

VTP Process Photodiodes

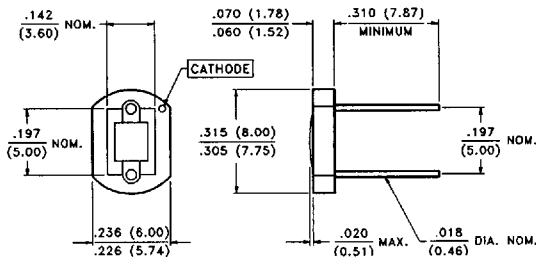
VTP8440, 8441

E G & G VACTEC

T-41-51



PACKAGE DIMENSIONS inch (mm)



PRODUCT DESCRIPTION

Planar silicon photodiode in a recessed ceramic package. Chip is coated with a protective layer of clear epoxy. These diodes exhibit low dark current under reverse bias and fast speed of response.

CASE 21 8 mm CERAMIC

CHIP ACTIVE AREA: .008 in² (5.16 mm²)

ABSOLUTE MAXIMUM RATINGS

Storage Temperature: -20°C to 75°C

Operating Temperature: -20°C to 75°C

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTP curves, pages 48-49)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTP8440			VTP8441			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{sc}	Short Circuit Current	H = 100 fc, 2850 K	30	55		30	55		μA
TC I _{sc}	I _{sc} Temp. Coefficient	2850 K		.20			.20		% / °C
V _{oc}	Open Circuit Voltage	H = 100 fc, 2850 K		350			350		mV
TC V _{oc}	V _{oc} Temp. Coefficient	2850 K		-2.0			-2.0		mV / °C
I _d	Dark Current	H = 0, V _R = 50 V			15			3	nA
R _{sh}	Shunt Resistance	H = 0, V = 10 mV		.5			.7		GΩ
C _j	Junction Capacitance	H = 0, V = 15 V			15			15	pF
R _e	Responsivity	940 nm		.025			.025		A/(W/cm ²)
S _R	Sensitivity	@ Peak		.55			.55		A/W
λ _{range}	Spectral Application Range		400		1150	400		1150	nm
λ _p	Spectral Response - Peak			925			925		nm
V _{BR}	Breakdown Voltage		50	140		50	140		V
θ _{1/2}	Ang. Resp. - 50% Resp. Pt.			±50			±50		Degrees
NEP	Noise Equivalent Power			1.3 x 10 ⁻¹³ (Typ.)			5.7 x 10 ⁻¹⁴ (Typ.)		W/√Hz
D*	Specific Detectivity			1.8 x 10 ¹² (Typ.)			4.0 x 10 ¹² (Typ.)		cm√Hz/W