

Special UV-Index Sensor

EryF

Features of the EryF special UV-Index Sensor



The UVI Sensor EryF is based on our approved broad band UV-Sensor TW30SX and uses a Filter leading to excellent accordance with the erythema action curve of the human skin. The EryF is designed for use as a erythema sensor according to ISO 17166 CIE S 007/E (2000) – DIN 5050. It is optimally suited to feature high quality instruments for exact measurements of the UV Index. Overview on the advantages:

- **UVI precision is possible up to $\pm \frac{1}{2}$ UVI**
- **the Sensor's current is directly proportional to the UV-Index**
- **also suited for sun tanning bank dosimetry**
- Based on approved TW30SX technology
- Schottky-type photodiode
- Intrinsic visible blindness due to wide-bandgap semiconductor material
- large photoactive area
- designed to operate in photovoltaic mode
- hermetically sealed metal TO18 housing and UV-glass window
- we are able to manufacture up to 2.000.000 pcs. per year.

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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

($T_a = 25\text{ °C}$)

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
min. Short circuit current (200μW/cm ² , λ=300nm)	I_0	160	nA
Breakdown voltage (dark)	V_{BR}	> 3	V

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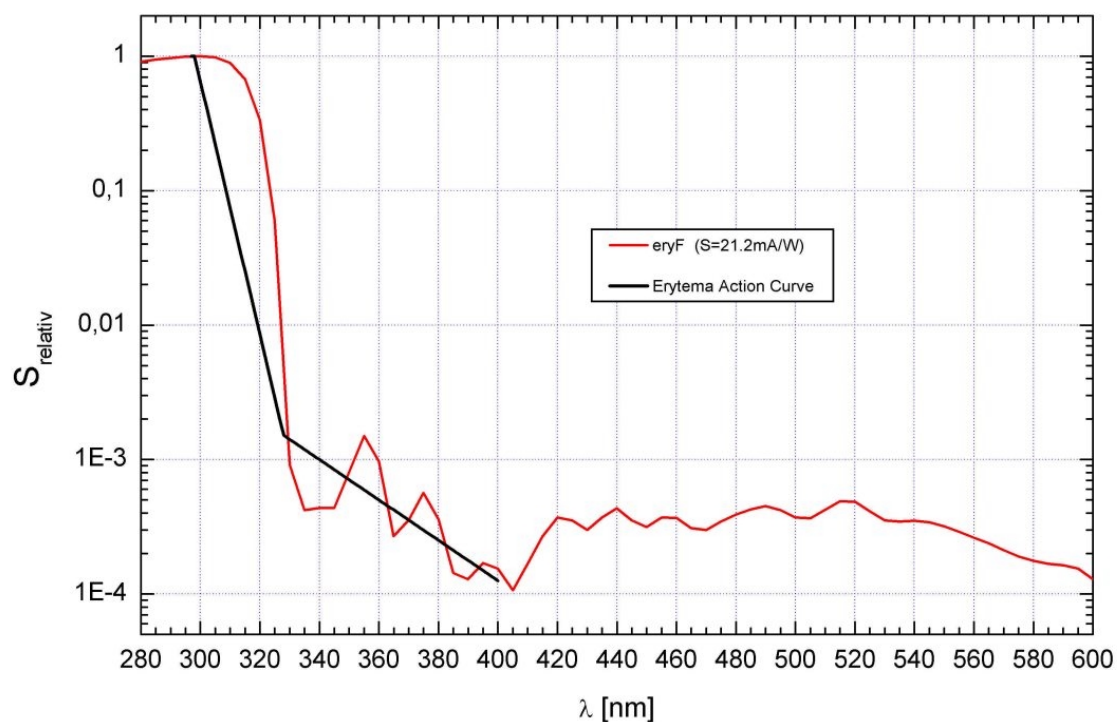
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Spectral Characteristics

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

Parameter	Symbol	garanteed Value	Unit
min. spectral sensitivity at peak	$S_{\max}$	19	mA W^{-1}
Wavelength of peak spectral sensitivity	$\lambda_{S_{\max}}$	300	nm
Range of spectral sensitivity ($S=0.1 \cdot S_{\max}$)	-	215 - 325	nm
Visible blindness	$\frac{S_{\max}}{S_{400\text{nm}}}$	10000	

Spectral Response



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Pin Layout

