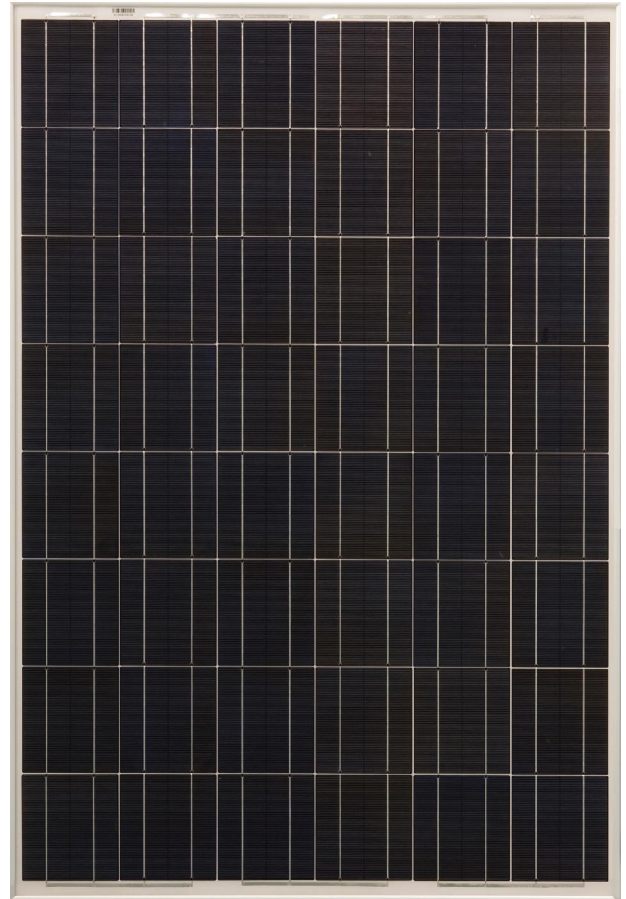




# ZHM 180P

## Polycrystalline Solar Module

- Certificate: TUV, VDE, MCS, IEC 61215/61730, UL1703, CEC, CE, ISO
- 5 years product defect warranty  
25 years power output warranty: 90% in 10 years, 80% of 25 years  
Entire module certified to withstand high wind loads( 2400 Pascal) and snow loads( 5400 Pascal)
- Power tolerance: 0~+3%
- Cell: High efficiency solar cells  
Junction Box: MC4 connector  
TPT back sheet  
3.2mm high transmission tempered glass
- Anodized aluminum alloy frame (Available Depth: 35/45/50mm)



UE Solar Co., Ltd is a manufacturer of high quality mono- and multi-crystalline silicon PV modules in East China. We have the annual capacity of 200MW by April, 2010. Our 860 research staff and workers dedicate themselves to providing inexhaustible and renewable energy to human being.

# Electrical Performance

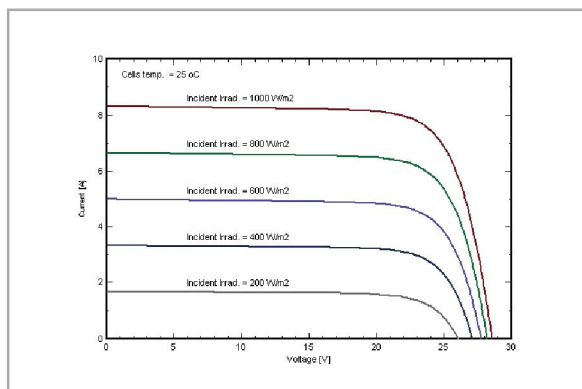
ZHM-180P			ZHM195P	ZHM190P	ZHM185P	ZHM180P	ZHM175P	ZHM170P	ZHM165P	ZHM160P
Peak power	P <sub>max</sub>	Wp	195	190	185	180	175	170	165	160
Maximum power voltage	V <sub>mp</sub>	V	24.4	24.2	24	23.8	23.6	23.3	23.1	23.0
Maximum power current	I <sub>mp</sub>	A	7.98	7.85	7.71	7.56	7.42	7.30	7.14	6.96
Short circuit current	I <sub>sc</sub>	A	8.80	8.65	8.49	8.32	8.21	8.05	7.87	7.66
Open circuit voltage	V <sub>oc</sub>	V	29.28	29.04	28.8	28.56	28.32	27.98	27.80	27.65
Cell efficiency	%		16.69	16.27	15.84	15.41	14.98	14.55	14.13	13.70
Module efficiency	%		14.88	14.50	14.11	13.73	13.35	12.97	12.59	12.21

Standard Test Condition: (STC)STC: T=25 AM=1.5 E=1000W/m<sup>2</sup>

## Working Conditions & Parameter

Maximum system Voltage (V)	1000 V
Power tolerance	0~+3%
Cell dimension	156*156mm
Number of cells / Layout	48pcs. /8*6
NOCT cell	48 °C ± 2 °C
Temperature coefficient I <sub>sc</sub> (%)	+0.04±0.015 % / °C
Temperature coefficient V <sub>oc</sub> (%)	- (0.35±0.02) % / °C
Temperature coefficient P <sub>m</sub> (%)	- (0.5±0.05) % / °C
Temperature coefficient I <sub>m</sub> (%)	+0.04% / °C
Temperature coefficient V <sub>m</sub> (%)	-0.38% / °C
Operating temperatures	-40°C ~ +90 °C
Surface pressure	60m/s (200kg /m <sup>2</sup> )

## I-V Curve



Length	Width	Depth	Weight
1316mm	996mm	50mm	15Kg

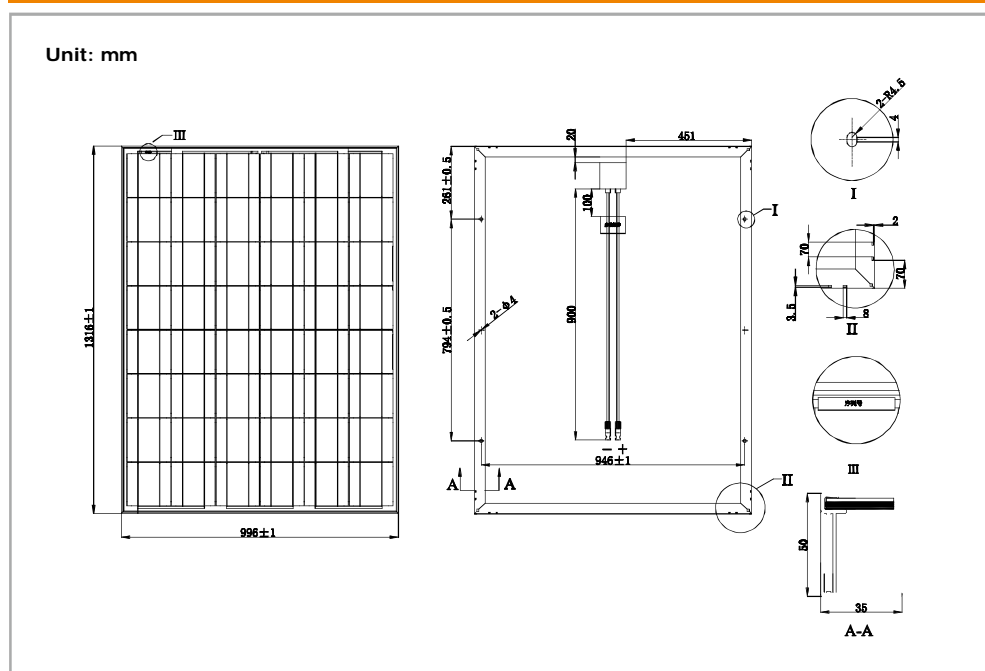
## New Packaging

23 modules / 1 cardboard box (up)  
 20 modules / 1 cardboard box (down)  
 1 cardboard box / 1 pallet

## Container loading capacities

Container 40" (HIGH): 688 modules / 32 pallets

## Front View And Back View



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Specification and designs included in this are subject to change without notice