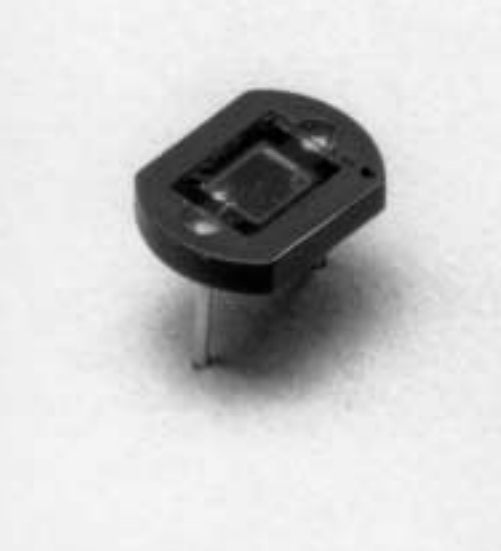
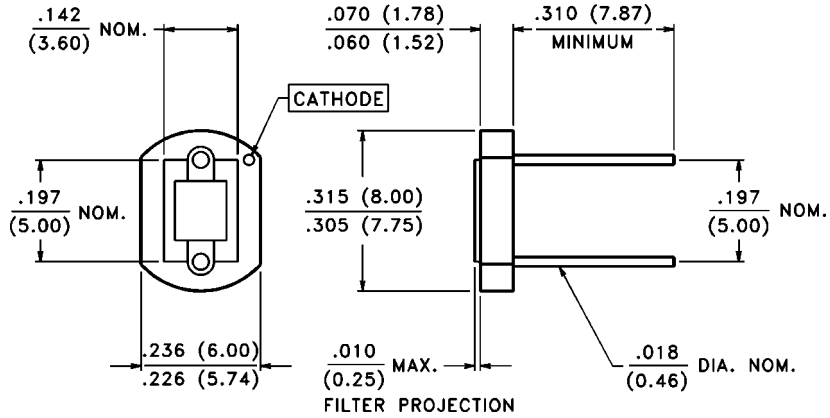
VTB Process Photodiodes

VTB8440B, 8441B



PACKAGE DIMENSIONS inch (mm)



CASE 21F 8 mm CERAMIC
CHIP ACTIVE AREA: .008 in^2 (5.16 mm^2)

PRODUCT DESCRIPTION

Planar silicon photodiode in recessed ceramic package. The package incorporates an infrared rejection filter. These diodes have very high shunt resistance and have good blue response.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature:	-20°C to 75°C
Operating Temperature:	-20°C to 75°C

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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTB8440B			VTB8441B			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	4	5		4	5		µA
TC I_{SC}	I_{SC} Temperature Coefficient	2850 K		.02	.08		.02	.08	%/°C
V_{OC}	Open Circuit Voltage	H = 100 fc, 2850 K		420			420		mV
TC V_{OC}	V_{OC} Temperature Coefficient	2850 K		-2.0			-2.0		mV/°C
I_D	Dark Current	H = 0, VR = 2.0 V			2000			100	pA
R_{SH}	Shunt Resistance	H = 0, V = 10 mV		.07			1.4		GΩ
TC R_{SH}	R_{SH} Temperature Coefficient	H = 0, V = 10 mV		-8.0			-8.0		%/°C
C_J	Junction Capacitance	H = 0, V = 0		1.0			1.0		nF
λ_{range}	Spectral Application Range		330		720	330		720	nm
λ_p	Spectral Response - Peak			580			580		nm
V_{BR}	Breakdown Voltage		2	40		2	40		V
$\theta_{1/2}$	Angular Resp. - 50% Resp. Pt.			±50			±50		Degrees
NEP	Noise Equivalent Power		1.1 x 10^{-13} (Typ.)			2.4 x 10^{-14} (Typ.)			$W/\sqrt{Hz}$
D*	Specific Detectivity		2.2 x 10^{12} (Typ.)			9.7 x 10^{12} (Typ.)			$cm\sqrt{Hz}$ / W