

# 166 Solar Module

## Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance certified by TUV NORD.



## PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for mass production.(Potential Induced Degradation) under the test conditions.



## High Efficiency

Higher module conversion efficiency benefit from half cell structure(low resistance characteristic).



## Low-light Performance

Advanced glass and cell surface textured design ensure excellent performance in low-light environment.



## Severe Weather Resilience

Certified to withstand:Wind load(2400 pascal) and snow load(5400 pascal).



12-year Warranty for Materials and Processing



25-year Warranty for Extra Linear Power Output

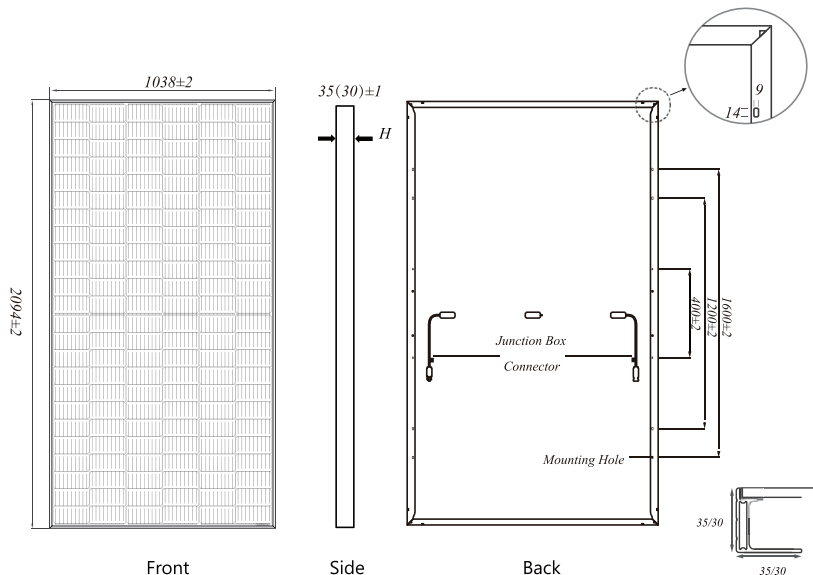


## 440-475W

STM440-475/144-S2

Half-Cut Cell High Efficiency PV Module

<b>Weight</b>	<b>Dimension(LxWxT)</b>
22.6kg±3%	2094x1038x35(30)mm
<b>Cells Type</b>	<b>Packaging(pcs/40HQ container)</b>
Mono 166-9BB	31/737pcs 37/869pcs



Remark: customized frame color and cable length available upon request

### MECHANICAL SPECIFICATION

Cell	Mono
No.of cells	144(6x24)
Cable Length	300mm(+)/300mm(-)
Cable Cross Section Size	4mm <sup>2</sup> (IEC)
Junction Box	IP68,3 diodes
Connector	MC4 Compatible

### OPERATING PARAMETERS

Maximum System Voltage	1500VDC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	20A
Maximum StaticLoad,Front	5400Pa(112lb/ft <sup>2</sup> )
Maximum StaticLoad,Back	2400Pa(50lb/ft <sup>2</sup> )
Safety Class	Class II

### ELECTRICAL CHARACTERISTICS

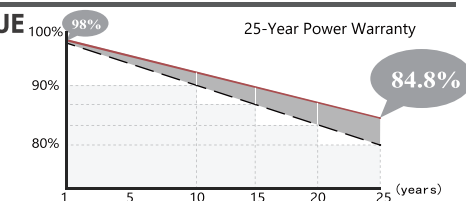
STC:AM1.5 1000W/m<sup>2</sup> 25 °C NOCT:AM1.5 800W/m<sup>2</sup> 20 °C 1m/s Test uncertainty for Pmax ±3%

Module Type	STM440/144-S2		STM445/144-S2		STM450/144-S2		STM455/144-S2		STM460/144-S2		STM465/144-S2		STM470/144-S2		STM475/144-S2	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power(Pmax/W)	440	327.4	445	331.1	450	334.8	455	338.5	460	342.2	465	346	470	349.7	475	353.4
Open Circuit Voltage(Voc/V)	49.40	46.54	49.56	46.69	49.70	46.82	49.85	46.96	50.01	47.12	50.15	47.25	50.31	47.40	50.46	47.54
Short Circuit Current(Isc/A)	11.28	9.11	11.32	9.14	11.36	9.18	11.41	9.22	11.45	9.25	11.49	9.28	11.53	9.31	11.58	9.35
Voltage at Maximum Power(Vmp/V)	40.92	38.27	41.21	38.57	41.52	38.86	41.82	39.12	42.13	39.41	42.43	39.70	42.74	39.99	43.05	40.24
Current at Maximum Power(Imp/A)	10.76	8.55	10.80	8.58	10.84	8.62	10.92	8.65	10.92	8.68	10.96	8.71	11.00	8.74	11.03	8.78
Module Efficiency(%)	20.24		20.47		20.70		20.93		21.20		21.40		21.60		21.90	

### TEMPERATURE RATINGS

Norminal Operating Cell Temperature(NOCT)	45±2 °C
Temperature Coefficient of Isc	+0.044%/ °C
Temperature Coefficient of Voc	-0.272%/ °C
Temperature Coefficient of Pmax	-0.350%/ °C

### ADDITIONAL VALUE



### I-V CURVE(STM-440-475/144-S2)

