# PHOTONIC Silicon Photodiode, Filter Combination Photovoltaic DETECTORS INC. (center wavelength 632 nm) Type PDR-V463-46

PHOTODIODE

Ø.184 [4.67]

Ø.155 [3.94]

Ø.210 [5.33]

.066 [1.68]



PACKAGE DIMENSIONS INCH [mm]

.042 [1.06]

.046 [1.17] ACTIVE AREA

ACTIVE

ARFA

.125 [3.18]

104 [2.64]

ACTIVE AREA = 2.98 mm<sup>2</sup>

FILTER CAP SUBASSEMBLY

HEADER ·

.040 [1.02]

## DESCRIPTION

The **PDR-V463-46** is a silicon, PIN planar diffused, photodiode with a narrow band interferance filter. The detector filter combination has a narrow 10 nm half bandwidth designed for low noise photovoltaic applications. Packaged in a TO-46 metal can

#### **APPLICATIONS**

**TO-46 CAN PACKAGE** 

275 [6.99]

0.500 12.70] MIN

\_\_\_\_\_CATHODE Ø.018 [0.46]

.060 [1.52]

.100 [2.54]

ANODE Ø.018 [0.46]

- Spectrophotometry
- Chemistry instrumentation
- Liquid chromatography

### tions. Packaged in a TO-46 metal can. ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYN	MBOL	OL PARAMETER		MAX	UNITS	Ś			
,	Vbr	Reverse Voltage		75	V	۲ (A			
1	Г <sub>stg</sub>	Storage Temperature	-20	+85	°C	ΞN			
	То	Operating Temperature Range	-15	+70	°C	ISNO			
	Ts	Soldering Temperature*		+240	°C	SPC			
	Light Current			0.5	mA	H			

SPECTRAL RESPONSE

				~	0/0	$\checkmark$	[					
0.5	ſ			2								
0.4	ł		ď,	$\checkmark$								
0.3	ł					1						
0.2	l	/										
	I						Γ	@	75%	T x	MII	N
0.1	ł					11		-				
0	1											5
	190		300		0.09	900	200	800	006			
				-				-	· -			_

WAVELENGTH (nm)

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

**FEATURES** 

• 632 nm CWL

10 nm FWHM

· Large active area

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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS		
lsc	Short Circuit Current***	H = 100 fc, 2850 K	35	40		μA		
ΙD	Dark Current	H = 0, V <sub>R</sub> = 10 V		150	300	pА		
Rsн	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	1.0	6		GΩ		
TC Rsh	Rsн Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C		
CJ	Junction Capacitance	H = 0, Vr = 0 V**		340		pF		
CWL	Center Wavelength	(CWL, $\lambda$ o) +/- 2 nm		632		nm		
HBW	Half Bandwidth	(FWHM)		10		nm		
VBR	Breakdown Voltage	I = 10 µµA	30	50		V		
N EP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		5x10 <sup>-14</sup>		W/ $\sqrt{Hz}$		
tr	Response Time	$RL = 1 K\Omega V_R = 0 V$		450		nS		
						<b>A</b> 10 11		

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, \*\*\*without filter [FORM NO. 100-PDR-V463-46 REV N/C]