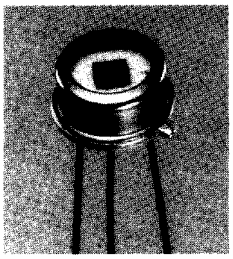
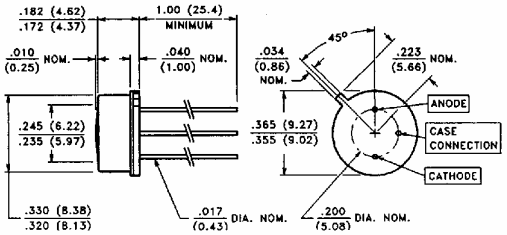
E G & G VACTEC

T-41-51



PACKAGE DIMENSIONS inch (mm)



CASE 14A TO-5 HERMETIC
CHIP ACTIVE AREA: .008 in^2 (5.16 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 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 12-13)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTB5040J			VTB5041J						UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	35	45		35	45					μA
TC I_{SC}	I_{SC} Temp. Coefficient	2850 K		.12	.23		.12	.23				%/°C
V_{OC}	Open Circuit Voltage	H = 100 fc, 2850 K		490			490					mV
TC V_{OC}	V_{OC} Temp. Coefficient	2850 K		-2.0			-2.0					mV/°C
I_D	Dark Current	H = 0, V_R = 2.0 V			2000			100				pA
R_{SH}	Shunt Resistance	H = 0, V = 10 mV		.07			1.4					GΩ
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V = 10 mV		-8.0			-8.0					%/°C
C_J	Junction Capacitance	H = 0, V = 0		1.0			1.0					nF
S_R	Sensitivity	365 nm		0.1			0.1					A/W
λ_{range}	Spectral Application Range		320		1100	320		1100				nm
λ_p	Spectral Response - Peak			920			920					nm
V_{BR}	Breakdown Voltage		2	40		2	40					V
$\theta_{1/2}$	Ang. Resp. - 50% Resp. Pt.			±45			±45					Degrees
NEP	Noise Equivalent Power		5.9×10^{-14} (Typ.)			1.3×10^{-14} (Typ.)						W/√Hz
D*	Specific Detectivity		3.9×10^{12} (Typ.)			1.7×10^{13} (Typ.)						cm√Hz/W