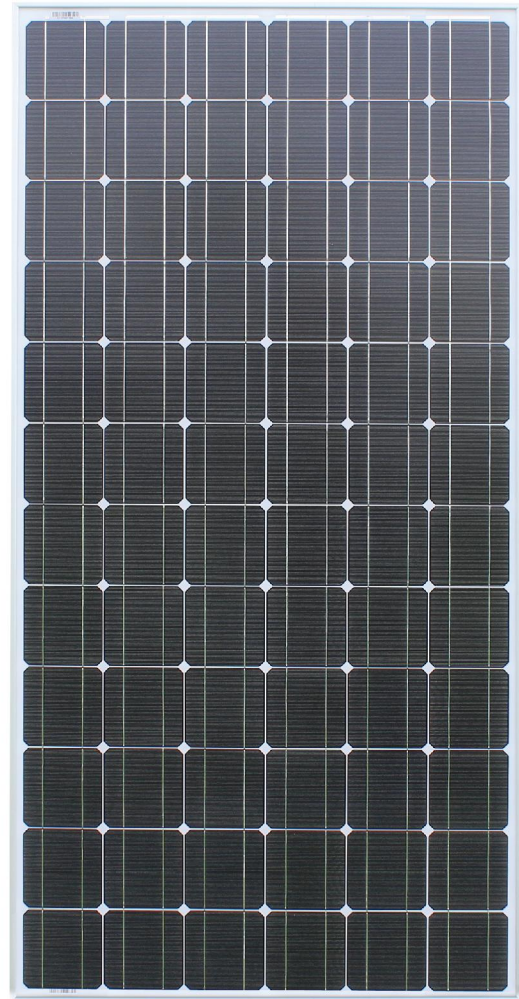




ZHM 190

Monocrystalline 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

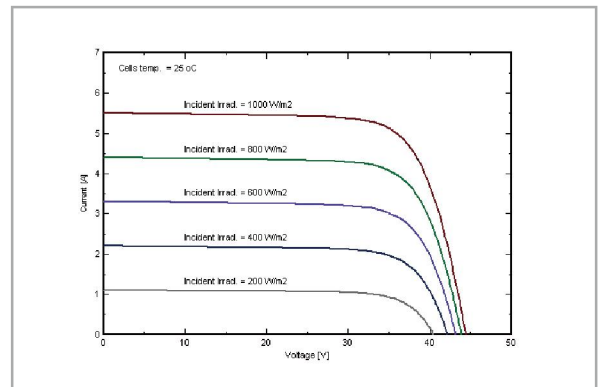
ZHM-190			ZHM195	ZHM190	ZHM185	ZHM180	ZHM175	ZHM170	ZHM165	ZHM160	ZHM155	ZHM150
Peak power	Pmax	Wp	195	190	185	180	175	170	165	160	155	150
Maximum power voltage	Vmp	V	36.6	36.5	36.2	36.0	35.7	35.4	35.0	34.7	34.5	34.2
Maximum power current	Imp	A	5.33	5.21	5.14	5.00	4.91	4.81	4.72	4.61	4.49	4.39
Short circuit current	Isc	A	5.78	5.74	5.66	5.51	5.41	5.30	5.20	5.08	4.95	4.83
Open circuit voltage	Voc	V	45.92	45.05	44.67	44.42	44.06	43.69	42.35	41.99	41.75	41.39
Cell efficiency	%		18.23	17.76	17.29	16.83	16.36	15.89	15.42	14.96	14.49	14.02
Module efficiency	%		15.27	14.88	14.49	14.10	13.71	13.32	12.92	12.53	12.14	11.75

Standard Test Condition: (STC)STC: T=25 AM=1.5 E=1000W/m²

Working Conditions & Parameter

Maximum system Voltage (V)	1000 V
Power tolerance	0~+3%
Cell dimension	125*125mm
Number of cells / Layout	72pcs. /12*6
NOCT cell	48 °C ± 2 °C
Temperature coefficient Isc (%)	+0.04±0.015 % / °C
Temperature coefficient Voc (%)	- (0.35±0.02) % / °C
Temperature coefficient Pm (%)	- (0.5±0.05) % / °C
Temperature coefficient Im (%)	+0.04% / °C
Temperature coefficient Vm (%)	-0.38% / °C
Operating temperatures	-40°C ~+90 °C
Surface pressure	60m/s (200kg /m ²)

I-V Curve



Length	Width	Depth	Weight
1580mm	808mm	35mm	14Kg
1580mm	808mm	50mm	16Kg

35' Frame

Packaging

26 modules / 1 cardboard box
1 cardboard box / 1 pallet

Container loading capacities

Container 20' : 356 modules / 14 pallets
Container 40' : 728 modules / 28 pallets

50' Frame

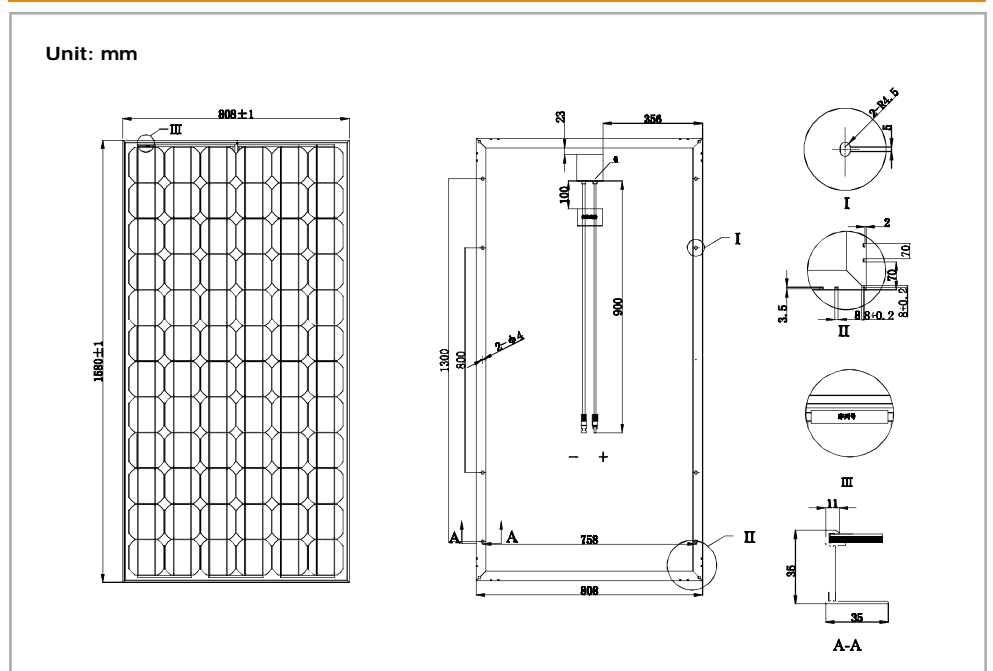
New Packaging

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

Container loading capacities

Container 40' : 602 modules / 28 pallets

Front View And Back View



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