

# QUALITY MATTERS

## OUR COMMITMENT TO QUALITY

At Supervim, we think about solar energy all day long. We live and breathe it. We contemplate how it can power every aspect of our lives. And through our experience, we've come to believe:

### Quality Matters:

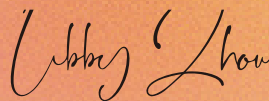
Our energy is different because we're different. Our Experience, knowledge and trusted partnerships have helped deliver reliable products to businesses across the world. We have a vision to create a sustainable future for the world and we have the experience to make it happen.

Our difference comes through in the quality of our product. In fact, we've built numerous quality steps into every stage of manufacturing. We call this quality process The Supervim Standard.

### Introducing the Supervim Standard

It's not just a quality-assurance program. Throughout every stage, we hold our products, our partners and ourselves to rigorous benchmarks.

Our team adheres to testing guidelines that far exceed industry requirements. We apply stringent manufacturing controls. All of the materials in our products come from suppliers proven to deliver first rate quality. **This level of attention ensures that every product we deliver meets the Supervim Standard every single time.**



**Libby Zhou**  
**Supervim Founder & CEO**



SUPERVIM

# SP-DH96N11B

## 440-460W

**23.0%** **N-Type** **96 Pieces**  
Max. Efficiency Unifacial & Dual Glass Half-Cell

### Advanced Technology

Embracing N - type Cells and a Novel product technology platform. The mass production efficiency and reliability are leading in the industry.

### Exceptional Performance

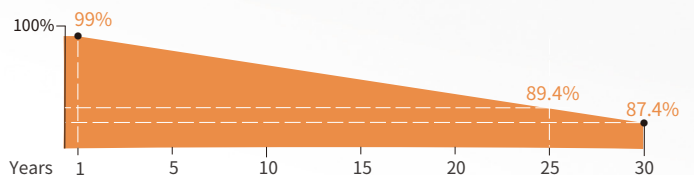
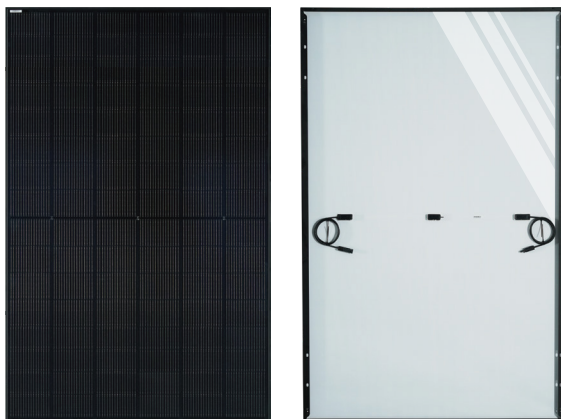
Leveraging Two - color, High - reflection Black Encapsulation Materials to Maximize Light Energy Utilization Rate.

### Aesthetics

A Captivating All - black Design That Effortlessly Blends with Buildings, with an Area of 2 Square meter.

### Solid Quality, Steady Reliability

Double - glass Design, Exhibiting Strong Resistance to Water Vapor and Guaranteeing Long - term Reliability.



Supervim N-Type Dual Glass Product Performance Warranty

1st year degradation **<1%**, annual degradation **<0.4%**

**15/25** 15-year product warranty  
25-year product warranty  
(special for rooftop market within 500kw only)

**30** 30-year linear power warranty

IEC61215 / IEC61730 / UL61730 / IEC61701 / IEC62716 / IEC60068 / ISO9001 / ISO14001 / ISO45001



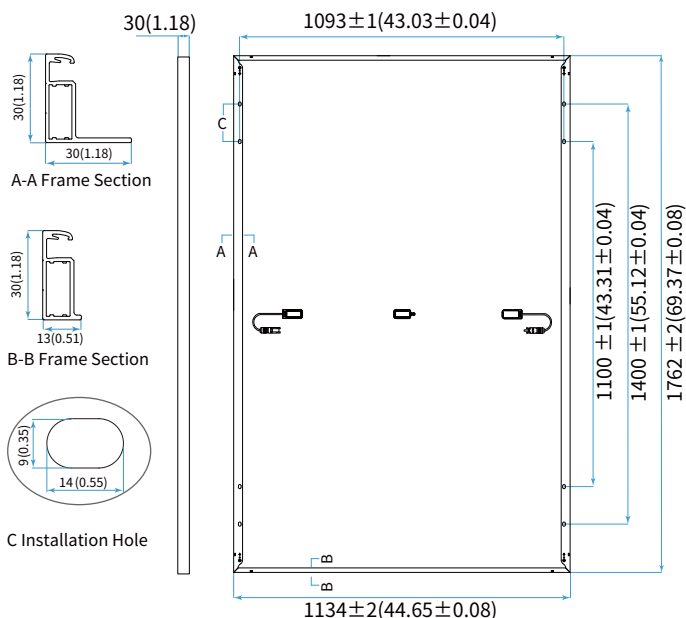
## Mechanical Parameters

Solar Cell	Mono N-Type 182*210mm
No. of Cells	96 (6 × 16)
Dimensions	1762 × 1134 × 30mm(69.37 x 44.65 x 1.18in)
Weight	25kg(55.12lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm <sup>2</sup> (IEC), 12 AWG(UL) ±1200mm(47.24in.) or customized
Connector	EVO2 or similar
Front Cover	2.0mm AR coated heat strengthened glass
Back Cover	2.0mm heat strengthened glass
Frame	Aluminum, Black anodized
Container	36 pcs/Pallet, 936 pcs/40' HQ(Global) ,756 pcs/40' HQ(US)

## Operating Parameters

Max. System Voltage	DC 1500V (IEC/UL)
Operating Temperature	-40°C ~ +85°C(-40°F ~ +185°F)
Max. Fuse Rating	35A
Frontside Max. Loading	5400Pa(112lb/ft <sup>2</sup> )
Backside Max. Loading	2400Pa(50lb/ft <sup>2</sup> )
Hail test	35mm, 27.2m/s
Fire Resistance	IEC Class A/ UL type 29

Unit: mm(inch)



## Electrical Characteristics - STC

Irradiance 1000 W/m<sup>2</sup>, cell temperature 25 °C, AM1.5, Test uncertainty for Pmax: ±3%

Maximum Power at STC (Pmax/W)	460	455	450	445	440
Power Tolerance (W)	0~+5				
Optimum Operating Voltage (Vmp/V)	29.70	29.57	29.44	29.30	29.16
Optimum Operating Current (Imp/A)	15.49	15.39	15.29	15.19	15.09
Open Circuit Voltage (Voc/V)	35.52	35.39	35.26	35.12	34.98
Short Circuit Current (Isc/A)	16.23	16.15	16.07	15.99	15.91
Module Efficiency	23.0%	22.8%	22.5%	22.3%	22.0%

## Electrical Characteristics - NMOT

Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM1.5, wind speed 1 m/s.

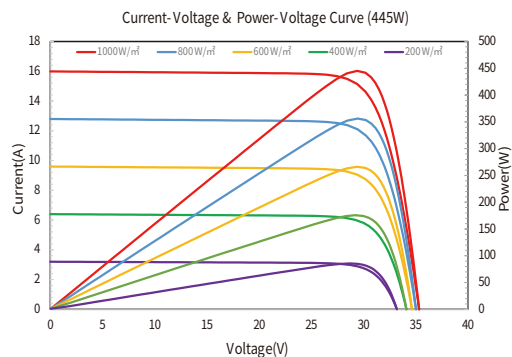
Maximum Power at NMOT (Pmax/W)	352.3	348.5	344.8	340.9	337.0
Optimum Operating Voltage (Vmp/V)	28.44	28.31	28.19	28.05	27.92
Optimum Operating Current (Imp/A)	12.39	12.31	12.23	12.15	12.07
Open Circuit Voltage (Voc/V)	34.01	33.89	33.76	33.63	33.49
Short Circuit Current (Isc/A)	13.08	13.02	12.95	12.89	12.83

## Warranty

Product Workmanship Warranty	15/25 Years
Linear Power Output Warranty	30 Years
First Year Degradation	1%
Annual Power Degradation	0.4%

## Temperature Characteristics

Nominal Module Operating Temperature	42 ± 2 °C
Nominal Cell Operating Temperature	45 ± 2 °C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.045%/°C



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