

VTS-3 Process Photodiodes

VTS_71, 73, 74

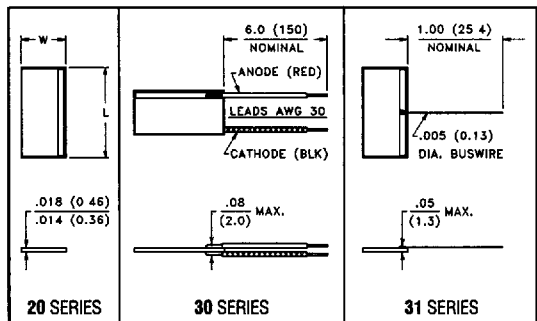
E G & G VACTEC

T-90-01

PRODUCT DESCRIPTION

Large area planar silicon photodiodes primarily intended for use in the photovoltaic mode. These devices have excellent response in the UV region and are designed for high output down to 220 nm. The cells have moderate shunt resistance and are optimized for use at lower light levels. These diodes have solderable contacts and are available with or without flexible leads. Devices with leads are acrylic (plastic) coated.

PACKAGE DIMENSIONS inch (mm)



CASE 44C

ANODE (ACTIVE) SURFACE SHOWN
CATHODE IS BACKSIDE

ABSOLUTE MAXIMUM RATINGS

Storage Temperature:

-40°C to 150°C Series 20, 31

-40°C to 105°C Series 30

Operating Temperature:

-40°C to 125°C Series 20, 31

-40°C to 105°C Series 30

DIMENSIONS

	VTS_71	VTS_73	VTS_74
L	.800 (20.32)	.800 (20.32)	.400 (10.16)
W	.400 (10.16)	.200 (5.08)	.200 (5.08)
ACTIVE AREA	.290 ² (187 ²)	.132 ² (85 ²)	.065 ² (42 ²)

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTS-3 curves, page 95)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTS_71			VTS_73			VTS_74			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{sc}	Short Circuit Current	H = 10 fc, 2850 K	115	130		52	58		26	29		μA
TC I _{sc}	I _{sc} Temp. Coefficient	2850 K		.18			.18			.18		% / °C
I _{sc}	Short Circuit Current	40 μW/cm ² , 365 nm	3.7	12		1.7	5.6		.84	2.8		μA
V _{oc}	Open Circuit Voltage	H = 10 fc, 2850 K		.20			.20			.20		V
I _D	Dark Current	H = 0, V _R = 100 mV		1.0	4.0		.5	2.0		.4	1.6	μA
R _{SH}	Shunt Resistance	H = 0, V = 10 mV		.06			.12			.15		MΩ
TC R _{SH}	R _{SH} Temp. Coefficient	H = 0, V = 10 mV		-11			-11			-11		% / °C
C _J	Junction Capacitance	H = 0, V = 0 V		1.6			.82			.41		nF
λ _{range}	Spectral Application Range		220		1050	220		1050	220		1050	nm
λ _p	Spectral Response - Peak			850			850			850		nm
S _R	Sensitivity	@ Peak		.50			.50			.50		A/W