

Ultraviolet selective thin film sensor

TW30DZ

Features

- Schottky-type photodiode
- Intrinsic visible blindness due to wide-bandgap semiconductor material
- Built-in filter glass for low sensitivity above 400nm
- Large photoactive area
- No focusing lens needed, therefore large usable incident angle
- Designed to operate in photovoltaic mode
- TO-46 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

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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	app. 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	167	nA
Breakdown voltage (dark)	V _{BR}	> 3	V

Spectral Characteristics

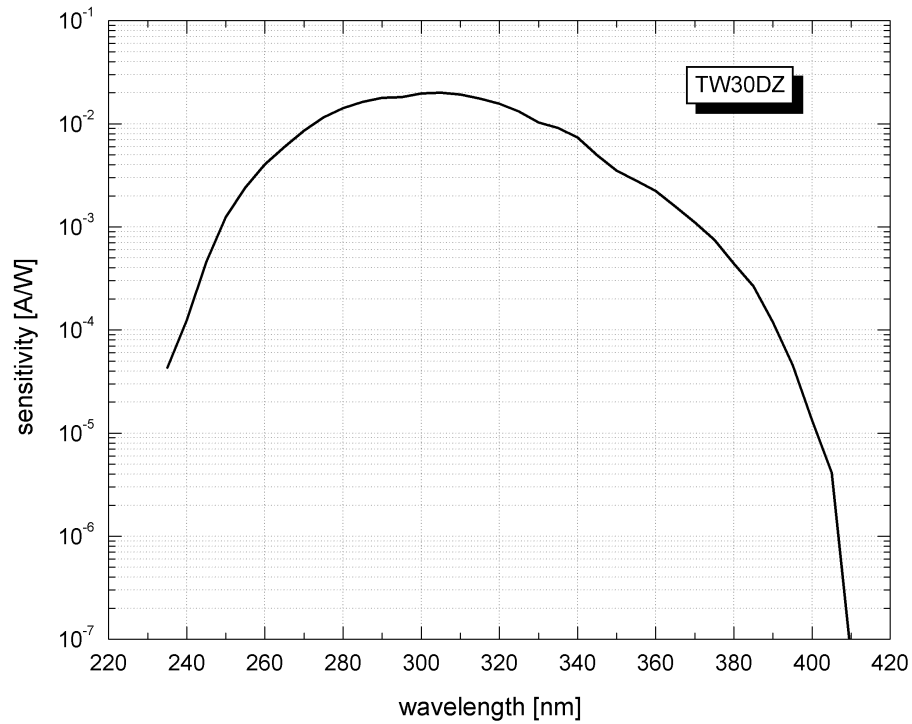
(T_a = 25 °C)

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=0.1*S _{max})	-	253-361	nm
Visible blindness	$\frac{S_{max}}{S_{400nm}}$	>1.000	

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Spectral Response



Pin Layout

