

Ihr Solar und LED Experte!  
Your solar und LED expert!

**DCH 235P**



**ENERGY**

- ◆ Use of pre-selected cells only
- ◆ Narrow output tolerance
- ◆ Plus-sorted modules delivered!
- ◆ Optimal utilization of low insolation
- ◆ Wide temperature range
- ◆ High resistance to mechanical loads
- ◆ UV—and ozone-resistant
- ◆ Flash data for each module provided
- ◆ Self-supporting aluminium frame
- ◆ System voltage up to 1000 V

from the  
**Raw material**  
to the finished  
**Module**  
[www.dch-group.de](http://www.dch-group.de)



**10 Year Product Warranty**  
**10 Year Limited Performance Warranty**  
for 90% of nominal power  
**25 Year Limited Performance Warranty**  
for 80% of nominal power

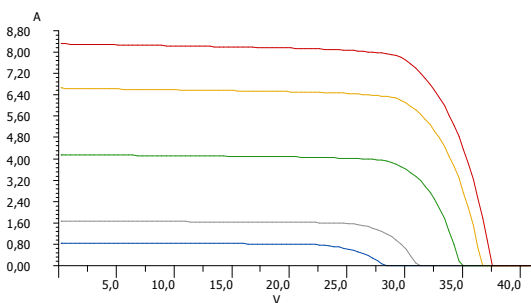


**DCH 230P 230 Wp**  
**DCH 235P 235 Wp**



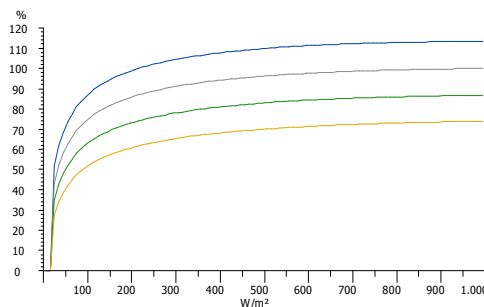
Technical data subject to change. Last update 12/2011

U-I-Kennlinien bei 25 °C



— U-I-Kennlinie 100 W/m<sup>2</sup>    — U-I-Kennlinie 200 W/m<sup>2</sup>  
— U-I-Kennlinie 500 W/m<sup>2</sup>    — U-I-Kennlinie 800 W/m<sup>2</sup>  
— U-I-Kennlinie 1.000 W/m<sup>2</sup>

Leistungskennlinie



— rel. Wirkungsgrad 0 °C    — rel. Wirkungsgrad 25 °C  
— rel. Wirkungsgrad 50 °C    — rel. Wirkungsgrad 75 °C

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## Electrical data:

Nominal power		230 Wp	235 Wp
Voltage at max. power Umpp		29,81 V	30,18 V
Current at max. power Impp		7,72 A	7,79 A
Open circuit voltage Uoc		36,86 V	37,06 V
Short circuit current Isc		8,30 A	8,39 A
Nominal power tolerance		-0/+3%	-0/+3%
Temperature coefficient Isc		4,66mA/K	4,66mA/K
Temperature coeffizient Usc		-145,19mV/K	-145,19mV/K
<b>Module efficiency</b>		<b>14,1%</b>	<b>14,4%</b>
<b>Number of bypass-diodes</b>		<b>6 pcs</b>	<b>6 pcs</b>

Junction box Protection type: IP65 with spring-cage term.

Data applies to Standard Test Conditions (STC): Insolation 1000W/m<sup>2</sup> with an AM of 1,5 and a cell temperature of 25°C

## Characteristic data:

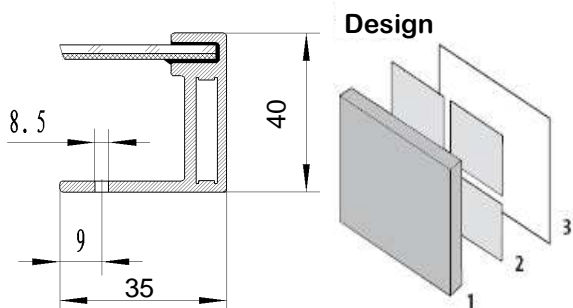
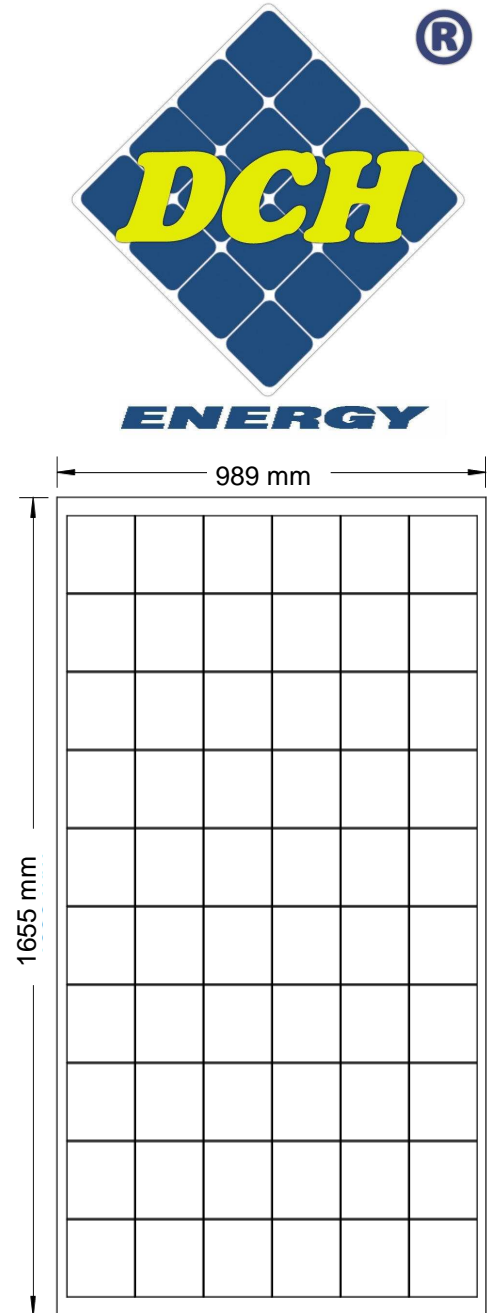
Solar cells per module	60
Solar cell type	Poly-crystalline high-efficiency cells 156 x 156 mm <sup>2</sup> (quadratic)
Connection	Junction box with 6 bypass-diodes
Cable/connector	4 mm <sup>2</sup> PV wire with MC4®-connectors
Cable length	Ca. 900 mm each

## Boundary values:

Maximum system voltage	1000 VDC
Operating temperature range	-40 + 85°C

## Mechanical data:

Dimensions (tolerance +/- 1 mm)	1655 mm x 989 mm
Frame height (tolerance +/- 1 mm)	40 mm
Weight	ca. 19,6 kg
Laminate/Glass	3,2 mm ESG extra-white impact resistance acc. to IEC 61215
Colouring	Back side: white
Hail test	Maximum diameter of 25mm with an impact speed of 23 m/s
Max. pressure allowed:	Max. 5400 N/m <sup>2</sup>



- 1] Front: hardened safety glass
- 2] 60 polycrystalline solar cells  
156 mm x 156 mm in EVA  
(Ethylene-vinyl-acetate)
- 3] Back side: Tedlar foil