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SILICON PHOTODIODE
VTP1332

FEATURES

- *Low dark current*

- *Fast response*

- *Infrared transmitting/visible blocking spectral range*
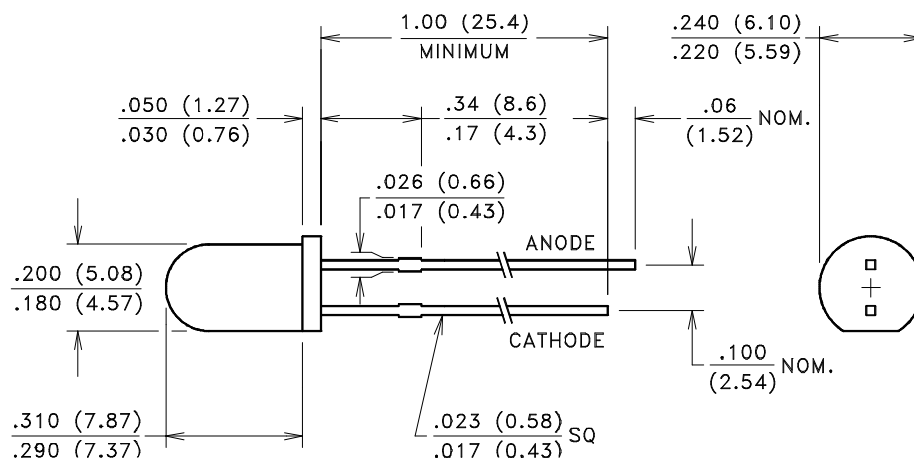
- *Low junction capacitance*

PRODUCT DESCRIPTION

This VTP processed P on N planar silicon photodiode is housed in an IR transmitting, T-1 3/4 endlooking 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}	75			µA
RESPONSIVITY @ 880 nm	R_e	0.050	0.065		A/(W/cm^2)
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)	$\theta_{1/2}$		±20		Degrees

PACKAGE DIMENSIONS inch (mm)

1.00 (25.4) MINIMUM
.240 (6.10) / .220 (5.59)
.050 (1.27) / .030 (0.76)
.34 (8.6) / .17 (4.3)
.06 (1.52) NOM.
.026 (0.66) / .017 (0.43)
ANODE
.200 (5.08) / .180 (4.57)
CATHODE
.100 (2.54) NOM.
.310 (7.87) / .290 (7.37)
.023 (0.58) SQ / .017 (0.43)

CASE 26   T-1 3/4
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}	725 - 1100	nm
RISE/FALL TIMES @ 800 nm, V_R =10 V, R_L = 50 Ω	t_R / t_F	20	ns
TEMPERATURE COEFFICIENT SHORT CIRCUIT CURRENT @ 2850 K SOURCE DARK CURRENT @ V_R = 10 V OPEN CIRCUIT VOLTAGE	TC I_{SC} TC I_D TC $_{VOC}$	+0.20 +11.0 −2.0	% / °C % / °C mV/ °C
TEMPERATURE RANGE, OPERATING & STORAGE	T_{AMB}	− 40 to +100	°C

TYPICAL CHARACTERISTIC CURVES

RELATIVE SPECTRAL RESPONSE

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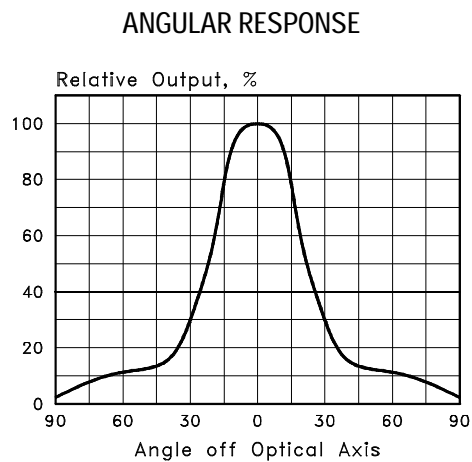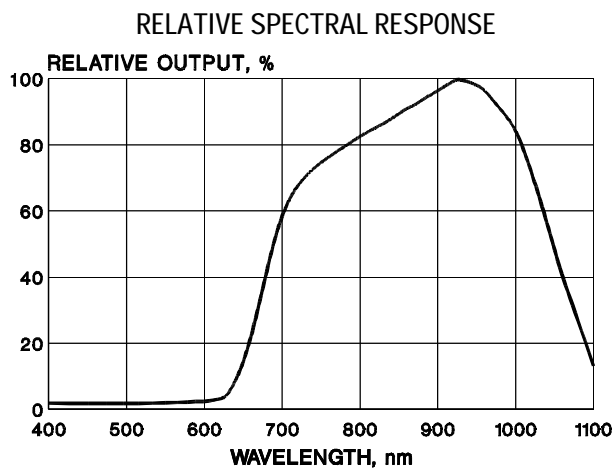
RELATIVE JUNCTION CAPACITANCE vs BIAS VOLTAGE
(REFERRED TO ZERO BIAS)
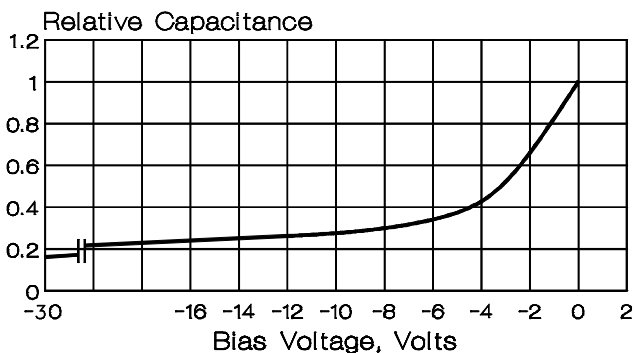
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