

Ultraviolet selective thin film sensor

UVD 39

Features

- Schottky-type photodiode
- Intrinsic visible blindness due to wide-bandgap semiconductor material
- Large photoactive area
- No focusing lens needed, therefore large usable incident angle
- No interference filter required
- Designed to operate in photovoltaic mode
- TO-39 metal package

Maximum Ratings

Parameter	Symbol	Value	Unit
Operating temperature range	T_{opt}	0 ... +60	°C
Reverse voltage	V_{Rmax}	3	V
Forward current	I_{Fmax}	5	mA
Forward voltage (dark)	V_F	900	mV
Total power dissipation at 25 °C	P_{tot}	5	mW

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General Characteristics

($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	typ. Value	Unit
Active area	A	15.66	mm ²
Active area dimensions	L x W	5.4 x 2.9	mm
Shunt resistance (dark)	R _p	100	MΩ
Dark current	I _d	100	pA
Open circuit voltage (200 μW / cm ² ; λ = 300 nm)	V ₀	120	mV
Short circuit current (200 μW / cm ² ; λ = 300 nm)	I ₀	620	nA
Breakdown voltage (dark)	V _{BR}	> 3	V

Spectral Characteristics

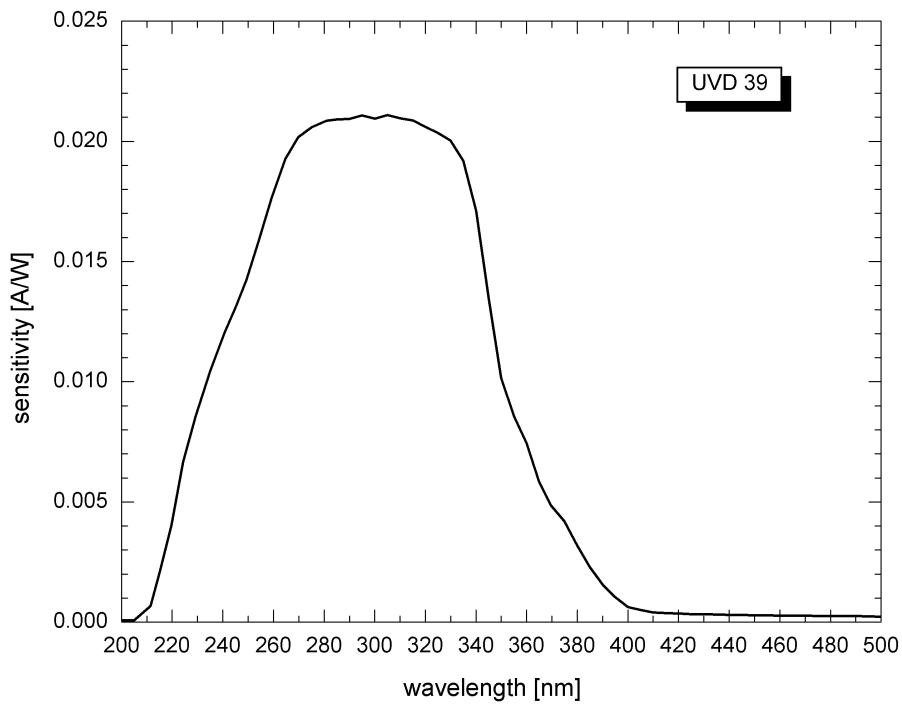
($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	typ. Value	Unit
Max. spectral sensitivity	S _{max}	20	mA·W ⁻¹
Wavelength of max. spectral sensitivity	λ _{Smax}	300	nm
Range of spectral sensitivity (S = 10 % of S _{max})	-	225 – 380	nm

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Spectral Response



Pin Layout

