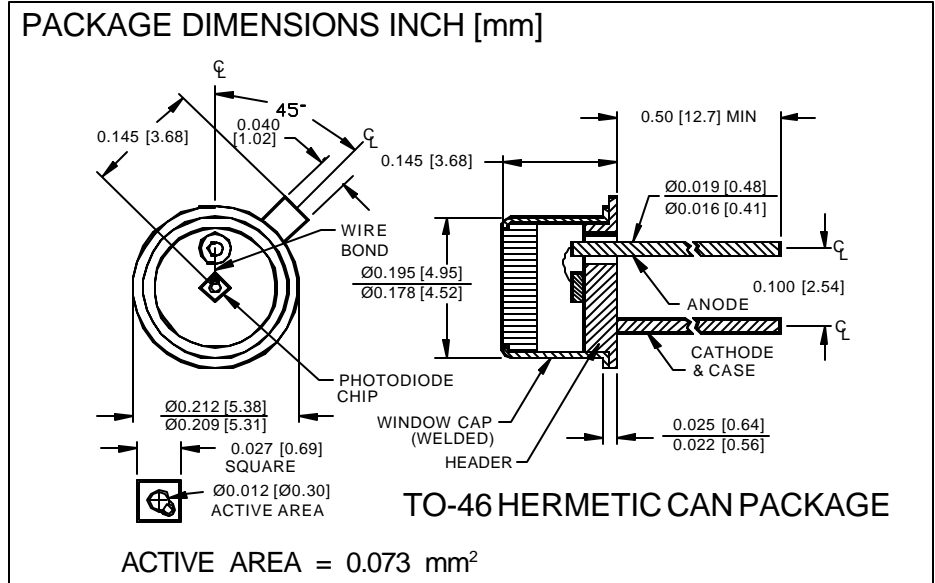


# PHOTONIC DETECTORS INC.

## High Speed Silicon Photodiode, U.V. Enhanced Photoconductive Type PDU-C120



### FEATURES

- High speed
- Low cost
- Hermetically sealed
- Passivated

### DESCRIPTION

The **PDU-C120** is a high speed silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for high speed U.V., laser detection, switching, and logic applications. Packaged in a hermetic TO-46 metal can with a flat U.V. transmitting window.

### APPLICATIONS

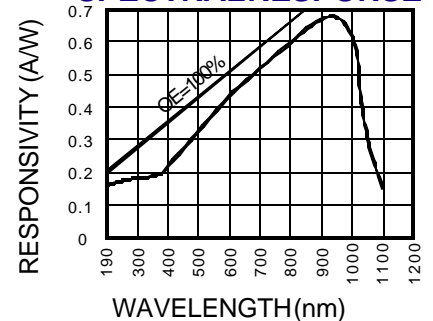
- Medical laser
- Light demodulation
- Laser detection
- U.V. receiver

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		30	V
T <sub>STG</sub>	Storage Temperature	-65	+150	°C
T <sub>O</sub>	Operating Temperature Range	-55	+125	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C
I <sub>L</sub>	Light Current		500	mA

\*1/16 inch from case for 3 secs max

### SPECTRAL RESPONSE



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	1.2	1.5		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 5 V		0.5	2.0	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	200	250		MΩ
TCR <sub>SH</sub>	RSH Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 5 V**		20		pF
λrange	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	V <sub>R</sub> = 0 V, λ = 254 nm	.15	.18		A/W
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	15	25		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		9.0x10 <sup>-15</sup>		W/√Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 5 V		5		nS

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.\*\*f=1 MHz

[FORMNO. 100-PDU-C120REV03]