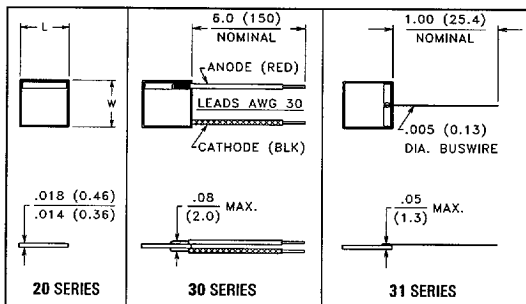


PRODUCT DESCRIPTION

This series of planar, P on N, large area silicon photodiodes is characterized for use in the photovoltaic (unbiased) mode. Their excellent speed and broadband sensitivity makes them ideal for detecting light from a variety of sources such as LEDs, IREDs, flashtubes, incandescent lamps, lasers, etc. Improved shunt resistance minimizes amplifier offset and drift in high gain systems. The solderable contact system on these photodiodes provides a cost effective design solution for many applications.

PACKAGE DIMENSIONS Inch (mm)

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

Reverse Voltage:

6.0 Volts

CASE 44A

ANODE (ACTIVE) SURFACE SHOWN
CATHODE IS BACKSIDE

DIMENSIONS

	VTS __80	VTS __82	VTS __85
L	.800 (20.32)	.400 (10.16)	.200 (5.08)
W	.800 (20.32)	.400 (10.16)	.200 (5.08)
ACTIVE AREA	.607 ² (392 ²)	.144 ² (93 ²)	.032 ² (21 ²)

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTS curves, page 59)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTS __80			VTS __82			VTS __85			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{SC}	Short Circuit Current	H = 1000 Lux, 2850 K	2.30	3.00		0.55	0.69		0.13	0.16		mA
TC I _{SC}	I _{SC} Temp. Coefficient	H = 1000 Lux, 2850 K		0.20			0.20			0.20		% / °C
I _D	Dark Current	H = 0, V _R = 100 mV		0.2	1.0		0.05	0.2		0.02	0.1	μA
TC I _D	I _D Temp. Coefficient	H = 0, V _R = 100 mV		+11			+11			+11		% / °C
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV		0.3			1.2			3.0		MΩ
C _J	Junction Capacitance	H = 0, V = 0 V, 1 MHz		7.5			1.75			0.50		nF
S _R	Sensitivity	@ 400 nm	0.18	0.20		0.18	0.20		0.18	0.20		A/W
R _e	Responsivity	400 nm, 0.18 A/W		0.70			0.16			0.04		A/(W/cm ²)
TC V _{OC}	Sensitivity @ Peak	925 nm		0.60			0.60			0.60		A/W
t _R / t _F	Response Time @ 1 kΩ Load	V _R = 1 V, 830 nm		13			3.4			1.2		μsec
V _{OC}	Open Circuit Voltage	H = 1000 Lux, 2850 K	0.25	0.45		0.25	0.45		0.25	0.45		Volts
TC V _{OC}	V _{OC} Temp. Coefficient	H = 1000 Lux, 2850 K		-2.6			-2.6			-2.6		mV / °C