ELMARK®

The Brand of Electricity

N-TYPE MONO-CRYSTALLINE BIFACIAL SOLAR MODULE 430W

TECHNICAL SPECIFICATION

SOLAR PANELS

Traditional solar panels are monofacial, with solar cells on only one side of the panels. Bifacial solar panels feature solar cells that can absorb solar energy on both sides. The bifacial panels provide 11-12% efficiency. Since these panels provide more energy with fewer resources, they are highly efficient than monofacial modules. Unlike monofacial solar panels, bifacial modules offer higher durability.

TOPCon, or tunnel oxide passivated contact. It pairs a tunneling oxide layer with a PERC solar cell to reduce recombination losses and increase cell efficiency

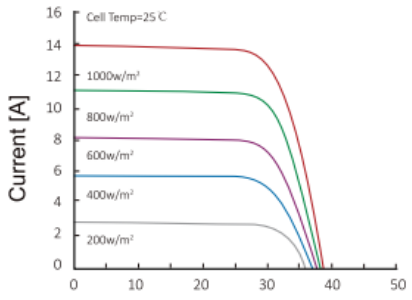
Module type: Pro-54HC(BK)

Catalog number: 98SOL430M

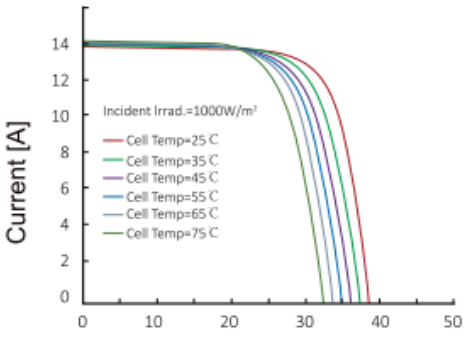
SPECIFICATION:

- **Standard Test Conditions (STC)**
  - Irradiance 1000 W/m2, AM 1.5, gand cell temperature of 25°C
  - Peack power (Pmax): 430
  - Maximum power voltage (Vmp): 37.27V
  - Maximum power current (Imp): 13.33A
  - Open circuit voltage (Voc): 38.40V
  - Short circuit current (Isc): 14.09A
  - Module efficiency (%): 22.00%
  - Maximum Series Fuse: 25A
  - Number of Diode: 3
  - Maximum system voltage (V): 1500DC
  - Watts positive tolerance: 0~+3%
  - Cell type: Monocrystalline silicon, Bifacial
  - Number of cells: 108(6x9+6x9)
  - Dimensions HxWxD (mm): 1722x1134x30
  - Weight (kg): 21.6
  - Max. load (Pa): 5400
  - Front Superstate: low-iron tempered glass / 3.2mm
  - Back sheet: transparent
  - Junction box (protection degree): IP68
- **Nominal Operating Cell Temperature (NOTC)**
  - Peack power (Pmax): 323.4W
  - Maximum power voltage (Vmp): 30.37V
  - Maximum power current (Imp): 10.65A
  - Open circuit voltage (Voc): 36.48V

CURRENT-VOLTAGE CURVES:



Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

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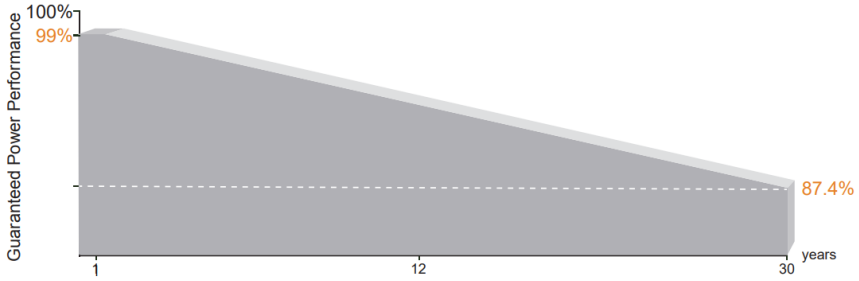
- Short circuit current (Isc): 11.37

MECHANICAL DATA:

- Cell type: Monocrystalline silicon, Bifacial
- Number of cells: 120(6x10x2)
- Weight (kg): 21.6
- Load Capacity for the cover of the module (glass): 5400 Pascals (IEC61215)(snow)
- Load Capacity for the front & back of the module: 2400 Pascals (IEC61215)(wind)
- Junction Box: IP68 rated
- Cables and plug connectors: 4mm², 300mm in length, length can be customized
- Frame: Aluminum hollow-chamber frame on each side anodized aluminum alloy



FEATURES:

- MBB Half-Cut solar Cell: 120(6x10x2)
- Higher module Conversion Efficiency: Higher module output up to 430W with module efficiency up to 22.00%
- Low-light Performance: Advanced glass and surface texturing allow for excellent performance in low-light environment.
- Light-weight design: Light-weight design using transparent back sheet for easy installation and BOS cost
- Higher Power Output: Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR

TEMPERATURE CHARACTERISTICS:

- Nominal module operating temperature (NMOT): 45° C±2° C
- Temp. Coeff. of Isc: +0.043%/°C
- Temp. Coeff. of Voc: -0.24% /°C
- Temp. Coeff of Pmpp: -0.30% /°C

TECHNICAL SPECIFICATION

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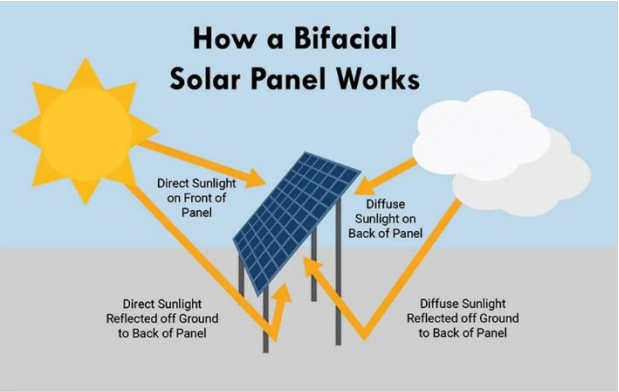
- Operating temperature: -40°C+85°C

ADVANTAGES OF HALF CELL Bifacial SOLAR PANELS:

- These panels are able to generate electricity using the reflective light passing through them
- Bifacial solar panels may be constructed of transparent or dual tempered back sheets.
- Degradation that could be caused by sunlight isn't an issue with solar panels with bifacial faces.
- The bifacial solar panel's glass can help to reduce UV exposure and moisture permeability
- They perform better under high heat conditions than standard solar panels.
- They are less susceptible to hot spots, a major cause of panel failure.
- They are much higher efficiency than standard panels.
- The panels are constructed of solid glass that is impervious to cracking.



DIMENSIONS:

Dimensions

Hight: 1722mm

Width: 1134mm

Deep: 35mm