

# ALPINE N Series

Half-Cell N-Type TOPCon  
Bifacial Module

**595-610Wp** | **22.58%**  
Module Power Output | Max Efficiency



## Key Features



High module conversion efficiency



Better temperature coefficient



Super multi busbar technology



Low attenuation long warranty



Superior load capacity



Higher bifaciality

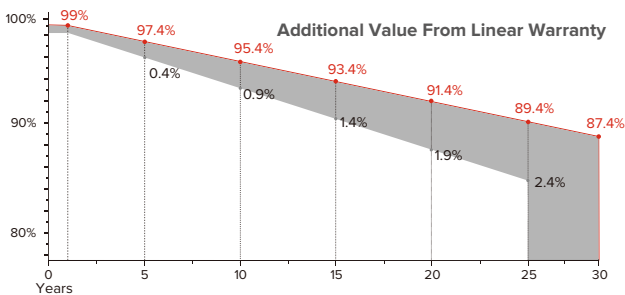


USA based liability insurance.



Houston, Texas based company.

## Warranty



**15** <Years> Guarantee on product material and workmanship

**30** <Years> Linear power output warranty

## Product Certification

IEC61215:2016; IEC 61730:2016; UL61730

IEC62804 PID

IEC61701 Salt Mist

IEC62716 Ammonia Resistance

IEC60068 Dust and Sand

IEC61215 Hailstone

Fire Type (UL61730):Type29

ISO14001:2015; ISO9001:2015; ISO45001:2018



## About SEG Solar

SEG Solar is a leading manufacturer of high-performance solar panels for residential, commercial, and utility applications. The company, headquartered in Houston, Texas, is committed to providing cost-effective and reliable solar solutions that help customers reduce their energy costs and carbon footprint.



Download Datasheet

## Electrical Characteristics

| Module Type                   | SEG-595-BTC-BG |            |          | SEG-600-BTC-BG |            |          | SEG-605-BTC-BG |            |          | SEG-610-BTC-BG |            |          |
|-------------------------------|----------------|------------|----------|----------------|------------|----------|----------------|------------|----------|----------------|------------|----------|
|                               | Front STC      | Front NOCT | Back STC | Front STC      | Front NOCT | Back STC | Front STC      | Front NOCT | Back STC | Front STC      | Front NOCT | Back STC |
| Maximum Power -Pmp(Wp)*       | 595            | 454        | 476      | 600            | 458        | 480      | 605            | 461        | 484      | 610            | 465        | 488      |
| Open Circuit Voltage -Voc(V)  | 47.50          | 45.60      | 47.48    | 47.70          | 45.90      | 47.58    | 47.90          | 46.10      | 47.88    | 48.10          | 46.40      | 48.08    |
| Short Circuit Current -Isc(A) | 15.90          | 12.70      | 12.70    | 15.95          | 12.73      | 12.73    | 16.00          | 12.76      | 12.76    | 16.05          | 12.78      | 12.78    |
| Maximum Power Voltage -Vmp(V) | 39.27          | 37.60      | 39.25    | 39.44          | 37.80      | 39.42    | 39.60          | 38.00      | 39.58    | 39.77          | 38.30      | 39.75    |
| Maximum Power Current -Imp(A) | 15.15          | 12.07      | 12.13    | 15.21          | 12.12      | 12.18    | 15.28          | 12.13      | 12.23    | 15.34          | 12.14      | 12.28    |
| Module Efficiency(%)          | 22.03          |            |          | 22.21          |            |          | 22.40          |            |          | 22.58          |            |          |
| Power Tolerance(W)            | (0, +4.99)     |            |          |                |            |          |                |            |          |                |            |          |
| Maximum System Voltage        | 1500V DC       |            |          |                |            |          |                |            |          |                |            |          |
| Maximum Series Fuse Rating    | 35 A           |            |          |                |            |          |                |            |          |                |            |          |
| Bifaciality                   | 80%±10%        |            |          |                |            |          |                |            |          |                |            |          |

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C AM=1.5

NOCT: Irradiance 800W/m<sup>2</sup> ambient temperature 20°C module temperature 45°C wind speed: 1m/s

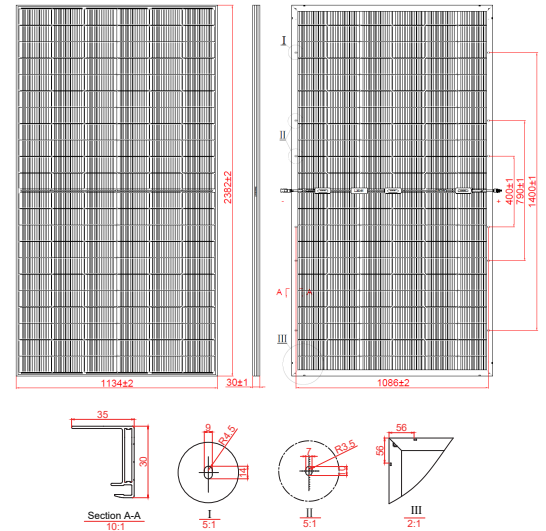
\*Measuring tolerance: ±3%

## Mechanical Specifications

|                            |  |
|----------------------------|--|
| External Dimension         | 2382 x 1134 x 30 mm  |
| Weight                     | 33.1 kg  |
| Solar Cells                | N-TOPCon 182 x 105mm(132 pcs)  |
| Front / Back Glass         | 2.0mm AR coating semi-tempered glass /low iron   |
| Frame                      | Anodized aluminium alloy   |
| Junction Box               | IP68 / 3 diodes  |
| Connector Type             | PV-CO02-xy   |
| Cable Type<br>Cable Length | 12 AWG PV Wire (UL)<br>Portrait: 400 mm(+)/ 200 mm(-)<br>Landscape: 1200 mm(+)/ 1200 mm(-)<br>or customized length |
| Mechanical Load(Front)     | 5400 Pa / 113 psf*   |
| Mechanical Load(Rear)      | 2400 Pa / 50 psf*  |

\*Refer to SEG installation Manual for details

## Technical Drawing



\*Refer to SEG installation Manual for details

## Packing Configuration

| Container             | 40'HQ | 40'HQ(For USA) |
|-----------------------|-------|----------------|
| Pieces per Pallet     | 36    | 36             |
| Pallets per Container | 20    | 16             |
| Pieces per Container  | 720   | 576            |

## Temperature Characteristics

|   |             |
|---|-------------|
| Pmax Temperature Coefficient              | -0.30 %/°C  |
| Voc Temperature Coefficient               | -0.25 %/°C  |
| Isc Temperature Coefficient               | +0.046 %/°C |
| Operating Temperature                     | -40~+85 °C  |
| Nominal Operating Cell Temperature (NOCT) | 45±2 °C     |

## I-V Curve

