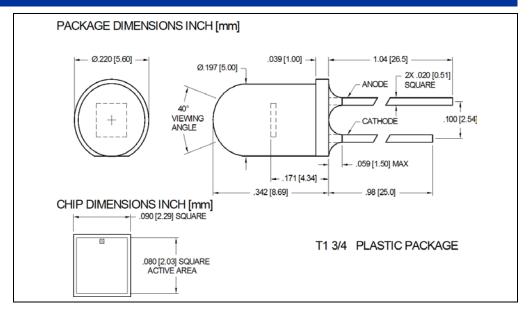


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## **Precision – Control – Results**





#### **DESCRIPTION**

The **PDB-C142** is a blue enhanced PIN silicon photodiode in a photoconductive mode packaged in a water clear T1 <sup>3</sup>/<sub>4</sub> plastic package.

#### **FEATURES**

- Large active area
- Photoconductive
- High Speed
- Low cost

### **RELIABILITY**

Contact Luna for recommendations on specific test conditions and procedures.

### **APPLICATIONS**

- Smoke detectors
- Light pen detectors
- TV & VCR remotes
- Bar code detectors



#### **ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN		MAX	UNITS	
Reverse Voltage	-	-	100	V	T <sub>a</sub> = 23°C UNLESS OTHERWISE NOTED
Storage Temperature	-40	-	+100	°C	-
Operating Temperature	-40	to	+80	°C	-
Soldering Temperature*	-	-	+260	°C	-
* 1/16 inch from case for 3 seconds max.					1



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# **Precision – Control – Results**

## **OPTO-ELECTRICAL PARAMETERS**

T<sub>a</sub> = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit Current	H=100 fc, 2850 K	100	150	-	μΑ
Dark Current	V <sub>R</sub> = 10 V	-	5	30	nA
Shunt Resistance	V <sub>R</sub> = 10 mV	100	500	-	ΜΩ
Junction Capacitance	V <sub>R</sub> =10V; f = 1 MHz	-	18	25	pF
Spectral Application Range	Spot Scan	400	-	1100	nm
Breakdown Voltage	I=10 μA	15	25	-	V
Noise Equivalent Power	V <sub>R</sub> =10V@λ= Peak	-	2x10 <sup>-14</sup>	-	W/√ <sub>Hz</sub>
Response Time**	$RL = 1K\Omega, V_R = 10 \text{ V}$	-	50	-	nS

<sup>\*\*</sup>Response time of 10% to 90% is specified at 660nm wavelength light.

## **TYPICAL PERFORMANCE**

### **SPECTRAL RESPONSE**

