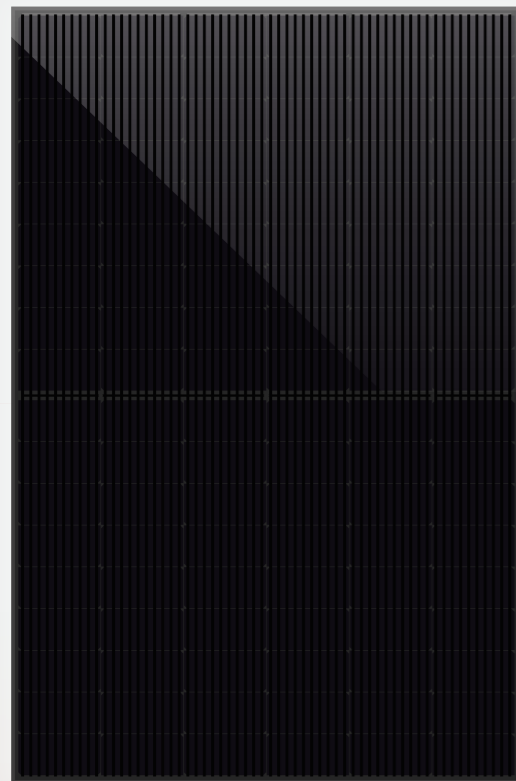


# SOLAR Module

## M10N-BG-435-460W

### Mono Bifacial Full-Black Module



#### N-TOPCON

Conversion Efficiency  
**23.5%**

Maximum Power Output  
**460W**

Quality Assurance

Product warranty **15** years  
Power warranty **30** years

Recommend for adaptation to villa roofs, featuring high standard exterior design.



**High module conversion efficiency**

Module efficiency up to 23.5% achieved through advanced cell technology and manufacturing process



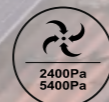
**Lower operating temperature**

Lower operating temperature and temperature coefficient increase the power output



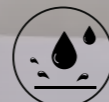
**Excellent weak light performance**

More power output in weak light condition, such as cloudy, morning and sunset



**Extended wind and snow load tests**

Module certified to withstand extreme wind (2400 Pascal) and snow loads(5400 Pascal)



**IP68 junction box**

High waterproof & dustproof level

#### ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ [Wp]*	435	440	445	450	455	460
Maximum Power Voltage- $V_{MP}$ [V]	32.7	32.9	33.1	33.3	33.5	33.7
Maximum Power Current- $I_{MP}$ [A]	13.31	13.38	13.44	13.51	13.58	13.65
Open Circuit Voltage- $V_{OC}$ [V]	39.3	39.5	39.7	39.9	40.1	40.3
Short Circuit Current- $I_{SC}$ [A]	14.10	14.19	14.27	14.36	14.45	14.54
Module Efficiency $\eta$ [%]	22.3	22.5	22.8	23.0	23.3	23.5
Power Tolerance- $P_{MAX}$ [W]	0~+5					

STC: Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C, AM=1.5; \*Measuring Tolerance: ±3%

#### ELECTRICAL DATA(BNPI)

Peak Power- $P_{MAX}$ [Wp]*	480	485	490	495	500	505
Maximum Power Voltage- $V_{MP}$ [V]	32.7	32.9	33.1	33.3	33.5	33.7
Maximum Power Current- $I_{MP}$ [A]	14.68	14.74	14.80	14.86	14.93	14.99
Open Circuit Voltage- $V_{OC}$ [V]	39.3	39.5	39.7	39.9	40.1	40.3
Short Circuit Current- $I_{SC}$ [A]	15.60	15.68	15.76	15.84	15.92	16.00

BNPI: Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C

#### ELECTRICAL DATA(NMOT)

Maximum Power- $P_{MAX}$ [Wp]*	333	337	341	345	349	353
Maximum Power Voltage- $V_{MP}$ [V]	30.8	31.0	31.2	31.4	31.6	31.8
Maximum Power Current- $I_{MP}$ [A]	10.82	10.88	10.93	10.99	11.04	11.10
Open Circuit Voltage- $V_{OC}$ [V]	37.2	37.4	37.6	37.8	38.0	38.2
Short Circuit Current- $I_{SC}$ [A]	11.41	11.48	11.55	11.62	11.70	11.77

NMOT: Irradiance 800W/m<sup>2</sup>, Module Temperature 20°C, AM=1.5; Wind Speed:1m/s

#### MECHANICAL DATA

Solar Cells	N-Type TOPCon Monocrystalline silicon
Cell Orientation	108 cells (6 x 18)
Module Dimensions	1724x1134x30mm
Weight	25.1kg
Front Glass	2.0mm tempered glass
Encapsulant Material	POE/EVA
Back Glass	2.0mm semi-tempered glass
Frame	30mm Anodized Aluminium Alloy (Silver/Black Frame optional)
Junction Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> Cable length 350 mm or customized length

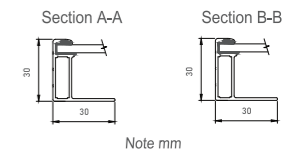
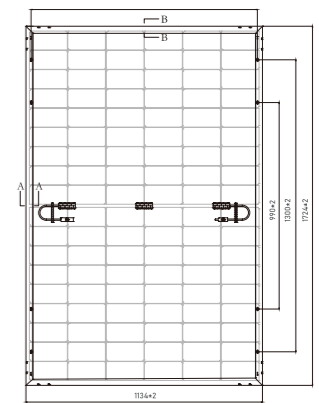
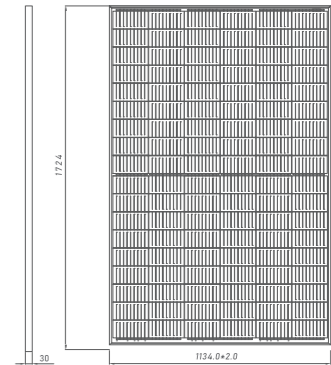
\*Please refer to regional datasheet for specied connector

#### TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	42°C(±2°C)
Temperature Coefficient of $P_{MAX}$	-0.29%/°C
Temperature Coefficient of $V_{OC}$	-0.25%/°C
Temperature Coefficient of $I_{SC}$	0.046%/°C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

#### CERTIFICATIONS OF PRODUCT AND MANUFACTURER



#### MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC(IEC)
Max Series Fuse Rating	25A

#### PACKAGING CONFIGURATION

Modules per box	36 pieces
Modules per 40' container	936 pieces

#### I-V CURVE

Current-Voltage & Power-Voltage Curve(430)

