中宜新能源
Zhongyi New Energy

ZY-M10NHB/108P

0~+5W

415~435W

N 型单晶双面双玻黑框组件

TOPCon Mono-crystalline Bifacial
Black Frame Module

22.3%
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

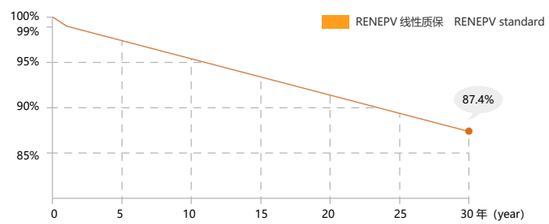
半片电池和多主栅设计
Half-cell and MBB design

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

30 年线性性能质保
Linear performance warranty

首年功率衰减不超过 1%
后续每年功率衰减不超过 0.4%

First year power degradation < 1%
Annual degradation < 0.4%

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

+86-574-63097978
+86-574-63097969
info@renepv.com
浙江省慈溪高新技术产业开发区政通北路 509 号
No. 509, Zhengtong North Road, High-tech Industrial Development Zone, Cixi City, Zhejiang, China
www.renepv.com

电性能参数 Electrical Characteristics

组件型号 Module Type		ZY415M10NHB-108		ZY420M10NHB-108		ZY425M10NHB-108		ZY430M10NHB-108		ZY435M10NHB-108	
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	415	310.4	420	314.2	425	317.9	430	321.6	435	325.4
最佳工作电压 Optimum Operating Voltage(Vmp)	V	31.98	29.74	32.12	29.87	32.27	30.01	32.43	30.16	32.58	30.30
最佳工作电流 Optimum Operating Current (Imp)	A	12.98	10.44	13.07	10.52	13.17	10.59	13.26	10.66	13.32	10.74
开路电压 Open Circuit Voltage(Voc)±3%	V	37.99	35.33	38.15	35.48	38.29	35.61	38.46	35.77	38.62	35.92
短路电流 Short Circuit Current(Isc)±3%	A	13.50	11.12	13.61	11.21	13.72	11.30	13.82	11.38	13.88	11.47
组件发电效率 Module Efficiency	%	21.3		21.5		21.8		22.0		22.3	
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	30									
组件工作温度范围 Operating Module Temperature	℃	-40~+85									

STC: 光照 1000W/m² 组件温度 25℃ 大气质量 1.5 Irradiance 1000W/m², cell temperature 25℃, atmospheric quality AM1.5
NMOT: 光照 800W/m² 环境温度 20℃ 风速 1m/s Irradiance 800W/m², ambient temperature 20℃, AM1.5, wind speed 1m/s

机械性能 Mechanical Characteristics

电池片类型 Solar Cell (No.of cells)	N 型单晶(N-Mono)182x182 54 PCS
组件尺寸 Dimensions	1722x1134x30 mm
组件重量 Weight	24.2 kg(±3%)
钢化玻璃 Front Glass	2.0mm 半钢化玻璃 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	4mm²/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	%/℃	-0.30
开路电压(Voc)温度系数 Temperature Coefficient of Voc	%/℃	-0.25
短路电流(Isc)温度系数 Temperature Coefficient of Isc	%/℃	+0.05
额定电池工作温度(NMOT)Nominal Module Operating Temperature	℃	45±2

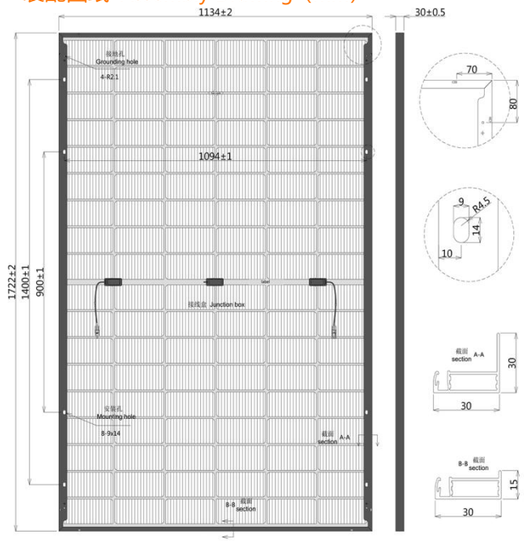
不同背面功率增益 Different Backside Power Gain(435W)

功率增益 Power Gain		5%	15%	25%
最大功率 Maximum Power Pmp	W	456.75	500.25	543.75
最佳工作电压 Optimum Operating Voltage(Voc)	V	32.58	32.58	32.58
最佳工作电流 Optimum Operating Current(Imp)	A	13.99	15.32	16.65
开路电压 Open Circuit Voltage (Voc)	V	38.62	38.62	38.62
短路电流 Short Circuit Current(Imp)	A	14.61	16.00	17.39

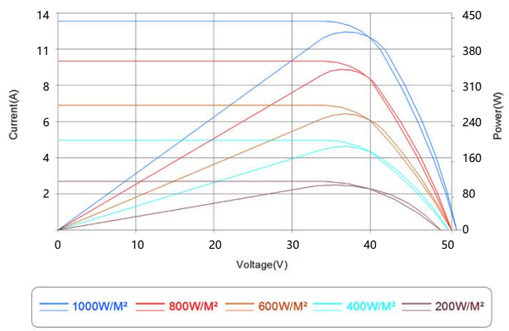
包装标准 Packing Configuration

货柜(出口)Container 40'HQ		36PCS/pallet	20pallet/40'HQ	720 PCS/40'HQ
17.5 米装车数量	30 边框	37PCS/托	26 托/车	962PCS/车

装配图纸 Assembly Drawing（mm）



曲线图 I-V Curves(435W)



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