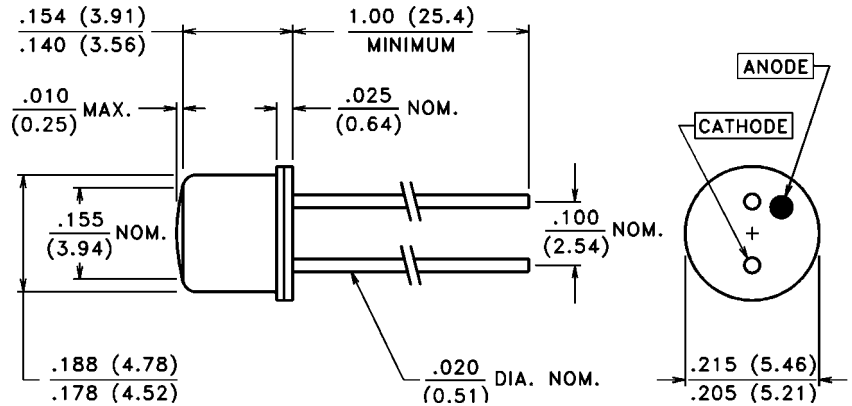


VTB Process Photodiode

VTB1012BH, 1013BH



PACKAGE DIMENSIONS inch (mm)



CASE 17 TO-46 HERMETIC
CHIP ACTIVE AREA: .0025 in² (1.60 mm²)

PRODUCT DESCRIPTION

Small area planar silicon photodiode in a "flat" window, dual lead TO-46 package. The package incorporates an infrared rejection filter. Cathode is common to the case. 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

RoHS Compliant



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTB1012BH			VTB1013BH			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	0.8	1.3		0.8	1.3		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			100			20	pA
R _{SH}	Shunt Resistance	H = 0, V = 10 mV		.25			7.0		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		.31			.31		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
θ _{1/2}	Angular Resp. - 50% Resp. Pt.			±35			±35		Degrees
NEP	Noise Equivalent Power		5.3 x 10 ⁻¹⁴ (Typ.)			1.1 x 10 ⁻¹⁴ (Typ.)			W/√Hz
D*	Specific Detectivity		2.4 x 10 ¹² (Typ.)			1.2 x 10 ¹³ (Typ.)			cm√Hz/W