

ZY-M10PH/120P

0~+5W
455~475W

单晶单玻半片组件

Mono-crystalline Half-cut Module

22.0%

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

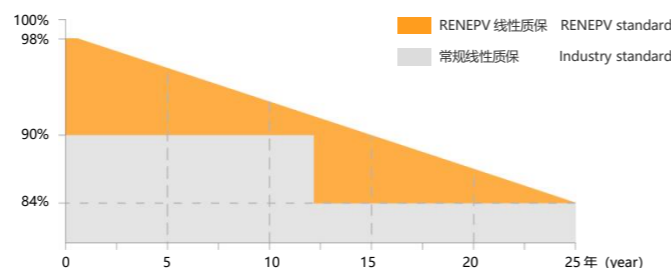
半片电池和多主栅设计
Half-cell and MBB design

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 年材料和工艺质保
Materials and workmanship warranty

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	ZY455M10PH-120		ZY460M10PH-120		ZY465M10PH-120		ZY470M10PH-120		ZY475M10PH-120	
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	455	340.3	460	344.1	465	347.8	470	351.56	475
最佳工作电压 Optimum Operating Voltage(Vmp)	V	34.78	32.35	34.89	32.45	34.93	32.49	35.07	32.62	35.21
最佳工作电流 Optimum Operating Current (Imp)	A	13.09	10.52	13.19	10.60	13.31	10.71	13.40	10.78	13.49
开路电压 Open Circuit Voltage(Voc)±3%	V	41.65	38.73	41.78	38.86	41.45	38.55	41.61	38.70	41.77
短路电流 Short Circuit Current(Isc)±3%	A	13.54	11.12	13.63	11.21	14.08	11.42	14.15	11.50	14.21
组件发电效率 Module Efficiency	%	21.1		21.3		21.5		21.8		22.0
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	25								
组件工作温度范围 Operating Module Temperature	°C	-40~+85								

STC: 光照 1000W/m² 组件温度 25°C 大气质量 1.5 Irradiance 1000W/m², cell temperature 25°C, atmospheric quality AM1.5
NMOT: 光照 800W/m² 环境温度 20°C 风速 1m/s Irradiance 800W/m², 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)182x182 60 PCS
组件尺寸 Dimensions	1903x1134x30 mm (±2mm)
组件重量 Weight	24.5 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 ² /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)

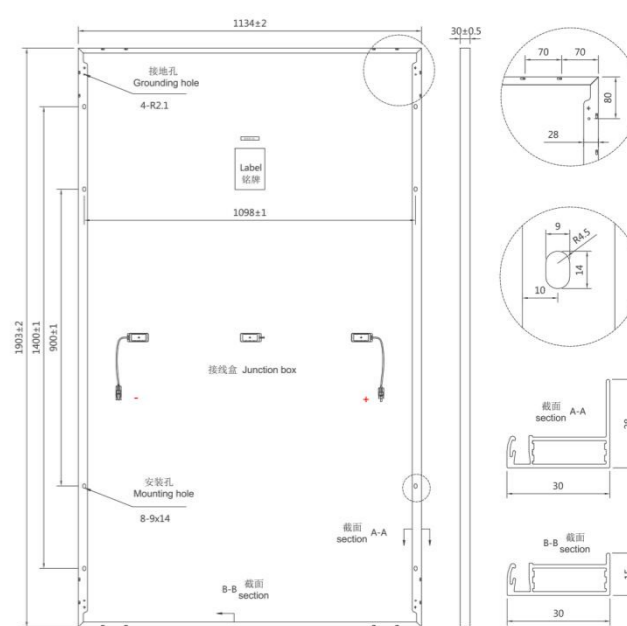
温度特性 Temperature Characteristics

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)	36	36
柜托数 Pallets per container (Pallet)	10	24
柜数量 Pieces per container(PCS)	360	864
平板车(国内陆运 Domestic Transport)	每托尺寸 MEAS: 1935x1120x1260 mm	
9.6米装车数量	36PCS/托	18托/车 648PCS/车
13.5米装车数量	36PCS/托	26托/车 936PCS/车
17.5米装车数量	36PCS/托	34托/车 1224PCS/车

装配图纸 Assembly Drawing (mm)



曲线图 I-V Curves(470W)

