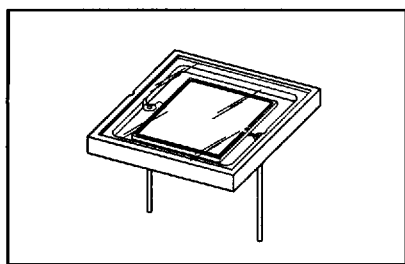




**LARGE AREA  
PIN PHOTODIODE**  
**VTH2090, 2091**  
(S1723-04, 06 INDUSTRY EQUIVALENT)

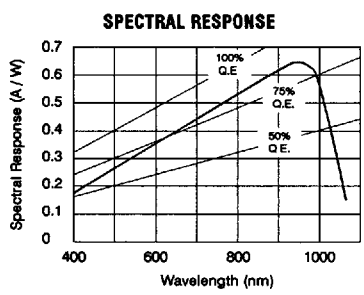
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**PRODUCT DESCRIPTION**

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.



**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 <sub>MAX</sub>	2	mA
MAXIMUM POWER DISSIPATION	P <sub>D</sub>	100	mW
MAXIMUM REVERSE VOLTAGE	V <sub>RMAX</sub>	50	V, PEAK
TEMPERATURE RANGE			
OPERATING	T <sub>A</sub>	- 20 to +60	°C
STORAGE	T <sub>S</sub>	- 20 to +70	°C

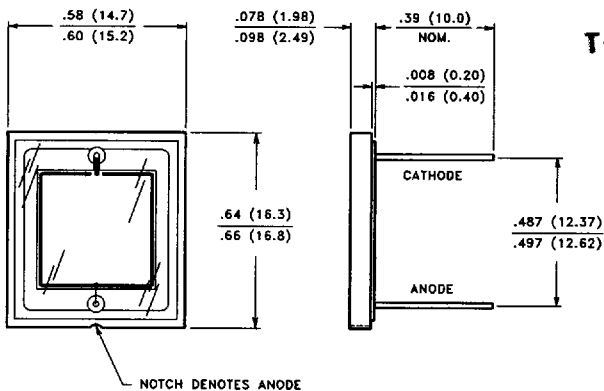
**ELECTRO-OPTICAL CHARACTERISTICS @ 25° C**

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

**PACKAGE DIMENSIONS inches (mm)**

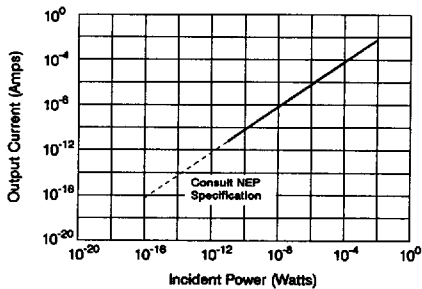
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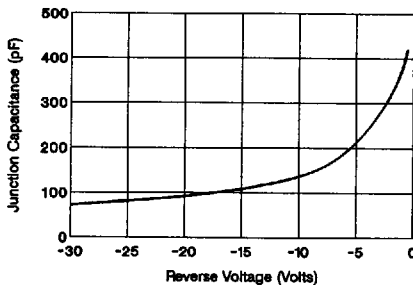


**TYPICAL PERFORMANCE CURVES @ 25° C**

**PHOTOCURRENT LINEARITY**



**JUNCTION CAPACITANCE vs REVERSE VOLTAGE**



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