



# TWMPF-66HD650-670W

P-type Half-cell Bifacial Module (66)

## PRODUCT FEATURES



High Power Output  
Low LCOE



Maximum Power  
670W+



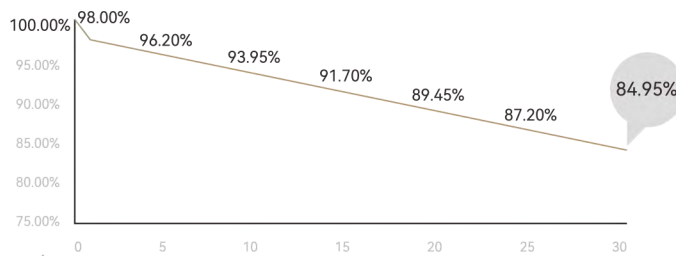
High  
Reliability



Low  
LID

## POWER WARRANTY

1st year <2%, 0.45% power degradation per year from 2 to 30 years



12-year Warranty for Materials



30-year Warranty for Linear Power Output

## MANAGEMENT SYSTEM AND PRODUCT CERTIFICATION

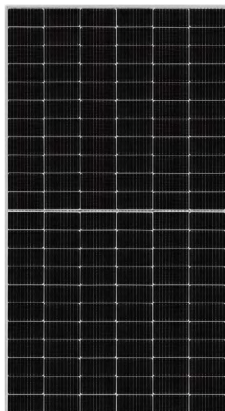
ISO9001: 2015/Quality Management System

ISO14001: 2015/Environment Management System

ISO45001: 2018/Occupational Health and Safety Management System



Front



Rear



## Electrical Characteristics (STC)

Module Type: TWMPF-66HDXXX					
Maximum Power: Pmax [W]	650	655	660	665	670
Open Circuit Voltage: Voc [V]	45.40	45.60	45.80	46.00	46.20
Short Circuit Current: Isc [A]	18.21	18.26	18.31	18.36	18.41
Voltage at Maximum Power: Vmp [V]	37.60	37.80	38.00	38.20	38.40
Current at Maximum Power: Imp [A]	17.29	17.33	17.37	17.41	17.45
Module Efficiency: $\eta$ [%]	20.9	21.1	21.2	21.4	21.6
STC: Irradiance 1000W/m <sup>2</sup> , Cell Temperature 25°C, Air Mass1.5, Measuring Tolerance: $\pm$ 3%					

## Electrical Characteristics (NMOT)

Maximum Power: Pmax [W]	491.8	495.6	499.4	503.1	506.9
Open Circuit Voltage: Voc [V]	42.77	42.96	43.14	43.33	43.52
Short Circuit Current: Isc [A]	14.68	14.72	14.76	14.80	14.84
Voltage at Maximum Power: Vmp [V]	35.08	35.26	35.45	35.64	35.82
Current at Maximum Power: Imp [A]	14.02	14.05	14.09	14.12	14.15
NMOT: Irradiance 800W/m <sup>2</sup> , Ambient Temperature 20°C, Air Mass1.5, Wind Speed 1m/s					

## Electrical characteristics with different rear side power gain

5%	Maximum Power: Pmax[W]	682.5	687.8	693.0	698.3	703.5
	Module Efficiency: $\eta$ [%]	22.0	22.1	22.3	22.5	22.6
15%	Maximum Power: Pmax[W]	747.5	753.3	759.0	764.8	770.5
	Module Efficiency: $\eta$ [%]	24.1	24.2	24.4	24.6	24.8
25%	Maximum Power: Pmax[W]	812.5	818.8	825.0	831.3	837.5
	Module Efficiency: $\eta$ [%]	26.2	26.4	26.6	26.8	27.0

## Temperature Ratings

Temperature Coefficient (Pmax)	-0.34%/°C
Temperature Coefficient (Voc)	-0.28%/°C
Temperature Coefficient (Isc)	0.05%/°C
NMOT	45 $\pm$ 2°C

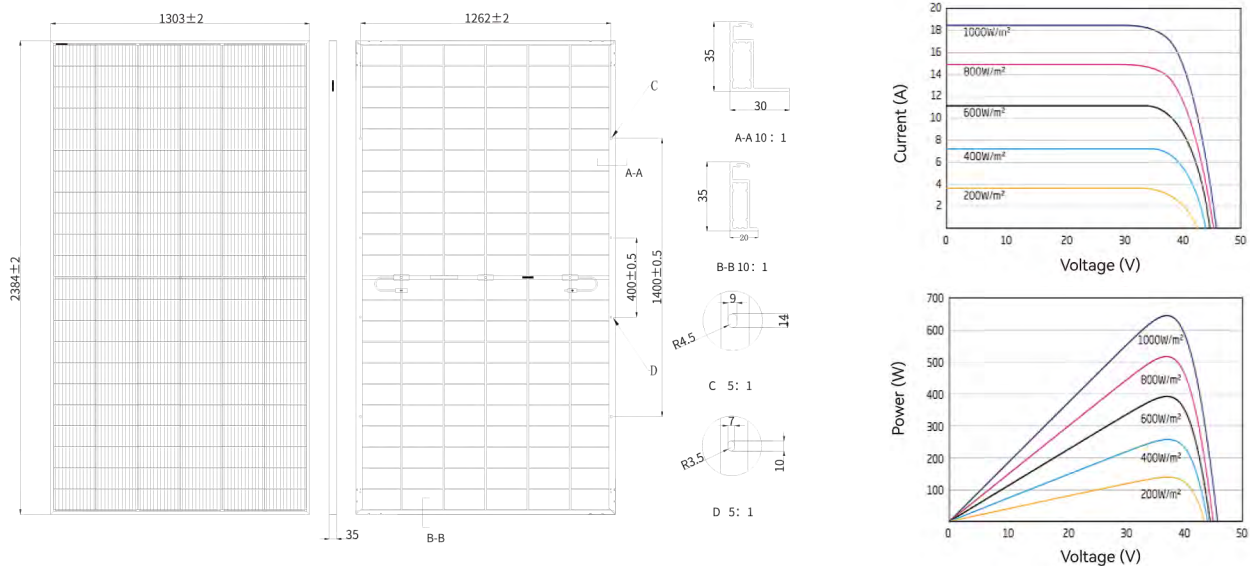
## Mechanical Parameters

Cells	TPC
Cell Orientation	132[6X22]
Dimension	2384 $\pm$ 2 X1303 $\pm$ 2X35mm
Weight	38.7kg
Front Glass	2.0mm high transmittance, AR coated tempered glass
Rear Glass	2.0mm high transmittance, coated tempered glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm <sup>2</sup>
Cable Length	+400mm, -200mm, length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	31pcs per pallet, 558pcs per 40'HC

## Operating Parameters

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	35A
Power Output Tolerance	0~+5W
Maximum Bifaciality	70 $\pm$ 5%

## Drawings (Unit: mm)



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