



SILICON PHOTODIODE VTP1232F

PRELIMINARY ENGINEERING DATA SHEET

FEATURES

- Low dark current
- Fast response
- Blue to IR spectral range
- Low junction capacitance

PRODUCT DESCRIPTION

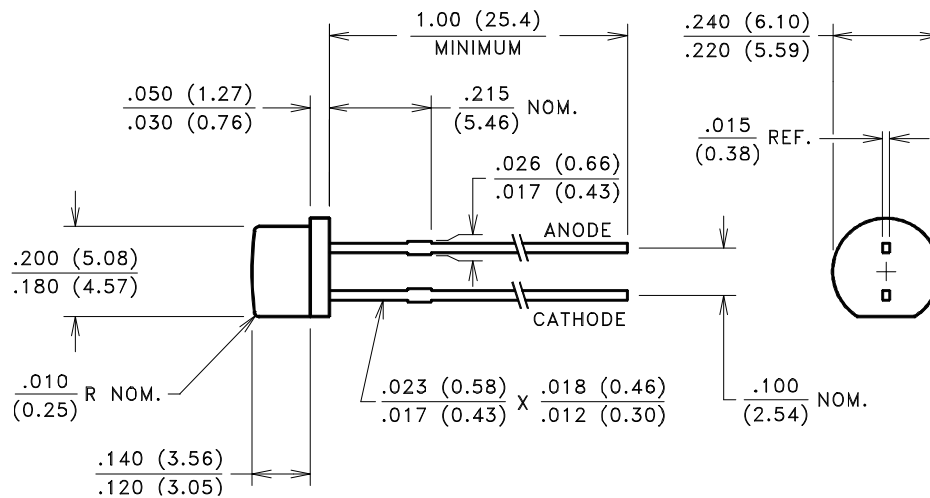
This VTP processed P on N planar silicon photodiode is housed in a clear, T-1 3/4 end-looking package.

These diodes exhibit low dark current under reverse bias. The VTP process offers low capacitance, resulting in fast response times.

ELECTRO-OPTICAL CHARACTERISTICS @ 25° C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS
SHORT CIRCUIT CURRENT @ 100 fc, 2850 K	I _{SC}	21			μA
SENSITIVITY @ PEAK	S _R		0.6		A/W
DARK CURRENT @ V _R = 10 V	I _D			25	nA
REVERSE BREAKDOWN VOLTAGE @ 100 μA	V _{BR}	30			V
JUNCTION CAPACITANCE @ V _R = 0 V, 1 MHz	C _J			100	pF
ANGULAR RESPONSE (50% RESPONSE POINT)	θ _{1/2}		±70		Degrees

PACKAGE DIMENSIONS inch (mm)



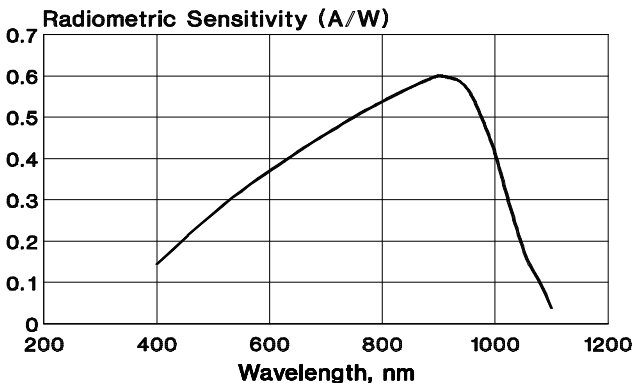
CASE 26F T-1 3/4 FLAT
 CHIP SIZE: .075 x .075 (1.90 x 1.90)
 TOTAL EXPOSED AREA: .0036 in² (2.326 mm²)

GENERAL CHARACTERISTICS

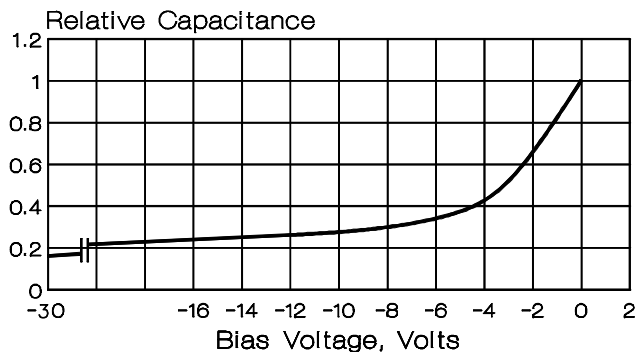
PARAMETER	SYMBOL	TYPICAL RATING	UNITS
OPEN CIRCUIT VOLTAGE @ 100 fc, 2850 K SOURCE	V_{OC}	420	mV
PEAK SPECTRAL RESPONSE @ 25°C	λ_{pk}	920	nm
SPECTRAL APPLICATION RANGE	λ_{range}	400 - 1100	nm
RISE/FALL TIMES @ 800 nm, $V_R = 10$ V, $R_L = 50 \Omega$	t_R / t_F	20	ns
TEMPERATURE COEFFICIENT			
SHORT CIRCUIT CURRENT @ 2850 K SOURCE	TC I_{SC}	+0.20	% / °C
DARK CURRENT @ $V_R = 10$ V	TC I_D	+11.0	% / °C
OPEN CIRCUIT VOLTAGE	TC V_{OC}	-2.0	mV / °C
TEMPERATURE RANGE, OPERATING & STORAGE	T_{AMB}	- 40 to +100	°C

TYPICAL CHARACTERISTIC CURVES

ABSOLUTE SPECTRAL RESPONSE



RELATIVE JUNCTION CAPACITANCE vs BIAS VOLTAGE
(REFERRED TO ZERO BIAS)



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