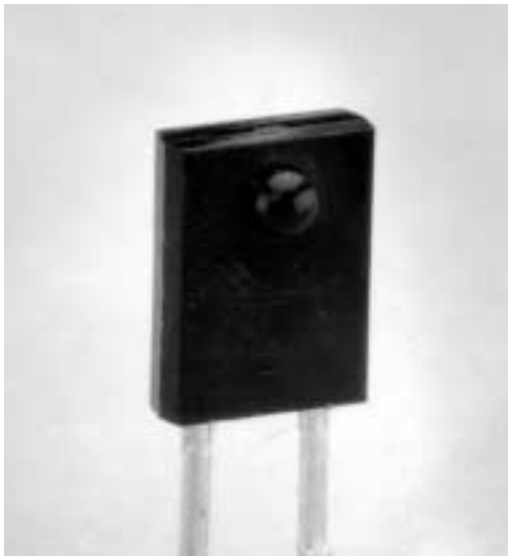
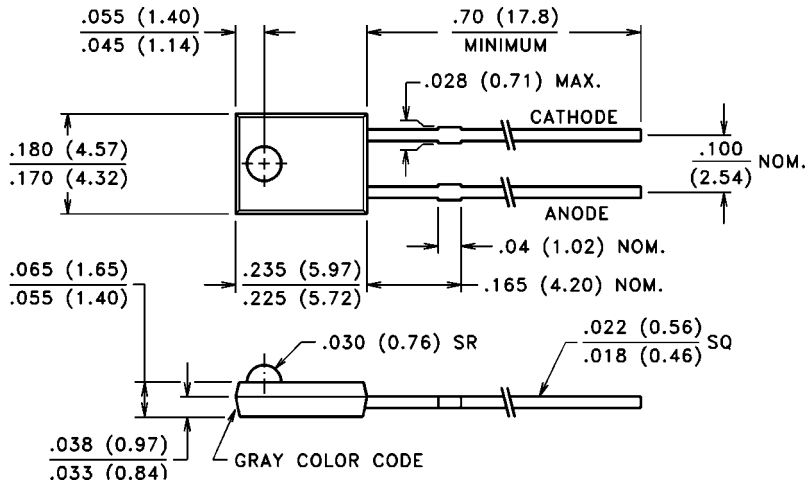
VTP Process Photodiodes

VTP7210



PACKAGE DIMENSIONS inch (mm)



CASE 7 LATERAL
CHIP ACTIVE AREA: .0011 in^2 (0.684 mm^2)

PRODUCT DESCRIPTION

Small area planar silicon photodiode in a lensed sidelooking package. The package material filters out visible light but passes infrared. These diodes exhibit low dark current under reverse bias and fast speed of response.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature:	-40°C to 85°C
Operating Temperature:	-40°C to 85°C

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTP curves, page 46)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTP7210			UNITS
			Min.	Typ.	Max.	
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	5	7		µA
TC I_{SC}	I_{SC} Temperature Coefficient	2850 K		.26		%/°C
V_{OC}	Open Circuit Voltage	H = 100 fc, 2850 K		350		mV
TC V_{OC}	V_{OC} Temperature Coefficient	2850 K		-2.0		mV/°C
I_D	Dark Current	H = 0, VR = 10 V			35	nA
R_{SH}	Shunt Resistance	H = 0, V = 10 mV		7		GΩ
C_J	Junction Capacitance	H = 0, V = 3 V			25	pF
Re	Responsivity	940 nm		.015		A/(W/cm^2)
S_R	Sensitivity	@ Peak		.55		A/W
λ_{range}	Spectral Application Range		700		1150	nm
λ_p	Spectral Response - Peak			925		nm
V_{BR}	Breakdown Voltage		30	140		V
$\theta_{1/2}$	Angular Resp. - 50% Resp. Pt.			±58		Degrees
NEP	Noise Equivalent Power			1.9×10^{-13} (Typ.)		$W/\sqrt{Hz}$
D*	Specific Detectivity			5.3×10^{11} (Typ.)		$cm\sqrt{Hz}/W$