

# Irradiance sensor

### P/N 100221



Sensor with polycrystalline cell.

Designed to measuring the solar radiation intensity of PV panels.

Two grommets provide a secure extension of the bus (1x for the connection to the Solar Monitor unit and 1x for the connection of the PV panel temperature sensor). Resistant to weathering. Designed for mounting on mounting system modules.

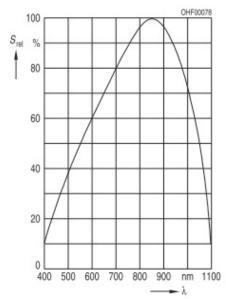
By connecting an irradiance sensor to the Solar Monitor unit you get other important values. You can perform energy audits, calculate the potential power and compare it with the real one. It may also serve to trigger other processes, alarms, etc.

Maximum Ratings (T<sub>A</sub> = 25 °C)

Parameter	Symbol	Values	Unit
Bezeichnung	Symbol	Werte	Einheit
Operating and storage temperature range Betriebs- und Lagertemperatur	T <sub>op</sub> ; T <sub>stg</sub>	-40 100	°C
Reverse voltage Sperrspannung	V <sub>R</sub>	32	V
Total power dissipation Verlustleistung	P <sub>tot</sub>	150	mW

#### Relative Spectral Sensitivity Relative spektrale Empfindlichkeit

 $S_{rel} = f(\lambda)$ 





#### Characteristics (T<sub>A</sub> = 25 °C)

Parameter	Symbol	Values	Unit	
Bezeichnung	Symbol	Werte	Einheit	
Spectral sensitivity Fotoempfindlichkeit (V <sub>R</sub> = 5 V, standard light A, T = 2856 K)	S	80	nA/lx	
Photocurrent Fotostrom ( $E_v = 1000$ lx, Std. Light A, V <sub>R</sub> = 5 V)	I <sub>P</sub>	80 (≥50)	μA	
Wavelength of max. sensitivity Wellenlänge der max. Fotoempfindlichkeit	$\lambda_{S max}$	850	nm	
Spectral range of sensitivity Spektraler Bereich der Fotoempfindlichkeit	$\lambda_{10\%}$	400 1100	nm	
Radiant sensitive area Bestrahlungsempfindliche Fläche	A	7.02	mm <sup>2</sup>	
Dimensions of radiant sensitive area Abmessung der bestrahlungsempfindlichen Fläche	LxW	2.65 x 2.65	mm x mm	
Half angle Halbwinkel	φ	± 60	0	
Dark current Dunkelstrom (V <sub>R</sub> = 10 V)	I <sub>R</sub>	2 (≤ 30)	nA	
Spectral sensitivity of the chip Spektrale Fotoempfindlichkeit des Chips ( $\lambda$ = 850 nm)	S <sub>λ typ</sub>	0.62	A/W	

## Solar Monitor s.r.o.

28. října 17, 51101 Turnov Tel. 481313661 email: info@solarmonitor.cz