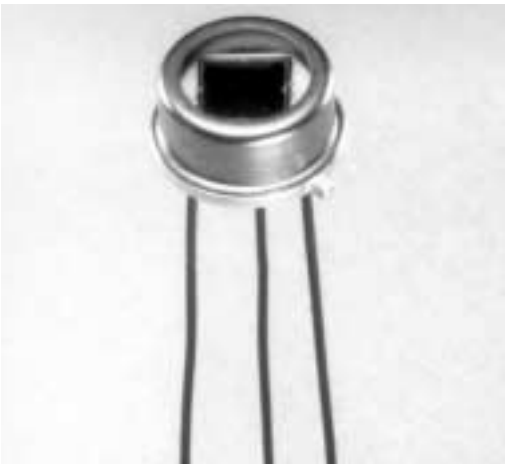
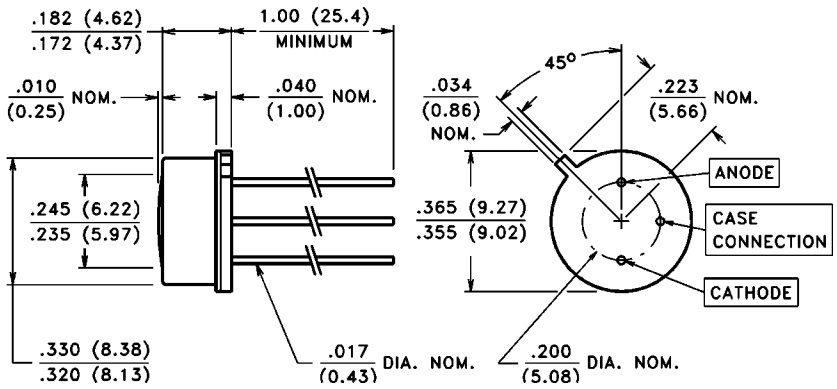
VTB Process Photodiodes

VTB5051J



PACKAGE DIMENSIONS inch (mm)



CASE 14A TO-5 HERMETIC
CHIP ACTIVE AREA: .023 in^2 (14.8 mm^2)

PRODUCT DESCRIPTION

Planar silicon photodiode in a "flat" window, three lead TO-5 package. Chip is isolated from the case. The third lead allows the case to be grounded. These diodes have very high shunt resistance and have good blue response.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature:	-40°C to 110°C
Operating Temperature:	-40°C to 110°C

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTB curves, pages 21-22)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTB5051J			UNITS
			Min.	Typ.	Max.	
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	85	130		µA
TC I_{SC}	I_{SC} Temperature Coefficient	2850 K		.12	.23	%/°C
V_{OC}	Open Circuit Voltage	H = 100 fc, 2850 K		490		mV
TC V_{OC}	V_{OC} Temperature Coefficient	2850 K		-2.0		mV/°C
I_D	Dark Current	H = 0, VR = 2.0 V			250	pA
R_{SH}	Shunt Resistance	H = 0, V = 10 mV		.56		GΩ
TC R_{SH}	R_{SH} Temperature Coefficient	H = 0, V = 10 mV		-8.0		%/°C
C_J	Junction Capacitance	H = 0, V = 0		3.0		nF
S_R	Sensitivity	365 nm		.10		A/W
λ_{range}	Spectral Application Range		320		1100	nm
λ_p	Spectral Response - Peak			920		nm
V_{BR}	Breakdown Voltage		2	40		V
$\theta_{1/2}$	Angular Resp. - 50% Resp. Pt.			±50		Degrees
NEP	Noise Equivalent Power		2.1 x 10^{-14} (Typ.)			$W/\sqrt{Hz}$
D*	Specific Detectivity		1.8 x 10^{13} (Typ.)			$cm\sqrt{Hz}$ / W