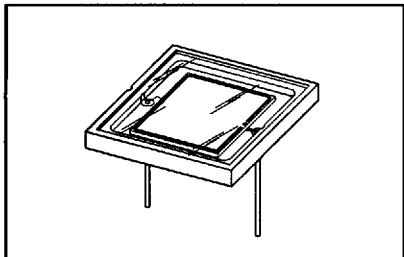




**LARGE AREA
PIN PHOTODIODE**
VTH2090, 2091
(S1723-04, 06 INDUSTRY EQUIVALENT)

E G & G VACTEC

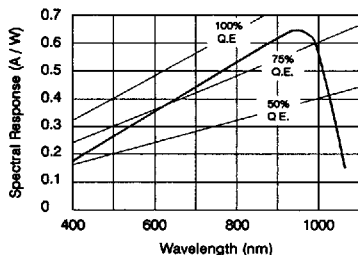


PRODUCT DESCRIPTION

This PIN photodiode consists of a chip with a 9.2 x 9.2 mm active area mounted in a black ceramic package with an epoxy window.

These devices are ideal for scintillation detection, spectrophotometry, CT scan, or other applications requiring a fast, large area, high detectivity device.

SPECTRAL RESPONSE



FEATURES

- High quantum efficiency
- Excellent uniformity
- High shunt impedance
- Low junction capacitance
- Fast response
- Low noise

ABSOLUTE MAXIMUM RATINGS @ 25°C UNLESS NOTED

PARAMETER	SYMBOL	RATING	UNITS
MAXIMUM CURRENT	I _{MAX}	2	mA
MAXIMUM POWER DISSIPATION	P _D	100	mW
MAXIMUM REVERSE VOLTAGE	V _{RMAX}	50	V, PEAK
TEMPERATURE RANGE			
OPERATING	T _A	- 20 to +60	°C
STORAGE	T _S	- 20 to +70	°C

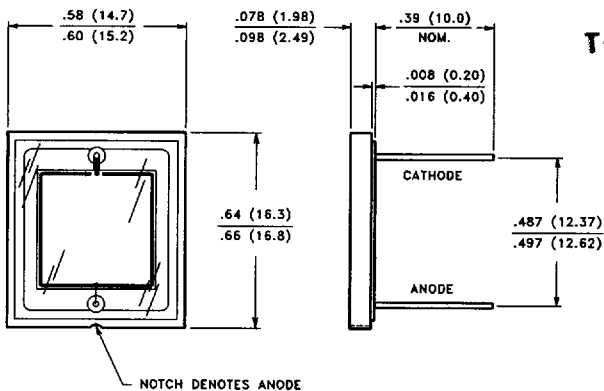
ELECTRO-OPTICAL CHARACTERISTICS @ 25° C

PART NUMBER	PEAK SPECTRAL RESPONSE λ _p , TYP. (nm)	RADIANT SENSITIVITY S _R TYP (A/W)				SHORT CIRCUIT CURRENT I _{SC} 100 LUX (μA)		DARK CURRENT I _D V _R = 30 V (nA)		JUNCTION CAPACITANCE C _J , TYP. V _R = 30 V (pF)	RISE TIME t _r , TYP (ns)	NEP V _R = 30 V TYP. (W/√Hz)	D* V _R = 30 V TYP. (cm √Hz/W)
		480 nm	540 nm	633 nm	940 nm	TEMP. COEFF. TC, TYP. (%/°C)		MAX.	MIN.				
						MIN.	TYP.						
VTH2090	960	.25	.30	.40	.60	65	80	10	15	70	15	4 X 10 ⁻¹⁴	2.6 X 10 ¹³
VTH2091	960	.25	.30	.40	.60	65	80	5	15	70	15	4 X 10 ⁻¹⁴	2.6 X 10 ¹³

PACKAGE DIMENSIONS inches (mm)

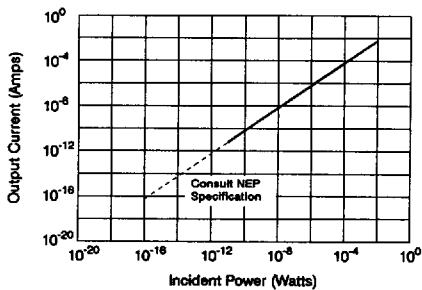
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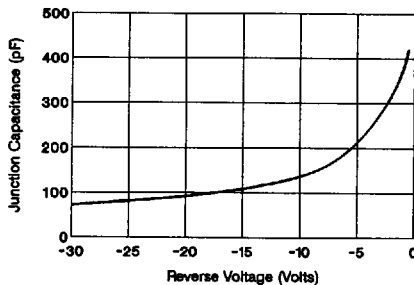


TYPICAL PERFORMANCE CURVES @ 25° C

PHOTOCURRENT LINEARITY



JUNCTION CAPACITANCE vs REVERSE VOLTAGE



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