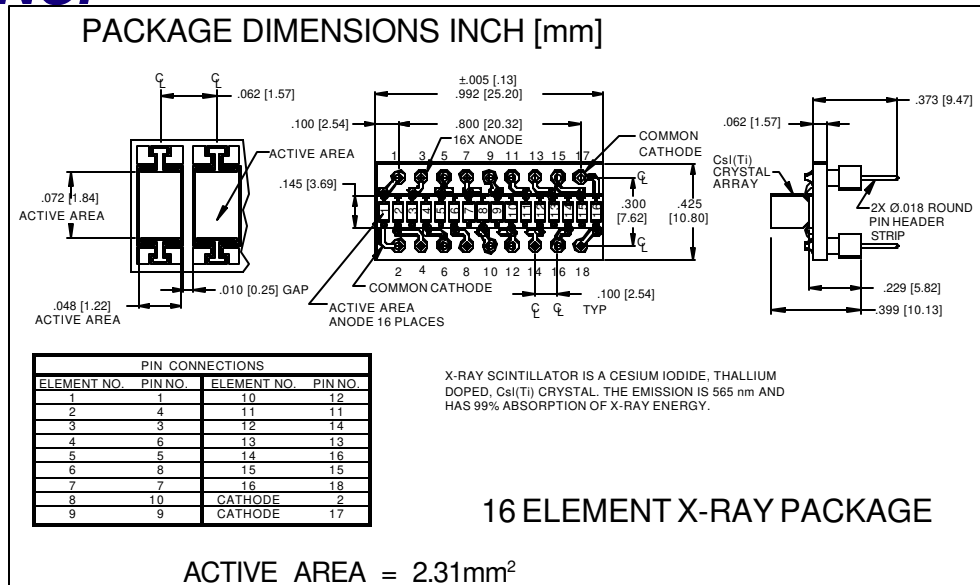
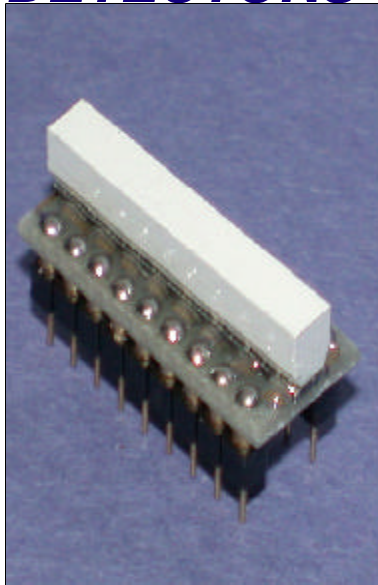


# PHOTONIC DETECTORS INC.

## X-RAY, Silicon Photodiode Array, Photovoltaic (with CsI(Tl) scintillation crystals) Type PDB-V216-C



### FEATURES

- .062 inch centers
- Stackable
- CsI(Tl) crystals
- Low capacitance

### DESCRIPTION

The **PDB-V216-C** is a common cathode, monolithic silicon PIN photodiode 16 element array. Designed to be stacked end to end to form a line of pixels. Supplied with X-Ray CsI(Tl) scintillation crystals.

### APPLICATIONS

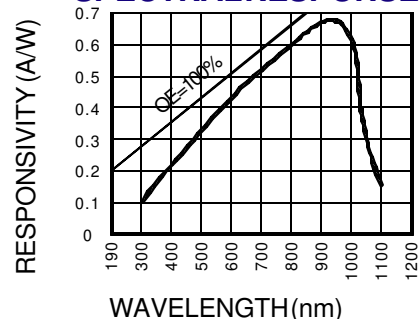
- Luggage X-ray
- X-Ray scanner
- X-Ray inspection

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		50	V
T <sub>STG</sub>	Storage Temperature	-40	+100	°C
T <sub>O</sub>	Operating Temperature Range	-20	+75	°C
T <sub>S</sub>	Soldering Temperature*		+265	°C
I <sub>L</sub>	Light Current		500	µA

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

### SPECTRAL RESPONSE



### ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted, without scintillator)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	18	28		µA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 1 V		1.0	5.0	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	200	400		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> = 0 V**		300	400	pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λp	Spectral Response - Peak	Spot Scan		950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 µA	15	30		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ Peak		2x10 <sup>-14</sup>		W/√Hz
tr	Response Time	RL = 50 Ω V <sub>R</sub> = 10 V		50		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-PDB-V216-C-REV D]