

ZY-G12PH/132P

0~+5W  
**650~670W**

单晶单玻半片组件

Mono-crystalline Half-cut Module

**21.6%**

转换效率最高可达

High Module Conversion Efficiency



产品特性 Key Features

**优异的弱光性能**  
Outstanding performance in weak-light conditions

**突出的低温度系数**  
Lower operating temperature

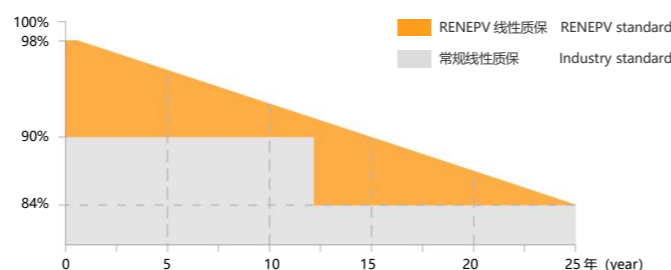
**半片电池和多主栅设计**  
Half-cell and MBB design

**优异的机械载荷能力**  
Extended wind and snow load tests

**环境适应性强**  
Withstanding harsh environment

**使用场景定制化**  
Use scenario customization

质量认证 Quality Certification



**12 years** 12年材料和工艺质保  
Materials and workmanship warranty

**25 years** 25年线性性能质保  
Linear performance warranty

首年功率衰减不超过 2%      First year power degradation < 2%  
后续每年功率衰减不超过 0.55%      Annual degradation < 0.55%

产品质保 Product Guarantee

ISO 9001:2015 质量管理体系 Quality management systems  
ISO 14001:2015 环境管理体系 Environment management systems  
ISO 45001:2018 职业健康安全管理体系 Occupational health and safety management systems  
IEC 61215/IEC 61730/IEC 61701/IEC 62716  
TUV/CE/CQC/MCS/BIS/SASO/SGS/INMETRO



电性能参数 Electrical Characteristics

组件型号 Module Type	ZY650G12PH-132		ZY655G12PH-132		ZY660G12PH-132		ZY665G12PH-132		ZY670G12PH-132	
组件工作条件 Working Conditions	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
最佳功率 Maximum Power at STC/NMOT(Pmax)	W	650	486.2	655	489.9	660	493.7	665	497.4	501.2
最佳工作电压 Optimum Operating Voltage(Vmp)	V	38.30	35.62	38.46	35.77	38.62	35.92	38.78	36.07	36.20
最佳工作电流 Optimum Operating Current (Imp)	A	16.97	13.65	17.03	13.70	17.09	13.75	17.15	13.79	13.85
开路电压 Open Circuit Voltage(Voc)±3%	V	45.71	42.51	45.88	42.67	46.05	42.83	46.22	42.98	43.13
短路电流 Short Circuit Current(Isc)±3%	A	17.89	14.48	17.94	14.53	17.98	14.59	18.03	14.65	14.71
组件发电效率 Module Efficiency	%	20.9		21.1		21.2		21.4		21.6
组件最大系统电压 Maximum System Voltage	V	1500 (DC)								
最大额定值熔丝电流 Maximum Series Fuse Rating	A	20								
组件工作温度范围 Operating Module Temperature	°C	-40~+85								

STC: 光照 1000W/m<sup>2</sup> 组件温度 25°C 大气质量 1.5 Irradiance 1000W/m<sup>2</sup>, cell temperature 25°C, atmospheric quality AM1.5  
NMOT: 光照 800W/m<sup>2</sup> 环境温度 20°C 风速 1m/s Irradiance 800W/m<sup>2</sup>, ambient temperature 20°C, AM1.5, wind speed 1m/s

机械性能 Mechanical Characteristics

电池片类型 Solar Cell (No.of cells)	P 型单晶(P-Mono)210x210 66 PCS
组件尺寸 Dimensions	2384x1303x35 mm
组件重量 Weight	34.3 kg(±3%)
钢化玻璃 Front Glass	3.2mm 镀膜钢化玻璃 Low-iron tempered glass
边框 Frame	阳极氧化铝合金 Anodized aluminum alloy
接线盒 Junction Box	IP68 防护(3个二极管)IP68 rated(3 bypass-diodes)
光伏线缆 Output Cables	4mm <sup>2</sup> /线长 2x300mm 或定制化(Customized length)
机械载荷 Mechanical Load	5400Pa/2400Pa
防火等级 Safety Rate	Class II (IEC)

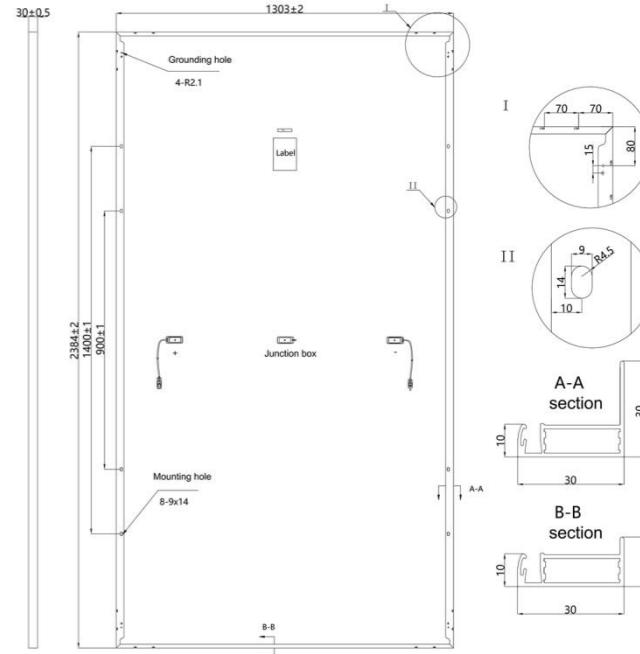
温度特性 Temperature Characteristics

最佳功率(Pmax)温度系数 Temperature Coefficient of Pmax	%/°C	-0.35
开路电压(Voc)温度系数 Temperature Coefficient of Voc	%/°C	-0.29
短路电流(Isc)温度系数 Temperature Coefficient of Isc	%/°C	+0.046
额定电池工作温度(NMOT)Nominal Module Operating Temperature	°C	44±2

包装标准 Packing Configuration

货柜 (出口货柜) Container	20'GP	40'HQ
托数量 Pieces per pallet(PCS)	/	31
柜托数 Pallets per container (Pallet)	/	18
柜数量 Pieces per container(PCS)	/	558
平板车(国内陆运 Domestic Transport)	每托尺寸 MEAS: 1320x1120x2300 mm	
9.6米装车数量	31PCS/托	16托/车 496PCS/车
13.5米装车数量	31PCS/托	22托/车 682PCS/车
17.5米装车数量	31PCS/托	30托/车 930PCS/车

装配图纸 Assembly Drawing (mm)



曲线图 I-V Curves(670W)

