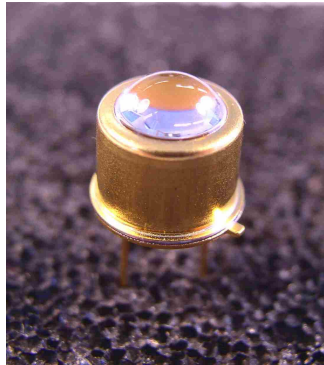


SG01M-Lens



Features

- Broad band UVA-UVB-UVC photodiode for weak and directed radiation
- Perfectly suited for flame sensing
- Silicon Carbide based chip for extreme low noise and dark current
- Chip dimensions of $0.5 \times 0.5 \text{ mm}^2$ with 0.22 mm^2 active area
- Virtual active area of approx. 4 mm^2 due to integrated lens
- Intrinsic visible blindness due to wide-bandgap semiconductor material
- Completely insensitive to the visible ($S_{280\text{nm}} / S_{400\text{nm}} > 10^4$) without filters
- The chip is manufactured by Cree Research Inc., U.S.A.

Maximum Ratings

Parameter	Symbol	Value	Unit
Operating temperature range	T_{opt}	-25 ... +70	°C
Reverse voltage	V_{Rmax}	20	V



SG01M-Lens

General Characteristics

(T_a = 25 °C)

Active chip area	A	0.22	mm ²
Dark current at 1 V reverse bias	I _d	2	fA
Capacitance	C	80	pF
Aperture angle	α	+/- 2.5	deg
Short circuit current from cigarette lighter at 1 m distance	I ₀	ca. 2	pA

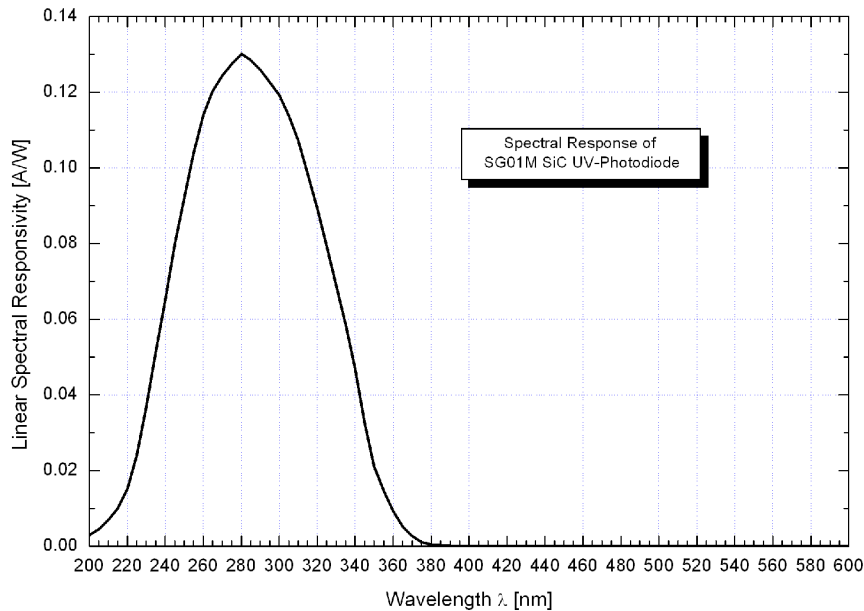
Spectral Characteristics

(T_a = 25 °C)

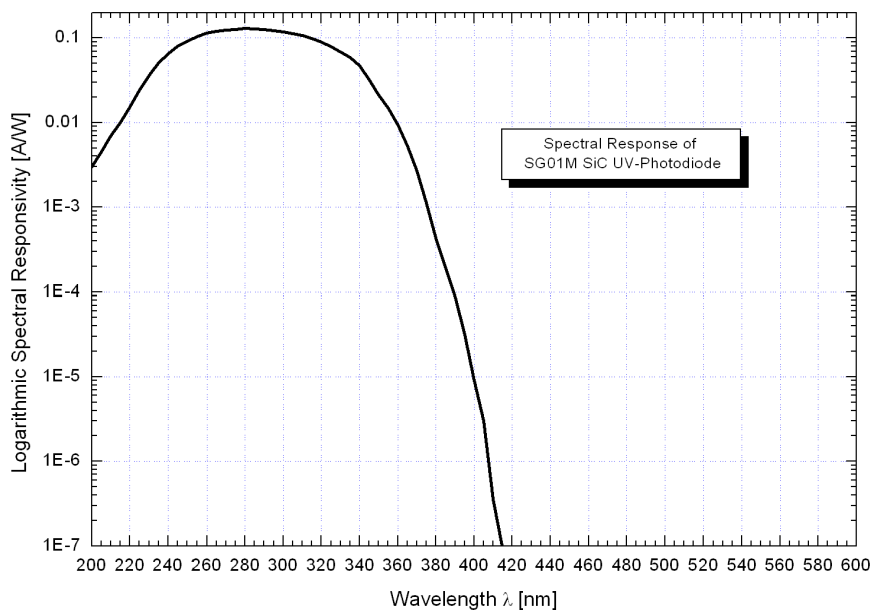
Parameter	Symbol	Value	Unit
Max. spectral sensitivity (chip)	S _{max}	0.13	A W ⁻¹
Wavelength of max. spectral sensitivity	λ _{Smax}	280	nm
Range of spectral sensitivity (S=0.1*S _{max})	-	220 - 360	nm

SG01M-Lens

Linear Spectral Response

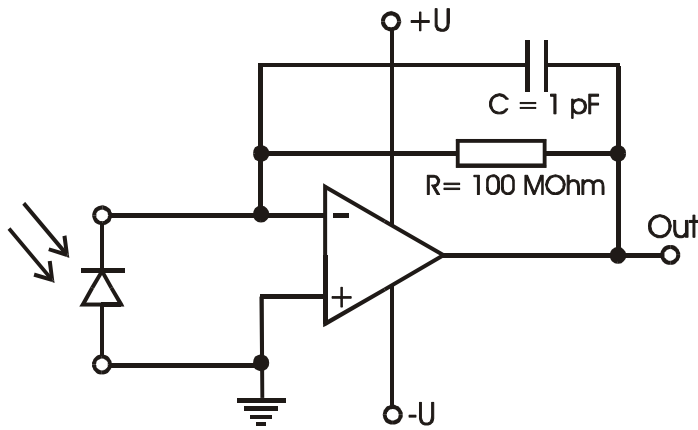


Logarithmic Spectral Response



SG01M-Lens

Application Example



Pin Layout

