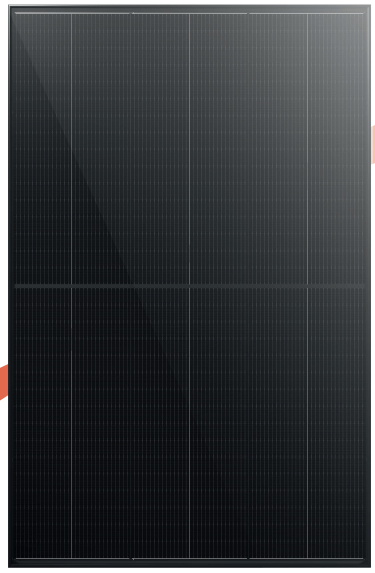
SUNTECH

Ultra T 3.0

QUARTER-CUT N-TYPE TOPCon
BLACK THRU BIFACIAL DOUBLE-GLASS MODULE
TYPE: STP-NT11/48QGDF

465-485W
POWER OUTPUT

24.3%
MAX EFFICIENCY



TOPCon 3.0
The advanced cell technology with edge passivation, etc, leads to ultra-high power output and efficiency

Multi-cut design
Drastically reduces the internal current of the cell, ensuring lower power loss and minimized hot spot risk

Withstand harsh environments
Reliable quality that makes module resistant even to high temperatures, salt water and ammonia

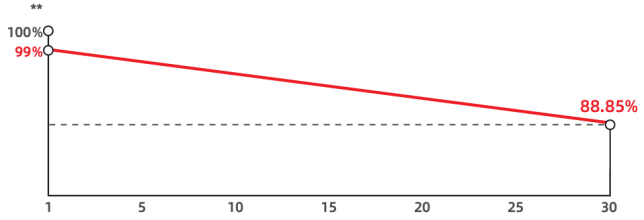
Superior load-bearing capability
Module certified to withstand **5400 Pa** front side max static test load and **2400 Pa** rear side max static test load *

ISO 14001 Environment Management System
ISO 45001 Occupational Health and Safety
ISO 9001 Quality Management System
SA 8000 Social Responsibility Standards
IEC TS 62941 Guideline for Module Design

IEC 61701 Salt-mist Certification
IEC 62716 Ammonia Certification
IEC 60068-2-68 Dust and Sand

Munich RE

30 years of linear warranty
25 years of product warranty



First year power degradation 1% Annual degradation 0.35%

* Please refer to Suntech Standard Module Installation Manual for details.

*** WEEE only for EU market.

** Please refer to Suntech Limited Warranty for details.

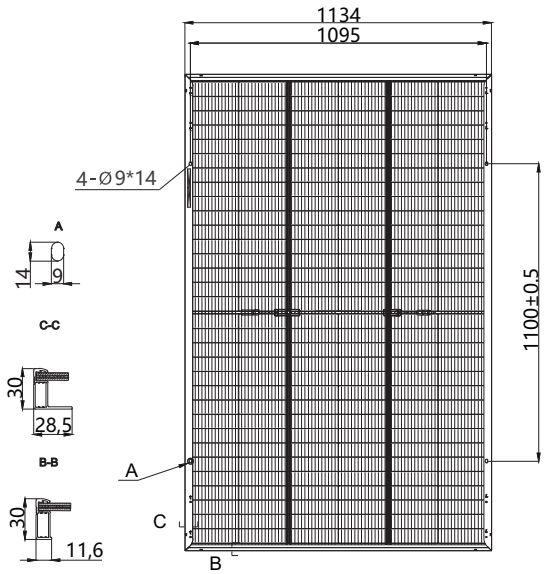
**** Suntech reserves the right to the final.

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Ultra T 3.0 STP-NT11/48QGDF 465-485W

Mechanical Characteristics

Solar Cell	N-type monocrystalline silicon
No. of Cells	192 (6 × 32)
Dimensions	1762 × 1134 × 30 mm (69.4 × 44.6 × 1.2 inches)
Weight	24 kg (52.91 lbs.)
Front Glass	2.0 mm (0.079 inches), anti-reflective coating
Back Glass	2.0 mm (0.079 inches), heat strengthened glass
Output Cables (Including Connector)	4.0 mm², (+) 1300 mm / (-) 1300 mm in length or customized length
Junction Box	IP68 rated (3 bypass diodes)
Operating Module Temperature (T_{98})*	-40 °C to +70 °C
Maximum System Voltage	1500 V DC (IEC)
Connectors	MC4-EVO2A
Maximum Series Fuse Rating	35 A
Power Tolerance	0 ~ + 3%
Refer. Bifaciality Factor	(85 ± 10)%
Frame	Anodized aluminum alloy frame
Packing Configuration	36 pieces per pallet 936 pieces per container / 40'HC 1790 × 1120 × 1260 mm per pallet 910 kg per pallet



* T_{98}: 98th percentile module operating temperature per IEC TS 63126. Short-term module operating temperature can reach up to 85 °C.

Electrical Characteristics (STC)

Maximum Power (Pmax/W)	485	480	475	470	465
Optimum Operating Voltage (Vmp/V)	30.78	30.60	30.43	30.26	30.08
Optimum Operating Current (Imp/A)	15.76	15.69	15.62	15.55	15.47
Open Circuit Voltage (Voc/V)	36.63	36.58	36.53	36.48	36.43
Short Circuit Current (Isc/A)	16.57	16.50	15.94	15.90	15.86
Module Efficiency (%)	24.3	24.0	23.8	23.5	23.3

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5; Measuring tolarance is within +/- 3%;

Electrical Characteristics (BNPI)

Maximum Power (Pmax/W)	539	533	528	523	517
Optimum Operating Voltage (Vmp/V)	30.78	30.60	30.43	30.26	30.08
Optimum Operating Current (Imp/A)	17.51	17.43	17.35	17.28	17.19
Open Circuit Voltage (Voc/V)	36.63	36.58	36.53	36.48	36.43
Short Circuit Current (Isc/A)	18.41	18.33	17.71	17.66	17.62

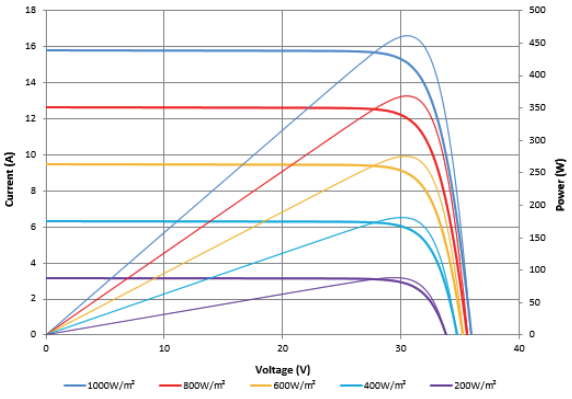
BNPI: Irradiance front 1000 W/m², rear 135 W/m², module temperature 25 °C, AM=1.5;

Temperature Characteristics

Temperature Coefficient of Pmax	-0.26%/°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Isc	0.043%/°C

Information on how to install and operate this product is available in the installation instruction. All values indicated in this data sheet are subject to change without prior announcement. The specifications may vary slightly . All specifications are in accordance with standard EN 50380. Color differences of the modules relative to the figures as well as discolorations of/in the modules which do not impair their proper functioning are possible and do not constitute a deviation from the specification.

Graphs Current-Voltage & Power-Voltage (465W)



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