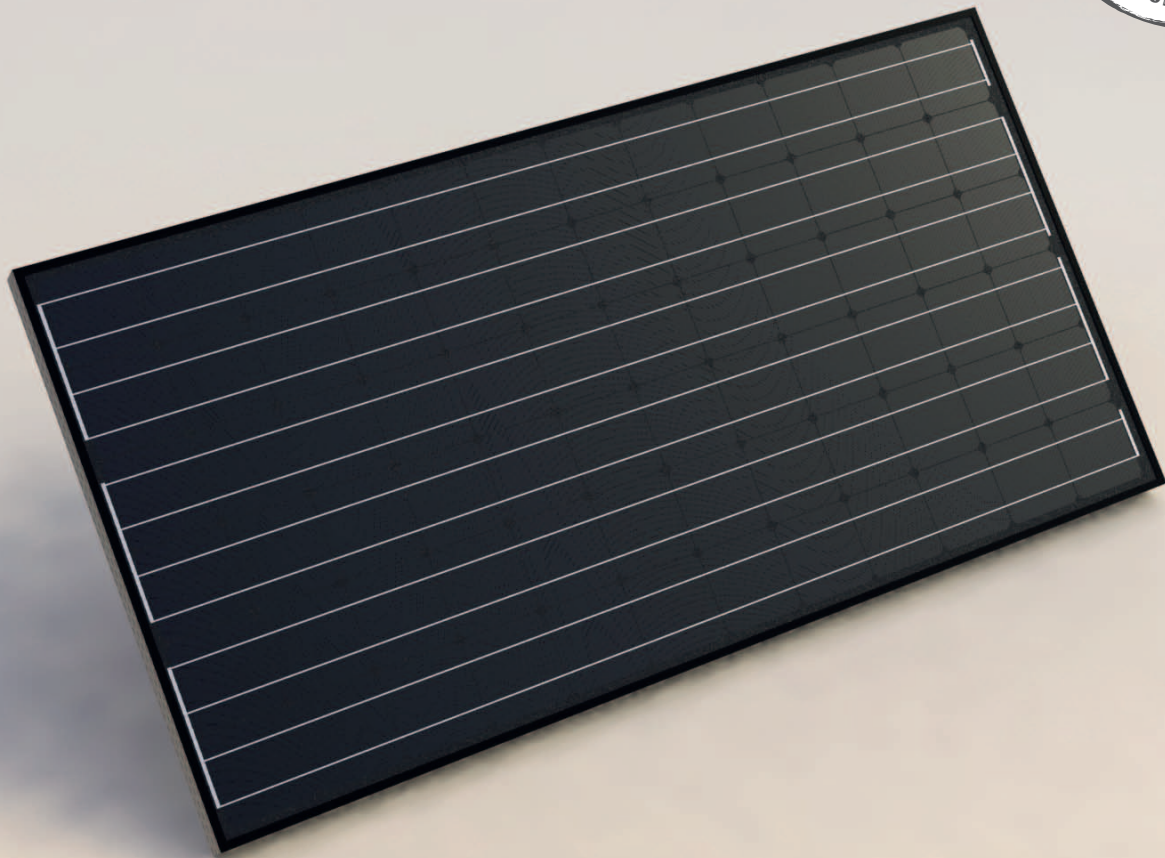
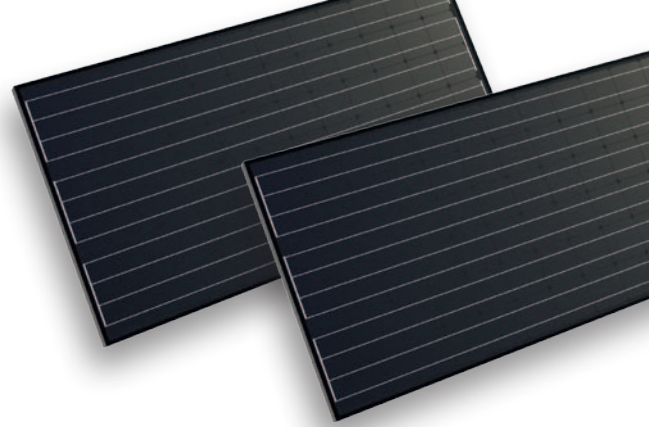


## SOLAR PANEL GENIUS SDM BLACK

SIMPLY  
BLACK.





# SOLAR PANEL GENIUS SDM BLACK

## The cool classic.

With an efficiency level average of over 15% and a positive performance tolerance between -0/+3 %, our SDM panels have for years been in the absolute peak category in the standard range – and with regard to quality. Thanks to a compact construction type and flexible roof allocation, our SDM panels have

become classics. Through sturdy, visually appealing aluminium frames, our SDM panels are seriously impressive. And best of all: they do what they say they will – in both a practical and a figurative sense. And on the subject of promise: we promise our customers a product guarantee of 10 years on all panels.



Awarded:

**RAL-certified all along the line**

We are one of the few companies in Germany, which are certified in all four categories of the photovoltaic area of RAL-GZ 966.



CE trademark

Declaration of conformity

Guarantee of adherence to all safety and health requirements under EU guidelines Art. 288, Paragraph 3 AEUV.



IEC 61215

Construction type certification of PV panels by TÜV Rheinland according to IEC 61215  
Testing and certification of all PV components to international standards (IEC 61215) as regards thermal, mechanical and radiation-related loading.

### Solar panel composition:

- 1 black anodised aluminium frame
- 2 3.2 mm toughened glass
- 3 EVA film
- 4 Monocrystalline cells
- 5 EVA film
- 6 PVF film, white
- 7 Junction box and identification plate



Term		Genius SDM 190 Black	
<b>Cell type</b>		Monocrystalline	
<b>Number of cells</b>	piece	72	
<b>Number of bypass diodes</b>	piece	3	
<b>String switching in panel</b>		3 x 24	
<b>Cell measurement, a x b mm</b>	mm	125 x 125	
<b>Nominal power (-0/+3%)</b>	$P_N$	Wp	190
<b>Nominal voltage</b>	$V_{MP}$	V	36,6
<b>Nominal current</b>	$I_{MP}$	A	5,2
<b>Open-circuit voltage</b>	$V_{OC}$	V	45,2
<b>Short-circuit current</b>	$I_{SC}$	A	5,6
<b>System tension, max.</b>	$V_{SYS-MAX}$	V	1000
<b>Insulation resistance</b>	$R_{ISO}$	MΩ	>100
<b>Temp. coefficient</b>			
<b>Open-circuit voltage</b>	TK ( $V_{OC}$ )	%/K	-0,52
<b>Temp. coefficient</b>			
<b>Short-circuit current</b>	TK ( $I_{SC}$ )	%/K	0,098
<b>Temperature range</b>	ϑ	°C	-40/+85
<b>Panel efficiency level</b>	η	%	14,91
<b>Length</b>	L	mm	1580
<b>Width</b>	B	mm	808
<b>Frame strength</b>	T	mm	50
<b>Weight</b>	m	kg	16
<b>Glass strength</b>	d	mm	3,2
<b>Area loading</b>	$m_L$	kg/m <sup>2</sup>	550
<b>Junction box</b>	Material		Plastic
<b>Protection class</b>	IP		65
<b>Connection</b>	<b>cable Ø</b>	mm <sup>2</sup>	4
	<b>cable L</b>	m	0,9
<b>Connector plug</b>			MC4



IEC 61730

Safety qualification of PV panels

IEC 61730 defines compulsory construction features of the panels, requirements for the materials used in the panel and regarding the documentation.



Protection Class II

Reinforced or double insulation under VDE 0100 Part 410, 412.1.



CdTe

Cadmium telluride free

Guarantees that our solar cells are free from cadmium telluride.



PV-CYCLE

Member of the Return and Recycling Programme

As a member of the voluntary Return and Recycling Programme for old models, we guarantee adherence to the promise of comprehensive sustainability.

# WHEN IT COMES TO THE ENVIRONMENT, WE DO IN ROME WHAT THE ROMANS DO.

VfL Wolfsburg has won a large environmental partner. With zentralsolar deutschland, the Bundesliga competitor has entered into cooperation within the framework of its Corporate Social Responsibility Activities (CSR).



## HIGHLY ADVANTAGEOUS.

### Peak Performance.

We rely on mono and polycrystalline cells, which are further processed within their own production. Our technologically high processing level is a guarantee of the subsequent faultless operation of the photovoltaic system, which provides high energy yields at fair manufacturing costs.

### Best Warranty.

For the worst-case scenario we guarantee an enhanced warranty on our solar panels: 12 years performance guarantee at 90% and 25 years performance guarantee at 80% of the stated minimum performance. There is also a 10 year product warranty.

### Highest Performance Tolerance.

A particularly narrow selection of panel performance enables row switching with low switching losses.

### Very simple and quick mounting.

The cables and plug connections (TÜV checked) pre-installed in the factory ensure simple and quick installation.

### Extremely High Tension.

All our panels fall into protection category II and are designed for a maximum system tension of 1,000 V. They are suitable both for facilities connected to the grid and for isolated systems that are not connected to the public electricity supply.

You can rely on our qualified Service Partners: