PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photovoltaic

(SFH 291 Industry Equivalent) Type PDU-V119-Q



PACKAGE DIMENSIONS INCH [mm] QUARTZ WINDOW CAP-(WELDED) Ø0.325 [8.25] 0.168 [4.26] Ø0.250 [6.35] 0.030 [0.76] 0.075 [1.91] WIRF -0.500 [12.70] BONDS MIN 78° VIEWING 0.200 [5.08] Ø0.358 [9.09] ANGI F 035 31/////// -C [0.89] -ANODE Ø0.018 [0.46] CATHODE HEADER PHOTODIODE Ø0.018 [0.46] -0.125 [3.18] 0.113 [2.87] CTIVE **TO-5 CAN PACKAGE** 0.113 [2.87] ACTIVE AREA

ACTIVE AREA = 7.95 mm²

FEATURES

- Low noise
- U.V. enhanced
- · High shunt resistance
- Quartz window

DESCRIPTION

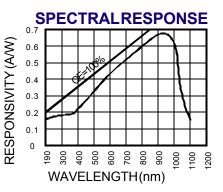
The **PDU-V119-Q** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a TO-5 metal can with a flat quartz window cap.

APPLICATIONS

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

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

SYMBOL	PARAMETER	MIN	MAX	UNITS		
VBR	Reverse Voltage		75	V		
T _{STG}	Storage Temperature	-55	+150	°C		
То	Operating Temperature Range	-40	+125	°C		
Ts	Soldering Temperature*		+240	°C		
Ι	Light Current		500	mA		
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*1/16 inch from case for 3 secs max

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

SYMBOL	CHARACTERISTIC	TESTCONDITIONS	MIN	TYP	MAX	UNITS
lsc	Short Circuit Current	${\sf E_c}$ = 0.1 mW/cm ² , λ = 350 nm	.60	1.0		μΑ
ΙD	Dark Current	H = 0, V _R = 10 mV		10	50	pА
Rsh	Shunt Resistance	H = 0, V _R = 10 mV	.2	1		GΩ
TC RSH	RSH Temp. Coefficient	H = 0, V _R = 10 mV		-8		% / °C
CJ	Junction Capacitance	H = 0, V _R = 0 V**		2000		pF
λrange	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	$\rm V_R$ = 0 V, λ = 254 nm	.12	.18		A/W
Vbr	Breakdown Voltage	I = 10 μA	5	10		V
NEP	Noise Equivalent Power	V _R = 10 mV @ Peak		2x10 ⁻¹⁴		W/ √ Hz
tr	Response Time	RL = 1 K Ω V _R = 0 V		900		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=1MHz [FORM NO. 100-PDU-V119-Q REV N/C]