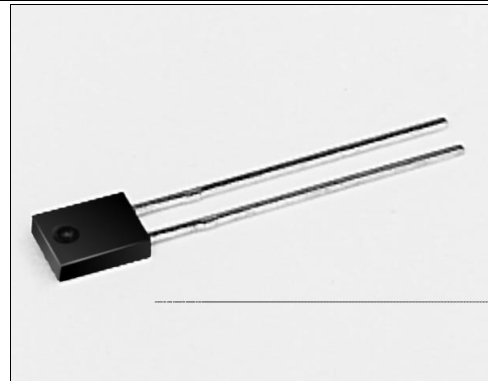


# SDP8276

## Silicon Photodiode

### FEATURES

- Side-looking plastic package
- Linear response
- Fast response time
- Internal visible light rejection filter
- 50° (nominal) acceptance angle
- Mechanically and spectrally matched to SEP8506 and SEP8706 infrared emitting diodes



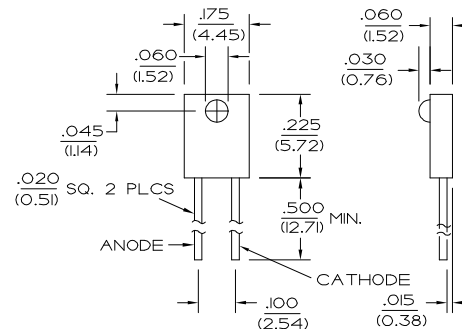
INFRA-79.TIF

### DESCRIPTION

The SDP8276 is a PN silicon photodiode, transfer molded in a side- looking black plastic package, to minimize the effects of visible ambient light. The chip is positioned to accept radiant energy through a lens on the side of the package. The SDP8276 photodiode offers fast response time and a linear output. It is ideal for battery powered systems or anywhere power is at a premium.

### OUTLINE DIMENSIONS in inches (mm)

Tolerance	3 plc decimals	±0.005(0.12)
	2 plc decimals	±0.020(0.51)



DIM\_074.cdr

# SDP8276

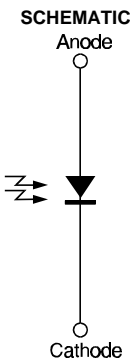
Silicon Photodiode

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)						
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Light Current	I <sub>L</sub>	4	7		μA	V <sub>R</sub> =20 V H=1 mW/cm <sup>2</sup> (1)
Dark Current	I <sub>D</sub>			50	nA	H=0, V <sub>R</sub> =20 VDC
Reverse Breakdown Voltage	V <sub>BR</sub>	50			V	I <sub>R</sub> =10 μA, H=0
Angular Response (2)	Ø		50		degr.	I <sub>F</sub> =Constant
Rise And Fall Time	t <sub>r</sub> , t <sub>f</sub>		50		ns	V <sub>R</sub> =20 V, R <sub>L</sub> =50 Ω

Notes  
1. The radiation source is an IRED with a peak wavelength of 935 nm.  
2. Angular response is defined as the total included angle between the half sensitivity points.

ABSOLUTE MAXIMUM RATINGS	
(25°C Free-Air Temperature unless otherwise noted)	
Operating Temperature Range	-40 to +85°C
Storage Temperature Range	-40 to +85°C
Soldering Temperature (5 sec)	240°C
Cathode Anode Voltage	50 V
Power Dissipation	100 mW (1)

Notes  
1. Derate linearly from 25°C free-air temperature at the rate of 0.78 mW/°C.



Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

# SDP8276

## Silicon Photodiode

SWITCHING TIME TEST CIRCUIT

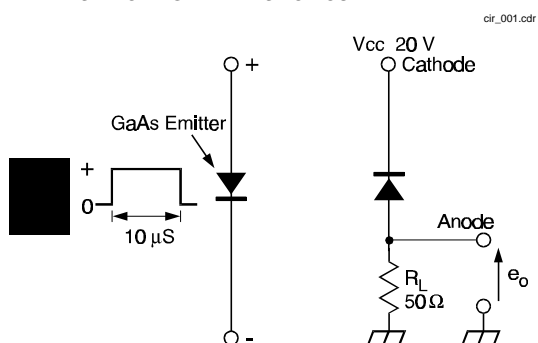


Fig. 1 Responsivity vs Angular Displacement

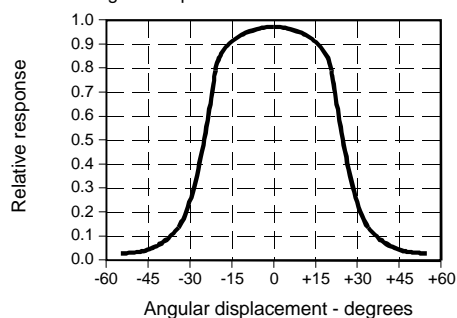
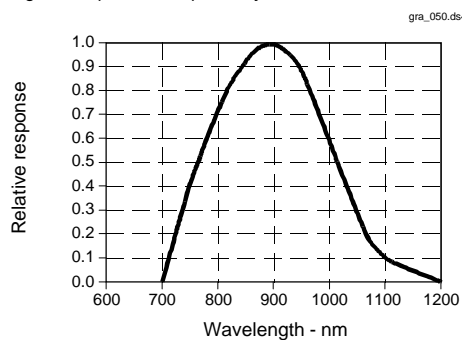


Fig. 3 Spectral Responsivity



All Performance Curves Show Typical Values

SWITCHING WAVEFORM

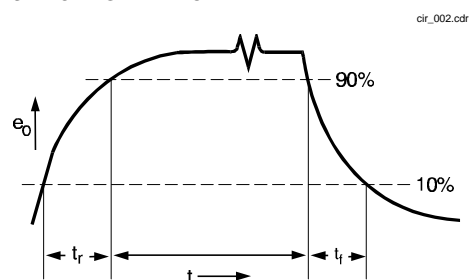
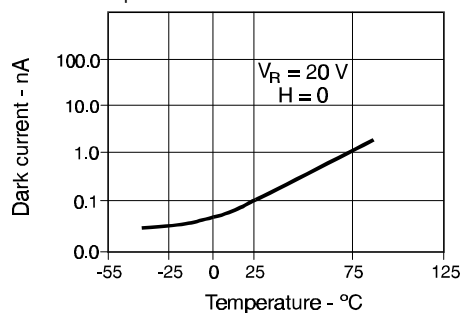


Fig. 2 Dark Current vs Temperature



# SDP8276

Silicon Photodiode

---



Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

# Honeywell