

# SOLAR N PLUS

## N型双面组件

### N-Type Bifacial Modules

#### SP-N16B/96HG440-460W

**460W**

最高组件功率输出  
Maximum Power

**23.0%**

最高组件效率  
Module Efficiency

**0~+5W**

组件功率公差  
Power Tolerance

#### 产品特性 PRODUCT CHARACTERISTICS



**210R电池片技术**

210R Cell Technology



**更适合分布式场景、户用场景**

More Suitable for Distribution & Household Scenarios



**全生命周期更优发电表现**

Better Power Generation Performance



**高品质保证组件长期可靠**

High Quality Ensures Long-term Reliability

#### 保险 INSURANCE



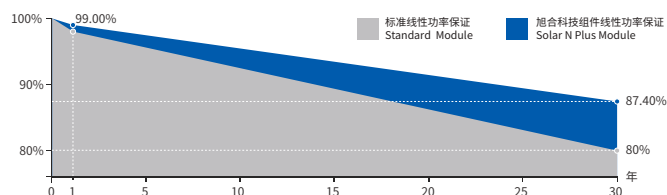
中国平安  
PINGAN

#### 认证 CERTIFICATION



- ISO 9001: 2015/质量管理体系 quality management system
- ISO 14001: 2015/环境管理体系 environment management system
- ISO 45001: 2018/职业健康安全管理体系 occupation health safety management system

#### 线性功率保证 WARRANTY



材料工艺质保

Guarantee on product material and workmanship



线性功率质保

Linear power output warranty



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电性能参数 ELECTRICAL CHARACTERISTICS (STC)

|                                                                   |   |       |       |       |       |       |
|-------------------------------------------------------------------|---|-------|-------|-------|-------|-------|
| 最大功率 Maximum Power (Pm)                                           | W | 440   | 445   | 450   | 455   | 460   |
| 功率公差 Power Tolerance                                              | W |       |       | 0~+5  |       |       |
| 最佳工作电压 Maximum Power Voltage (Vm)                                 | V | 29.2  | 29.4  | 29.6  | 29.8  | 30.0  |
| 最佳工作电流 Maximum Power Current (Im)                                 | A | 15.07 | 15.14 | 15.20 | 15.27 | 15.33 |
| 开路电压 Open Circuit Voltage (Voc)                                   | V | 35.25 | 35.45 | 35.65 | 35.85 | 36.05 |
| 短路电流 Short Circuit Curren (Isc)                                   | A | 15.9  | 15.96 | 16.02 | 16.08 | 16.14 |
| 组件效率 Module Efficiency (ηm)                                       | % | 22.0  | 22.3  | 22.5  | 22.8  | 23.0  |
| STC:AM=1.5, 辐照度 irradiance 1000W/m², 组件温度 module temperature 25°C |   |       |       |       |       |       |

电性能参数 ELECTRICAL CHARACTERISTICS (NMOT)

|                                                                                     |   |       |       |       |       |       |
|-------------------------------------------------------------------------------------|---|-------|-------|-------|-------|-------|
| 最大功率 Maximum Power (Pm)                                                             | W | 335   | 338   | 342   | 345   | 348   |
| 最佳工作电压 Maximum Power Voltage (Vm)                                                   | V | 27.52 | 27.72 | 27.92 | 28.12 | 28.32 |
| 最佳工作电流 Maximum Power Current (Im)                                                   | A | 12.17 | 12.21 | 12.24 | 12.27 | 12.3  |
| 开路电压 Open Circuit Voltage (Voc)                                                     | V | 32.94 | 33.11 | 33.28 | 33.45 | 33.62 |
| 短路电流 Short Circuit Current (Isc)                                                    | A | 12.78 | 12.81 | 12.84 | 12.87 | 12.90 |
| NMOT: 辐照度 irradiance 800W/m², 环境温度 environment temperature 20°C, 风速 wind speed 1m/s |   |       |       |       |       |       |

机械性能 MECHANICAL SPECIFICATIONS

|                                 |                                                           |
|---------------------------------|-----------------------------------------------------------|
| 组件尺寸 External Dimension (L×W×H) | 1762mm×1134mm×30mm                                        |
| 组件重量 Weight                     | 20.2kg                                                    |
| 电池 Number of Cells              | 96(6×16)/16BB                                             |
| 正面玻璃规格 Front Glass              | 1.6mm 减反射镀膜热增强玻璃 1.6mm AR-coating heat-strengthened glass |
| 背面玻璃规格 Rear Glass               | 1.6mm 半钢化玻璃 1.6mm heat-strengthened glass                 |
| 边框 Frame                        | 阳极氧化铝合金 Anodized aluminum alloy, silver color             |
| 接线盒防护等级 Junction Box            | IP68                                                      |
| 线缆规格 Output Cables              | 4mm², 300mm或客户定制 4mm², 300mm or customized length         |
| 连接器 Connector                   | MC4兼容 MC4 Compatible                                      |

工作条件 APPLICATION CONDITIONS

|                                      |                                                       |
|--------------------------------------|-------------------------------------------------------|
| 最大系统电压 Maximum System Voltage        | DC1500V(IEC)                                          |
| 最大保险丝额定电流 Maximum Series Fuse Rating | 30A                                                   |
| 工作温度范围 Operating Temperature         | -40°C~+85°C                                           |
| 机械载荷 Mechanical Load                 | 5400Pa / 2400Pa                                       |
| 冰雹撞击试验 Hail Test                     | Φ25mm冰雹, 从1m的距离以23 m/s的速度 25mm diameter hail at 23m/s |
| 应用等级 Application Rating              | Class A                                               |

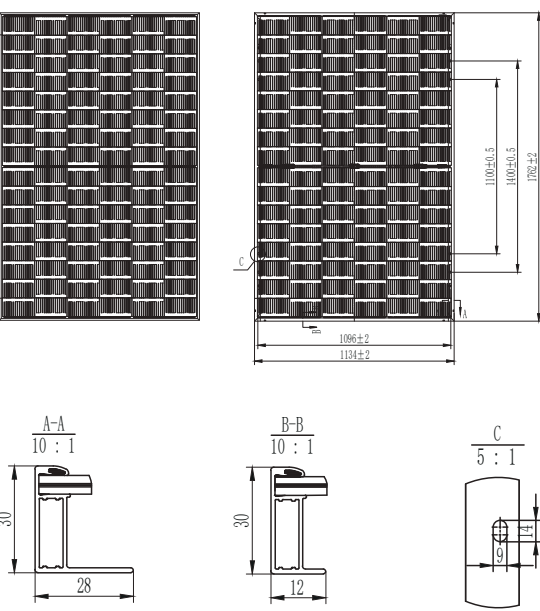
温度系数 TEMP CHARACTERISTICS

|                                                      |           |
|------------------------------------------------------|-----------|
| 电池额定工作温度 Nominal Module Operating Temperature (NMOT) | 42±2°C    |
| 功率温度系数 Temperature Coefficient of Pmax               | -0.29%/°C |
| 电压温度系数 Temperature Coefficient of Voc                | -0.25%/°C |
| 电流温度系数 Temperature Coefficient of ISC                | 0.045%/°C |

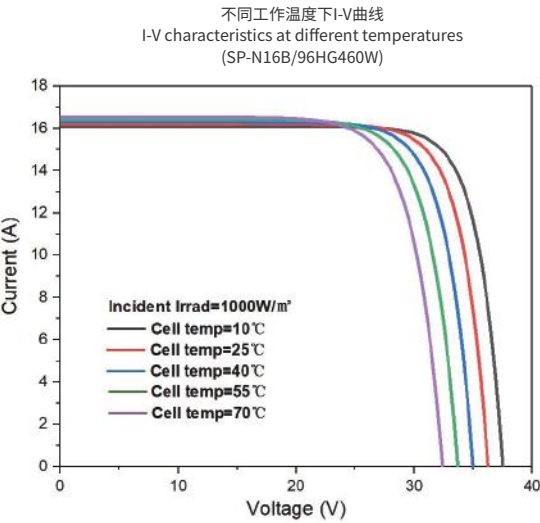
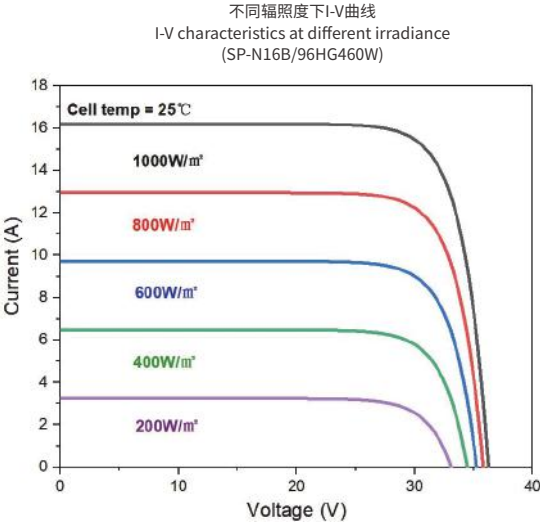
包装 PACKING CONFIGURATION

|                         |                  |       |           |
|-------------------------|------------------|-------|-----------|
| 每托数量 Pieces per Pallet  | 37片/pcs          | 40HC  | 962片/pcs  |
| 包装尺寸 Packaging box Size | 1819×1145×1260mm | 17.5m | 1332片/pcs |

组件尺寸 TECHNICAL DRAWING



IV曲线 I-V CURVE



SP-N16B/96HG440-460W