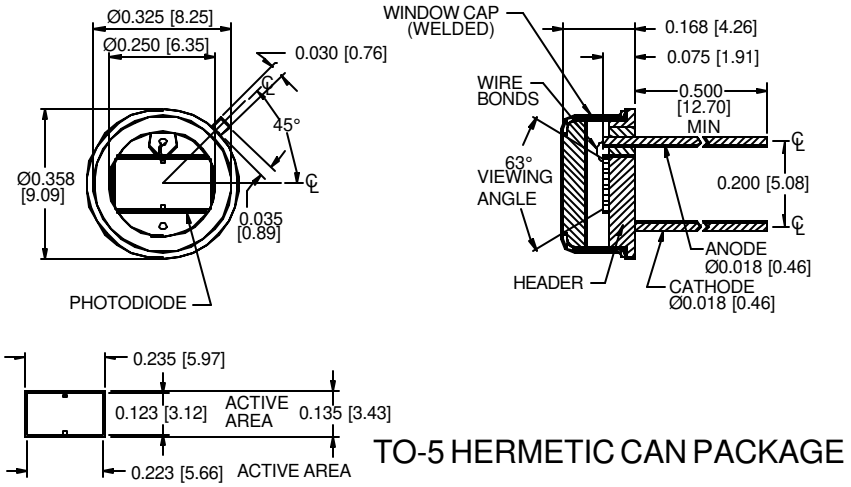
PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photoconductive

Type PDU-C114

PACKAGE DIMENSIONS INCH [mm]



TO-5 HERMETIC CAN PACKAGE

ACTIVE AREA = 17.74 mm²

FEATURES

- High speed
- U.V. enhanced
- Low capacitance
- U.V. window

DESCRIPTION

The **PDU-C114** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for high speed photoconductive applications. Packaged in a hermetic TO-5 metal can with a U.V. transmitting window.

APPLICATIONS

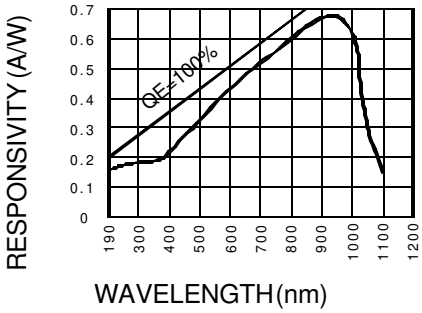
- Spectrometers
- Fluorescent analysers
- U.V. meters
- Colorimeters

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		30	V
T_{STG}	Storage Temperature	-55	+150	°C
T_O	Operating Temperature Range	-40	+125	°C
T_S	Soldering Temperature*		+240	°C
I_L	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_{SC}	Short Circuit Current	H = 100 fc, 2850 K	190	235		μA
I_D	Dark Current	H = 0, V_R = 5 V		3	8	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	75	250		MΩ
TC R_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 5 V**		200		pF
λrange	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	V_R = 0 V, λ = 254 nm	.12	.18		A/W
V_{BR}	Breakdown Voltage	I = 10 μA	15	25		V
NEP	Noise Equivalent Power	V_R = 10 mV @ Peak		3.8×10^{-14}		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 5 V		65		nS