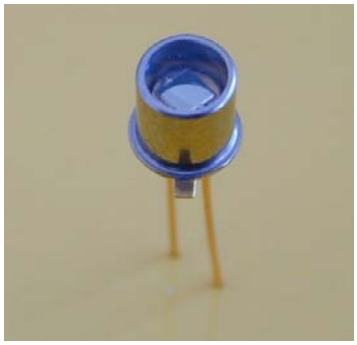
Ultraviolet selective thin film sensor

TW30SX



Features of the TW30SX UV Sensor

The UV Sensor TW30SX is our Big Seller. Our customers treasure it's broad application range, it's high reliability and robustness and it's competitive price. Overview on the advantages:

- Broad Band UVA – UVB spectral response
- Hermetically sealed metal housing and UV-glass window
- high photocurrent even if illuminated with very low radiation because of big active area.
- optimally suited for inexpensive sun dosimetry
- we are able to manufacture up to 2.000.000 pcs. per year.

Was leistet der TW30SX UV-Sensor?

Der UV-Sensor TW30SX ist unserer Verkaufsrenner. Unsere Kunden schätzen seine Universalität, seine Zuverlässigkeit, Robustheit und seinen günstigen Preis. Die Vorteile auf einen Blick:

- Breitband UVA – UVB Messspektrum
- Hermetisch dichtes Metallgehäuse mit UV-Glasfenster
- Großer Photostrom auch bei sehr schwachem UV-Signal durch große aktive Fläche
- optimal geeignet für preiswerte Sonnen-UV-Dosimetrie
- Lieferfähigkeit ist bis zu 2.000.000 Stück jährlich.

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-18 metal package

Maximum Ratings

Parameter	Symbol	Value	Unit
Operating temperature range	T_{opt}	-20 ... +80	°C
Reverse voltage	V_{Rmax}	3	V
Forward current	I_{Fmax}	1	mA
Total power dissipation at 25°C	P_{tot}	1	mW

General Characteristics

(T_a = 25 °C)

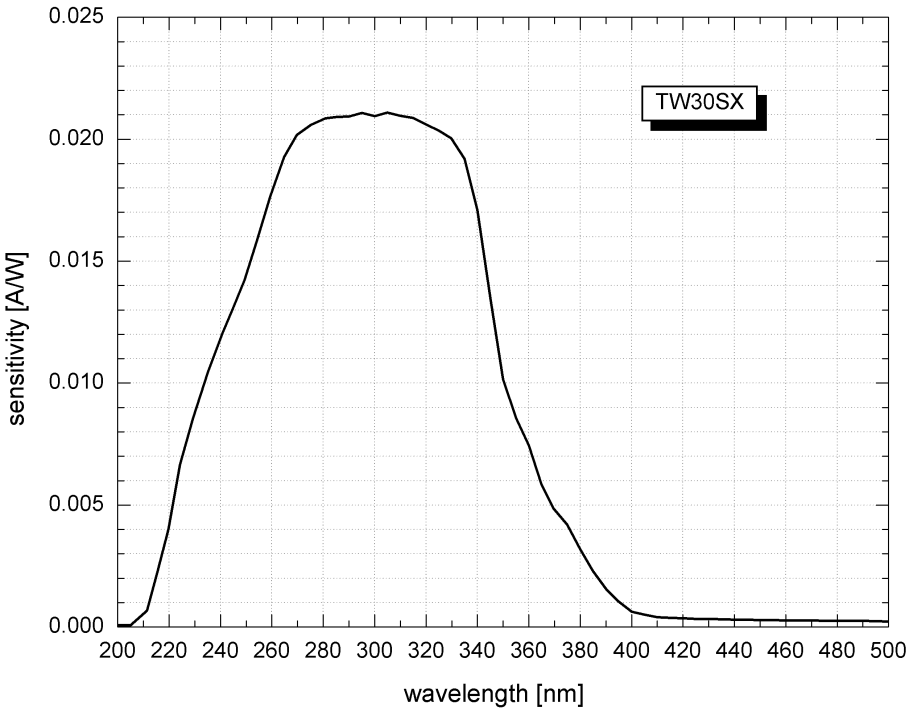
Parameter	Symbol	Value	Unit
Active area	A	4,18	mm^2
Active area dimensions	L x W	2.2 x 1.9	mm^2
Max. viewing angle	α	70	degree
Shunt resistance (dark)	R_s	300	MΩ
Dark current at 10mV reverse bias	I_d	30	pA
Open circuit voltage (200µW/cm^2, λ=300nm)	V_0	>250	mV
Short circuit current (200µW/cm^2, λ=300nm)	I_0	175	nA
Breakdown voltage (dark)	V_{BR}	> 3	V

Spectral Characteristics

(T_a = 25 °C)

Parameter	Symbol	garanteed Value	Unit
Max. spectral sensitivity	S_{max}	21	mA W^{-1}
Wavelength of max. spectral sensitivity	λ_{Smax}	300	nm
Range of spectral sensitivity ($S=0.1*S_{max}$)	-	215 – 387	nm
Visible blindness	$\frac{S_{max}}{S_{400nm}}$	50	

Spectral Response



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