# **PHOTONIC**<br/>DETECTORS INC.Silicon Photodiode, U.V. Enhanced Photoconductive<br/>Type PDU-C112-Q



PACKAGE DIMENSIONS inch (mm) - 0.175 [4.45] 0.073 [1.85] PHOTODIODE ACTIVE SURFACE TO TOP OF WINDOW Ø0.975 [Ø24.77] PWB QUARTZ WINDOW BLACK EPOXY Ø0.4447 [Ø11.295] HOUSING 4X WIRE BONDS ACTIVE AREA (100 mm<sup>2</sup>) 104° Ø0 625 VIEWING [Ø15.88] ANGLE 0.400 Ø0.695 [Ø17.65]-CAF [10.16] PHOTODIODE CHIP-1.045 [26.54] CATHODE AMP BNC CONNECTOR, ANODE BNC CONNECTOR PACKAGE ACTIVE AREA = .4447 (11.295) DIA = 100 mm<sup>2</sup>

#### FEATURES

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

# DESCRIPTION

The **PDU-C112-Q** is a large area, instrumentation grade, U.V. enhanced silicon photodiode. Designed for low capacitance high speed photoconductive applications. Packaged in a BNC connector package.

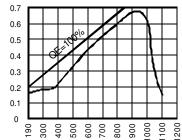
### **APPLICATIONS**

- Instrumentation
- Power meters
- Colorimeters
- Laser power meters

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
VBR	Reverse Voltage		30	V
TS	Storage Temperature	-20	+70	с
TO	Operating Temperature Range	-10	+60	с
TS	Soldering Temperature*	N/A	N/A	°C
Imax	Light Current		500	mA

## SPECTRAL RESPONSE



WAVELENGTH (nm)

RESPONSIVITY

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

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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS			
ISC	Short Circuit Current	H = 100 fc, 2850 K	1.0	1.3		mA			
I <sub>D</sub>	Dark Current	H = 0, VR = 5 V		10	30	nA			
RSH	Shunt Resistance	H = 0, VR = 10 mV	7	15		MΩ			
TCRSH	RSH Temp. Coefficient	H = 0, VR = 10 mV		-8		% / °C			
CJ	Junction Capacitance	$H = 0, VR = 5 V^{**}$		600		pF			
$\lambda$ range	Spectral Application Rang	e Spot Scan	190		1100	nm			
R	Responsivity	${\rm V_R}$ = 0 V, $\lambda$ = 254 nm	.12	.18		A/W			
VBR	Breakdown Voltage	I= 10 μA	15	25		V			
NEP	Noise Equivalent Power	VR = 10 @ Peak		1.5x10 <sup>-13</sup>		W∕√Hz			
tr	Response Time	$RL = 1 K\Omega VR = 5 V$		350		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 [FORM NO. 100-PDU-C112-Q REV N/C]