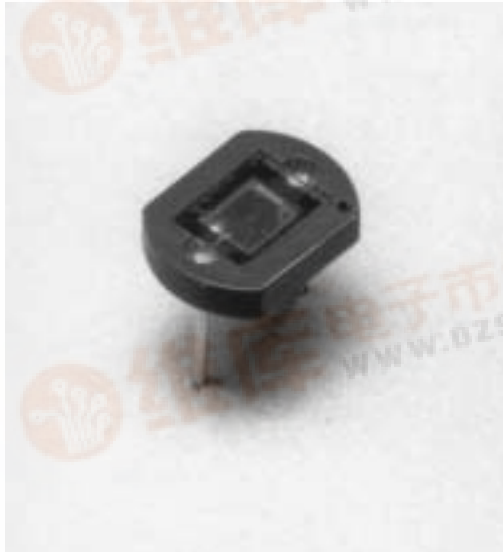
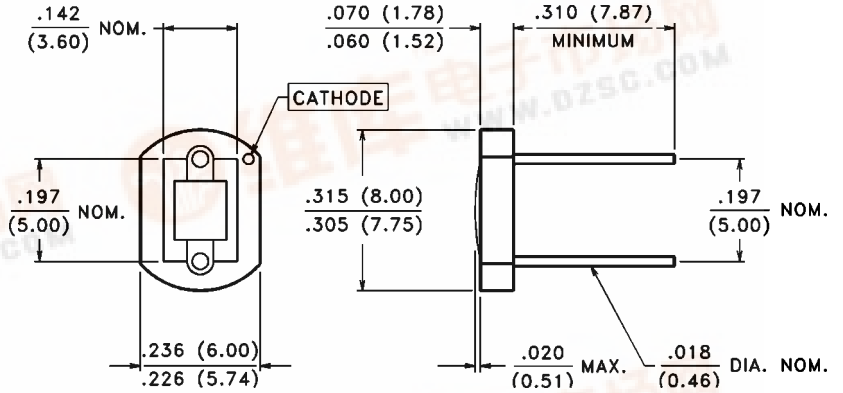


# VTB Process Photodiodes

# VTB8440, 8441



## PACKAGE DIMENSIONS inch (mm)



CASE 21 8 mm CERAMIC  
CHIP ACTIVE AREA: .008 in<sup>2</sup> (5.16 mm<sup>2</sup>)

## PRODUCT DESCRIPTION

Planar silicon photodiode in a recessed ceramic package. Chip is coated with a protective layer of epoxy. 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	VTB8440			VTB8441			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	
I <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	35	45		35	45		μA
TC I <sub>SC</sub>	I <sub>SC</sub> Temperature Coefficient	2850 K		.12	.23		.12	.23	%/°C
V <sub>OC</sub>	Open Circuit Voltage	H = 100 fc, 2850 K		490			490		mV
TC V <sub>OC</sub>	V <sub>OC</sub> Temperature Coefficient	2850 K		-2.0			-2.0		mV/°C
I <sub>D</sub>	Dark Current	H = 0, VR = 2.0 V			2000			100	pA
R <sub>SH</sub>	Shunt Resistance	H = 0, V = 10 mV		.07			1.4		GΩ
TC R <sub>SH</sub>	R <sub>SH</sub> Temperature Coefficient	H = 0, V = 10 mV		-8.0			-8.0		%/°C
C <sub>J</sub>	Junction Capacitance	H = 0, V = 0		1.0			1.0		nF
S <sub>R</sub>	Sensitivity	365 nm		.10			.10		A/W
λ <sub>range</sub>	Spectral Application Range		320		1100	320		1100	nm
λ <sub>p</sub>	Spectral Response - Peak			920			920		nm
V <sub>BR</sub>	Breakdown Voltage		2	40		2	40		V
θ <sub>1/2</sub>	Angular Resp. - 50% Resp. Pt.			±50			±50		Degrees
NEP	Noise Equivalent Power		5.9 x 10 <sup>-14</sup> (Typ.)			1.3 x 10 <sup>-14</sup> (Typ.)			W/√Hz
D*	Specific Detectivity		3.9 x 10 <sup>12</sup> (Typ.)			1.7 x 10 <sup>13</sup> (Typ.)			cm√Hz / W

