



# Monocrystalline Silicon Solar PV Modules

XNxxxM-144H/HV(xxx=440W-460W)

## Product Feature

### High Conversion Efficiency

With advanced manufacturing processes, the efficiency of our modules has exceeded 21.2%

### Positive Tolerance

+5W positive tolerance at peak power output, which ensures their reliability

### High Wind And Snow Resistance

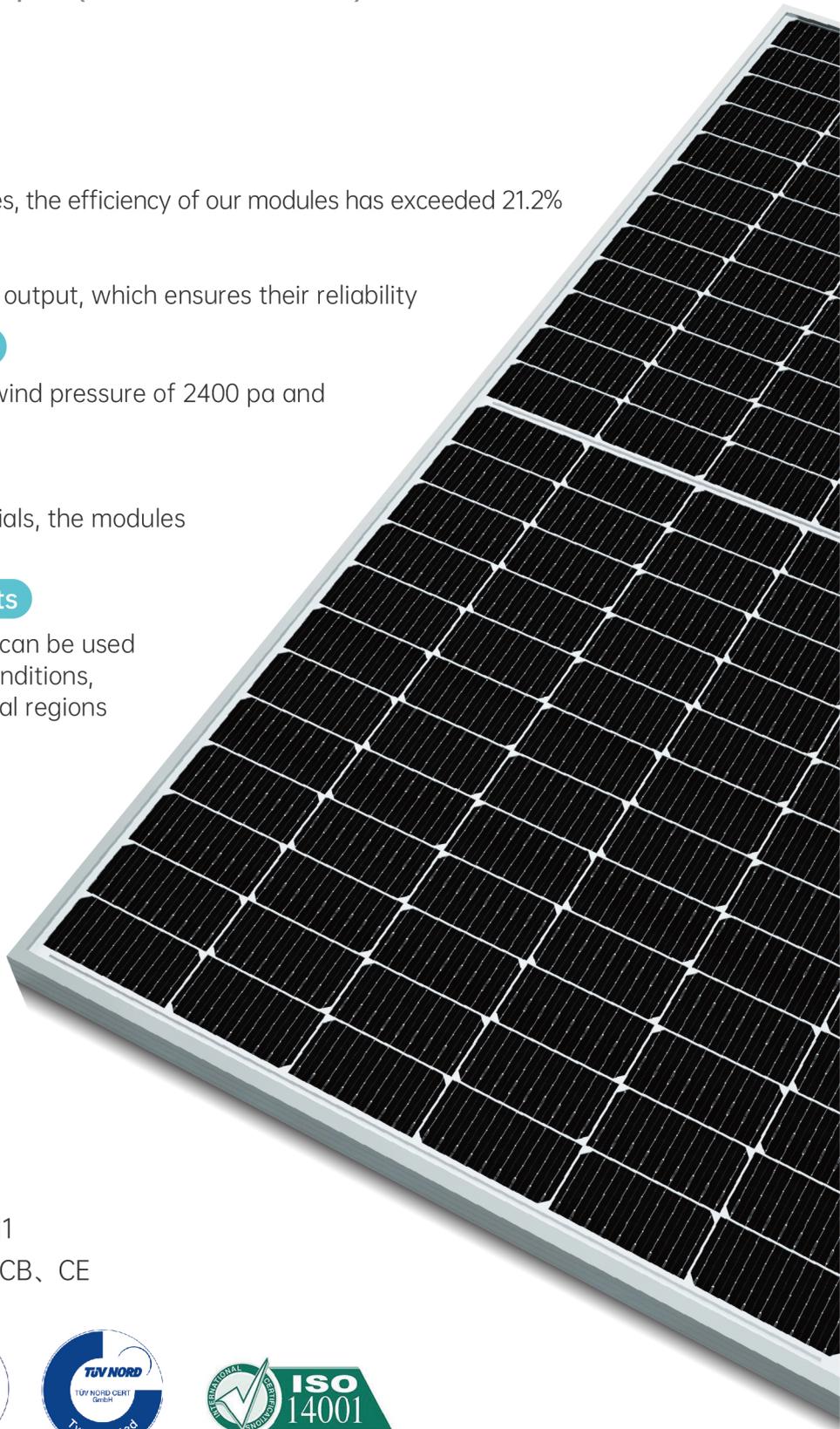
The modules are able to withstand a wind pressure of 2400 pa and snow pressure of 5400 pa

### Excellent PID Resistance

With special cell and packaging materials, the modules have excellent anti- pid performance

### Resistance To Harsh Environments

With excellent resilience, the modules can be used under high altitude and severe cold conditions, as well as in deserts, farms, and coastal regions



## Systems & Product Certifications

ISO9001:2015 / GB/T19001-2016

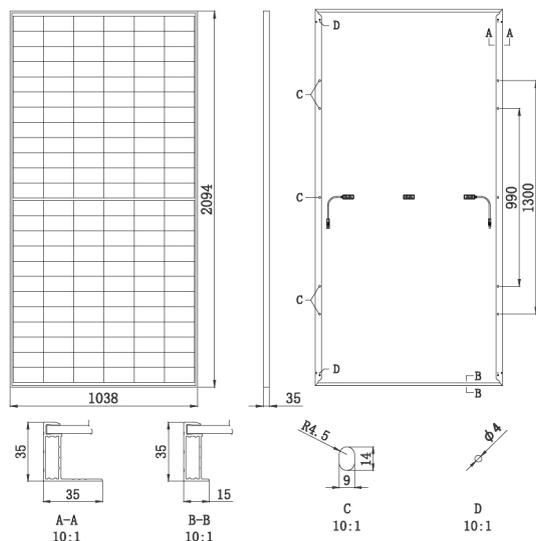
ISO14001:2015 / GB/T24001-2016

OHSAS18001:2007 / GB/T28001-2011

IEC61215、IEC61730、TUV、CQC、CB、CE



## Component Size



## Mechanical Parameters

Component Size	2094*1038*35mm
Cell Type	Monocrystalline silicon 166mm
Number Of Cells	144H(12×12)PCS
Component Weight	24kg
Glass	3.2mm High transmittance anti-reflection coated tempered glass
Package	High transparency EVA
Backplane	White fluorine backsheet
Aluminum Frame	Anodized aluminum alloy frame
Junction Box	Protection class IP68
Cable	4.0mm <sup>2</sup> ,300mm Photovoltaic special cable
Connector	MC4 Compatible

## Packaging Information

Standard Packaging	30 PCS
Quantity of components per container (40ft container)	660 PCS

## Working Parameters

Insulation Withstand Voltage	4000VDC(Max)
Operating Temperature	-40°C to +85°C
Maximum Static Load, Frontal (Eg Snow, Wind)	5400Pa
Hail Impact	25mm at 23m/s

## Electrical Performance Parameters (Standard Test Conditions)

Component Model	XNxxxM-144H/HV				
Max Power-pmax(W)	440	445	450	455	460
Power Tolerance	0 ~ +5W				
Operating Voltage At The Max Power Point - Vmp(V)	40.85	41.09	41.32	41.55	41.78
Operating Current At The Max Power Point - Imp(A)	10.77	10.83	10.89	10.95	11.01
Open Circuit Voltage-voc(V)	48.41	48.65	48.89	49.13	49.37
Short Circuit Current -isc(A)	11.34	11.41	11.48	11.55	11.62
Max System Voltage	1000VDC/1500VDC (IEC)				
Component Efficiency (%)	20.2%	20.5%	20.7%	20.9%	21.2%
Max Fuse Rated Current	20A				
Max Power (Pmax) Temp. Coefficient	-0.3474%/°C				
Open Circuit Voltage (Voc) Temp. Coefficient	-0.2653%/°C				
Short-circuit Current (Isc) Temp. Coefficient	0.0425%/°C				
Rated Battery Operating Temp. (Noct)	41.5±2°C				
Stc	Radioactivity 1000w/m <sup>2</sup> , Battery Temp. 25°C, Air Quality Am1.5				



# 单晶硅太阳能光伏组件

XNxxxM-144H/HV(xxx=440W-460W)

## 产品特性

### 高转换效率

采用先进的制造工艺，组件效率最高达 21.2%；

### 正公差

5W 的正公差峰值功率输出，确保组件的可靠性；

### 风、雪压承受能力

组件抗压能力强，能承受 2400 帕的风压和 5400 帕的雪压；

### 良好的PID抗性

采用精选电池片和封装材料，组件抗 PID 性能优良；

### 可承受更严酷的环境

耐候性能优良，组件适用于高海拔、极寒、沙漠、农场、海岸等环境。



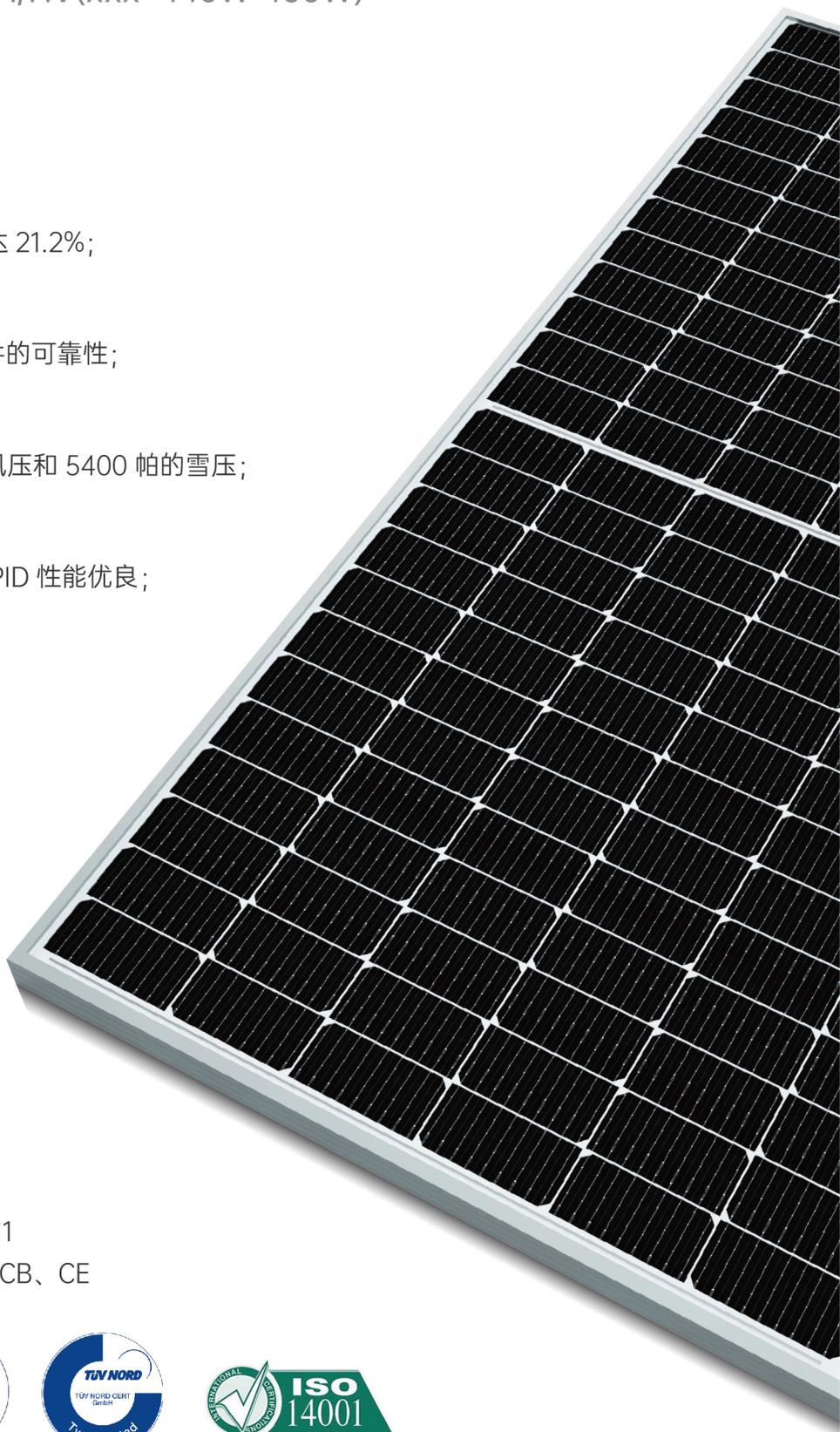
## 体系及产品认证

ISO9001:2015 / GB/T19001-2016

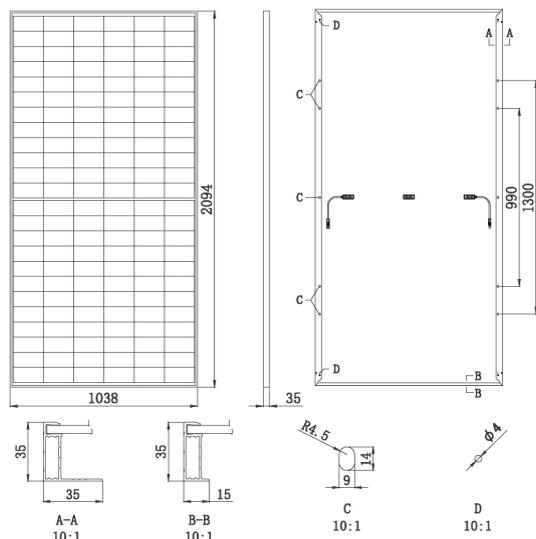
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IEC61215、IEC61730、TUV、CQC、CB、CE



## 组件尺寸



## 机械参数

组件尺寸	2094*1038*35mm
电池片类型	单晶硅 166mm
电池片数量	144H(12×12)pcs
组件重量	24kg
玻璃	3.2mm 高透 减反射镀膜钢化玻璃
封装	高透 EVA
背板	白色含氟背板
铝边框	阳极氧化铝合金边框
接线盒	防护等级 IP68
线缆	4.0mm <sup>2</sup> ,350mm 光伏专用缆线
连接器	MC4 兼容

## 包装信息

标准包装	30 件
每个集装箱组件数量 (40 尺柜)	660 件

## 工作参数

绝缘耐压	4000VDC(最大)
工作温度	-40°C 至 +85°C
最大静态负载, 正面 (如雪、风)	5400Pa
冰雹冲击	25mm at 23m/s

## 电性能参数(标准测试条件)

组件型号	XNxxxM-144H/HV				
最大功率 -Pmax(W)	440	445	450	455	460
功率公差	0 ~ +5W				
最大功率点的工作电压-Vmp(V)	40.85	41.09	41.32	41.55	41.78
最大功率点的工作电流-Imp(A)	10.77	10.83	10.89	10.95	11.01
开路电压-Voc(V)	48.41	48.65	48.89	49.13	49.37
短路电流-Isc(A)	11.34	11.41	11.48	11.55	11.62
最大系统电压	1000VDC/1500VDC (IEC)				
组件效率 (%)	20.2%	20.5%	20.7%	20.9%	21.2%
最大保险丝额定电流	20A				
最大功率 (Pmax) 温度系数	-0.3474%/°C				
开路电压 (Voc) 温度系数	-0.2653%/°C				
短路电流 (Isc) 温度系数	0.0425%/°C				
额定电池工作温度 (NOCT)	41.5±2°C				
STC	辐照度 1000W/m <sup>2</sup> , 电池温度 25°C, 大气质量 AM1.5				