

### PRELIMINARY ENGINEERING DATA SHEET

#### FEATURES

- *Low dark current*
- *Fast response*
- *Infrared transmitting/visible blocking spectral range*
- *Low junction capacitance*

#### PRODUCT DESCRIPTION

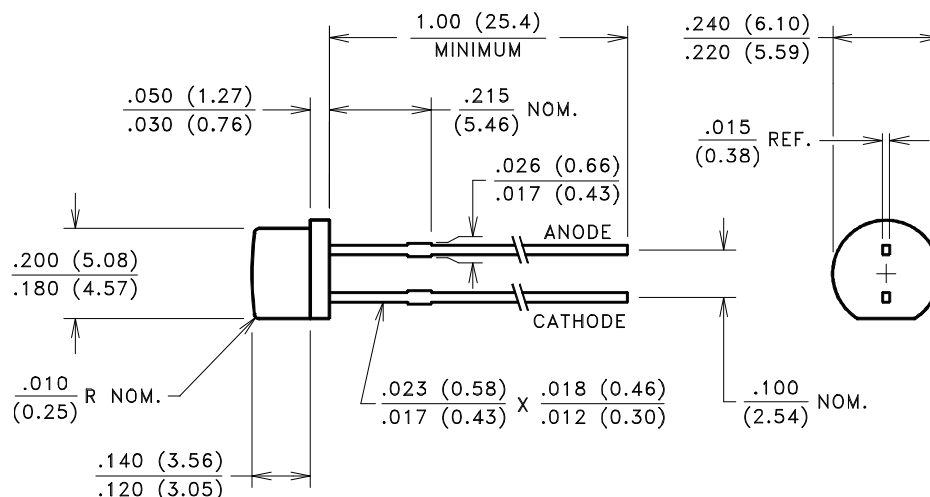
This VTP processed P on N planar silicon photodiode is housed in an IR transmitting, T-1 3/4 endlooking package.

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 <sub>SC</sub>	17			μA
SENSITIVITY @ PEAK	S <sub>R</sub>		0.6		A/W
DARK CURRENT @ V <sub>R</sub> = 10 V	I <sub>D</sub>			25	nA
REVERSE BREAKDOWN VOLTAGE @ 100 μA	V <sub>BR</sub>	30			V
JUNCTION CAPACITANCE @ V <sub>R</sub> = 0 V, 1 MHz	C <sub>J</sub>			100	pF
ANGULAR RESPONSE (50% RESPONSE POINT)	θ <sub>1/2</sub>		±70		Degrees

#### PACKAGE DIMENSIONS inch (mm)

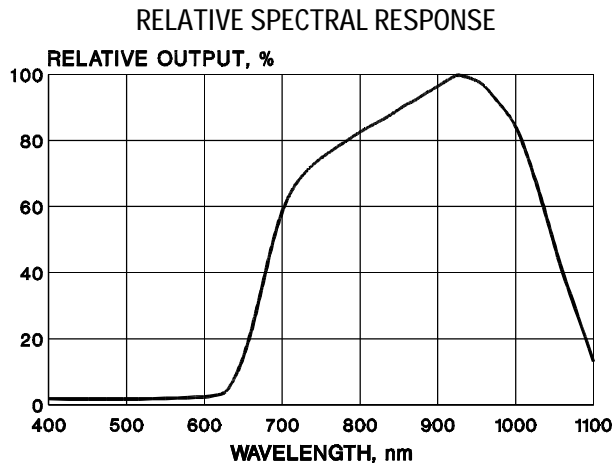


**CASE 26F T-1 3/4 FLAT**  
 CHIP SIZE: .075 x .075 (1.90 x 1.90)  
 TOTAL EXPOSED AREA: .0036 in<sup>2</sup> (2.326 mm<sup>2</sup>)

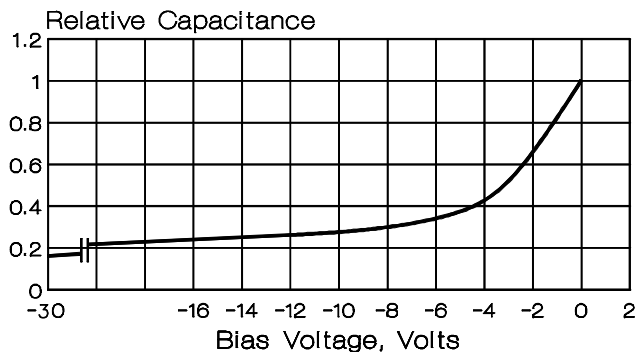
## GENERAL CHARACTERISTICS

PARAMETER	SYMBOL	TYPICAL RATING	UNITS
OPEN CIRCUIT VOLTAGE @ 100 fc, 2850 K SOURCE	$V_{OC}$	420	mV
PEAK SPECTRAL RESPONSE @ 25°C	$\lambda_{pk}$	920	nm
SPECTRAL APPLICATION RANGE	$\lambda_{range}$	725 - 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



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



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