



# SILICON PHOTODIODE VTD34SMH

## FEATURES

- High sensitivity
- Low capacitance
- Fast response
- Low noise
- High shunt impedance
- Leads configured for surface mount applications

## PRODUCT DESCRIPTION

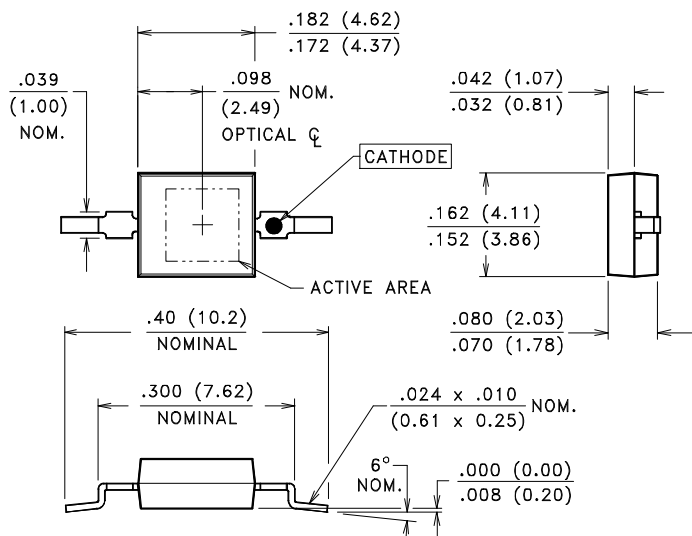
This P on N photodiode is packaged in a transparent plastic package with the leads configured for surface mounting.

These devices are designed to provide excellent sensitivity at low levels of irradiance. Linearity is assured by the high shunt impedance and low series resistance. Due to their low junction capacitance, these devices exhibit fast response, even with relatively high load resistances.

## ELECTRO-OPTICAL CHARACTERISTICS @ 25° C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS
SHORT CIRCUIT CURRENT @ 1000 lux, 2850 K	I <sub>SC</sub>	50	70		μA
RISE / FALL TIME @ 1 kΩ LOAD, V <sub>R</sub> = 10 V, 833 nm	t <sub>R</sub> / t <sub>F</sub>		50		nsec
DARK CURRENT @ V <sub>R</sub> = 10 V	I <sub>D</sub>		2	30	nA
JUNCTION CAPACITANCE @ 1 MHz, V <sub>R</sub> = 3 V	C <sub>J</sub>		25	40	pF
ACCEPTANCE ANGLE (BETWEEN 50% RESPONSE)	θ <sub>1/2</sub>		±50		Degrees
ACTIVE AREA	A		7.45		mm <sup>2</sup>

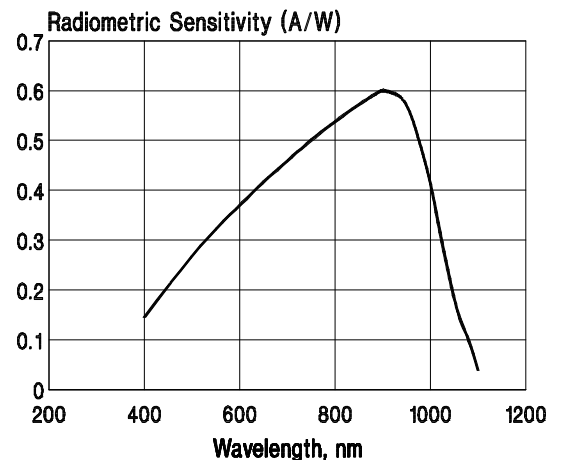
## PACKAGE DIMENSIONS inch (mm)



RoHS Compliant



Spectral Response



**GENERAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYPICAL RATING	UNITS
OPEN CIRCUIT VOLTAGE @ 1000 lux, 2850 K SOURCE	V <sub>OC</sub>	365	mV
BREAKDOWN VOLTAGE @ 25°C	V <sub>BR</sub>	50	V
PEAK SPECTRAL RESPONSE @ 25°C	λ <sub>pk</sub>	900	nm
RADIOMETRIC SENSITIVITY @ PEAK, 25°C	S <sub>RPK</sub>	0.60	A / W
NOISE EQUIVALENT POWER	NEP	4.8 x 10 <sup>-14</sup>	W / √Hz
SPECIFIC DETECTIVITY	D*	5.7 x 10 <sup>12</sup>	cm√Hz / W
TEMPERATURE COEFFICIENT			
SHORT CIRCUIT CURRENT @ 2850 K SOURCE	TCIL	+0.20	% / °C
OPEN CIRCUIT VOLTAGE @ 2850 K SOURCE	TCOCV	- 2.0	mV / °C
DARK CURRENT	TCID	+15.0	% / °C
TEMPERATURE RANGE			
OPERATING	T <sub>O</sub>	- 20 to +80	°C
STORAGE	T <sub>S</sub>	- 20 to +80	°C

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