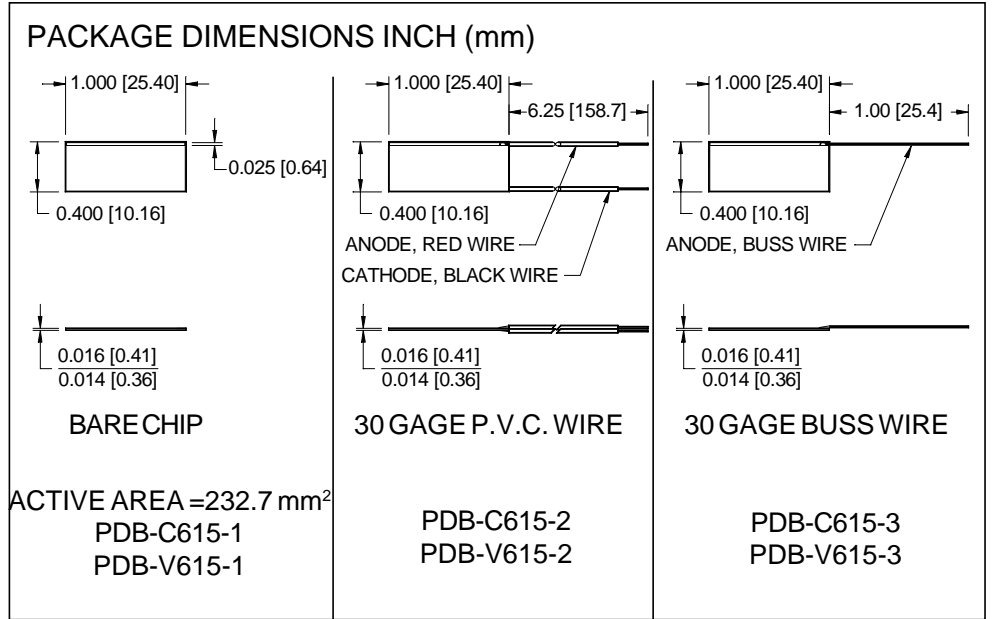
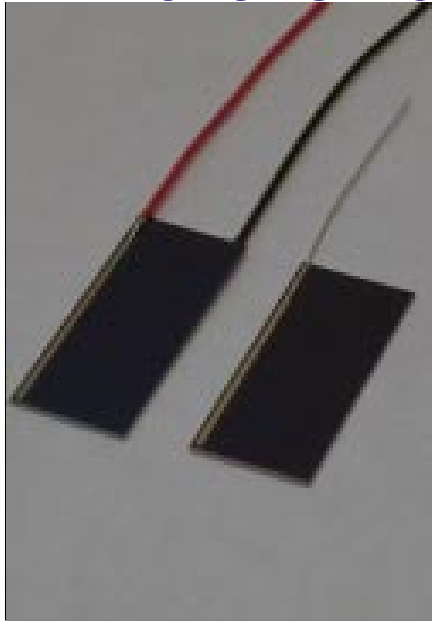
[Advanced Photonix, Inc.](#)  
[PDB-C615-1](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

**Silicon Photodiode, Blue Enhanced Solderable Chips**

**Photoconductive Type PDB-C615 Photovoltaic Type PDB-V615**



**FEATURES**

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

**DESCRIPTION:**

Low cost blue enhanced planar diffused silicon solderable photodiode. The **PDB-V615** cell is designed for low noise, photovoltaic applications. The **PDB-C615** cell is designed for low capacitance, high speed, photoconductive operation. They are available bare, PVC or buss wire leads.

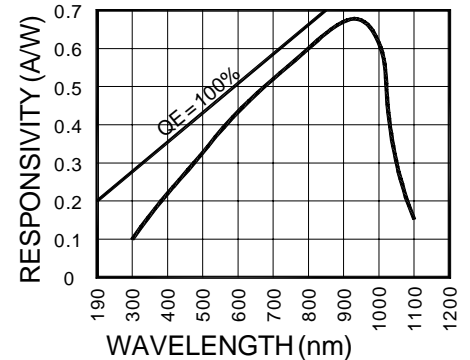
**APPLICATIONS**

- Optical encoder
- Position sensor
- Industrial controls
- Instrumentation

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

SYMBOL	PARAMETER	PDB-C615		PDB-V615		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-C615			PDB-V615			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
I <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	2.5	2.8		2.5	2.8		mA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 5 V*		350	700		350	700	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	.1	.25		.2	.5		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**		775			25800		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	3.0 x 10 <sup>-12</sup> TYP			5.0 x 10 <sup>-13</sup> TYP			W/ √Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 5 V**		150			7000		nS

\*V<sub>R</sub> = 100 mV on Photovoltaic type \*\*V<sub>R</sub> = 0 V on Photovoltaic type