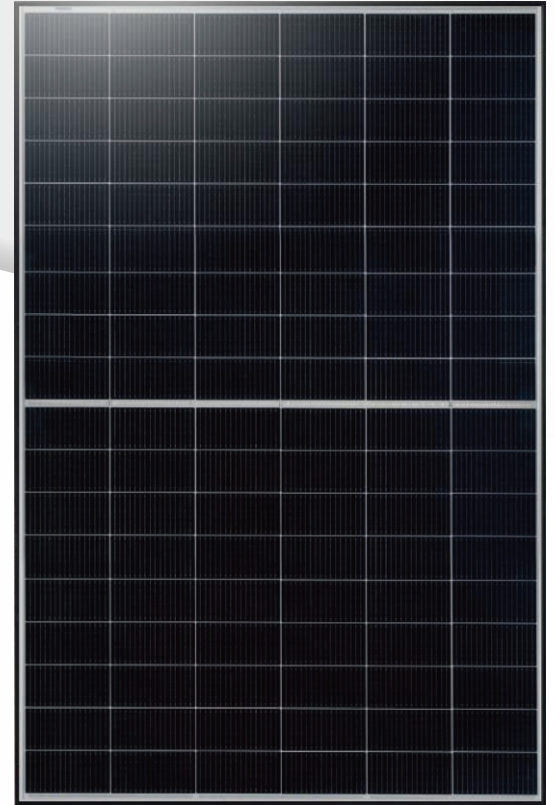
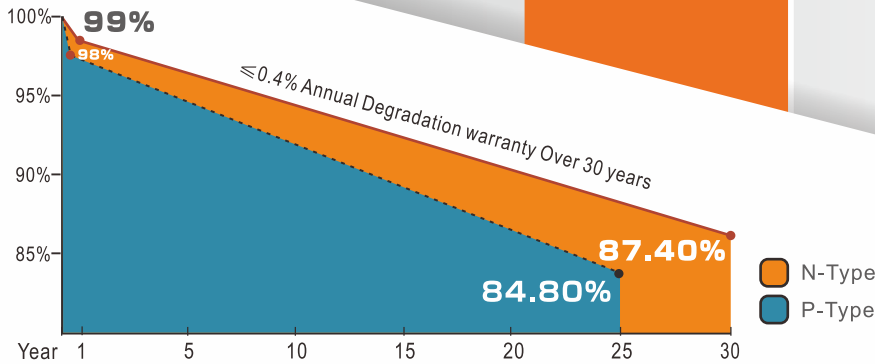


MONO-FACIAL MODULE N-TYPE 460~475 Watt



TOPCON



Cutting Free Technology
Minimized micro-crack



Anti-PID (potential induced degradation)
Passed anti-PID test under 85°C damp heat
85% relative humidity for 192 hours



Great Durability against extreme conditions
Passed salt mist corrosion test, ammonia corrosion test
dust & sand test, fire test, all certified by TÜV



Lower LCOE
Lower shading and resistive loss
Lower temperature coefficient



Outstanding mechanical load resistance
2400 Pa wind load, 5400 Pa snow load



15-year product warranty

30-year linear power output



CEC Listed



IEC 61215, IEC 61730

ISO 9001: 2015 (Quality management systems)

ISO 14001: 2015 (Environmental management systems)

ISO 45001: 2018 (Occupational health and safety)

UNI 9177 la CLASSE DI REAZIONE AL FUOCO:1



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TOPCon(N TYPE) 460~475Watt

ELECTRICAL SPECIFICATIONS

| Module Type | UL-460M-108CHVN | | UL-465M-108CHVN | | UL-470M-108CHVN | | UL-475M-108CHVN | |
|---|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
| | STC* | NOCT* | STC* | NOCT* | STC* | NOCT* | STC* | NOCT* |
| Maximum Power (Pmax) | W 460 | 349 | 465 | 352 | 470 | 356 | 475 | 360 |
| Maximum Power Voltage (Vmp) | V 33.22 | 30.56 | 33.42 | 30.75 | 33.62 | 30.93 | 33.82 | 31.11 |
| Maximum Power Current (Imp) | A 13.85 | 11.41 | 13.91 | 11.46 | 13.98 | 11.52 | 14.04 | 11.57 |
| Open-circuit Voltage (Voc) | V 39.78 | 36.20 | 39.98 | 36.38 | 40.18 | 36.56 | 40.38 | 36.75 |
| Short-circuit Current (Isc) | A 14.71 | 11.87 | 14.78 | 11.92 | 14.83 | 11.96 | 14.89 | 12.01 |
| Module Efficiency STC | % 22.54 | | 22.78 | | 23.03 | | 23.27 | |
| Operating Temperature | -40°C~85°C | | | | | | | |
| Maximum system voltage | DC1500V(IEC) | | | | | | | |
| Maximum series fuse rating | 25A | | | | | | | |
| Power tolerance | 0~+5 Watt | | | | | | | |
| Temperature coefficients of Pmax | -0.29%/°C | | | | | | | |
| Temperature coefficients of Voc | -0.25%/°C | | | | | | | |
| Temperature coefficients of Isc | 0.046%/°C | | | | | | | |
| Nominal operating cell temperature (NOCT) | 43±2°C | | | | | | | |

*STC : Cell temperature: 25°C, Irradiance: 1000 W/m², Air mass: 1.5G

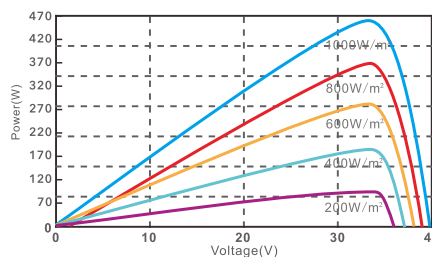
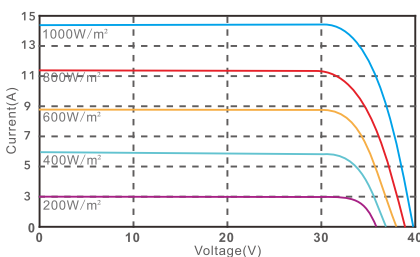
*NOTC : Air temperature: 20°C, Irradiance: 800 W/m², Air mass: 1.5G, Wind speed: 1 m/s

SPECIFICATIONS

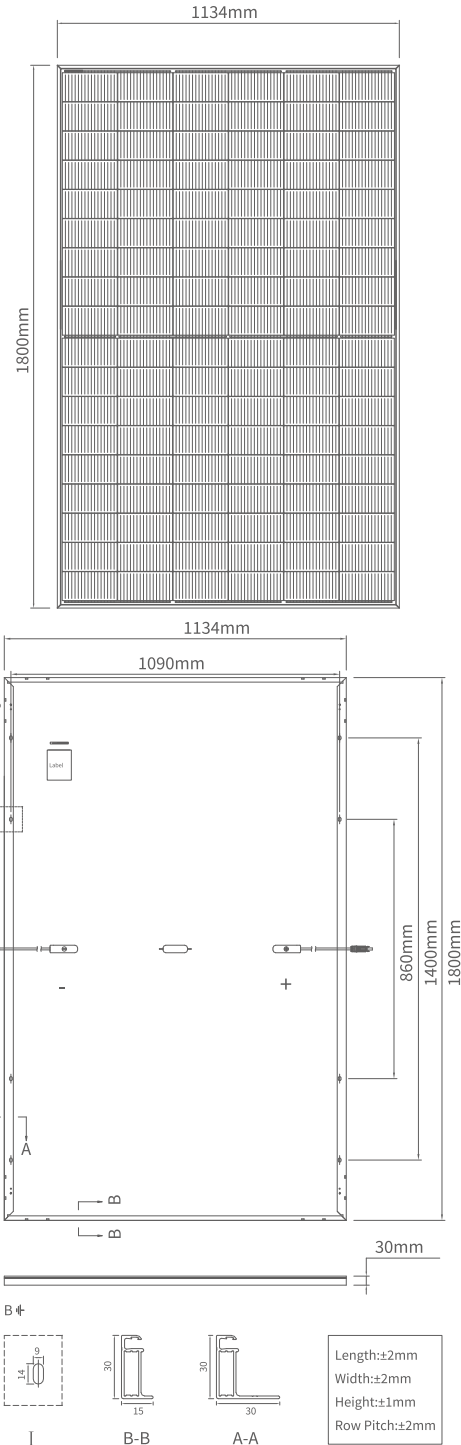
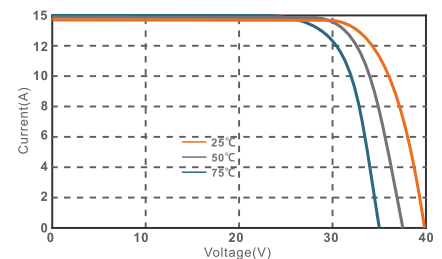
| | |
|------------------------------------|---|
| Cell Type | N type Mono-crystalline |
| No. of cells | 108 (6×9×2) |
| Dimensions | 1800*1134*30mm |
| Weight | 21.5Kg |
| Front Glass | 3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass |
| Junction Box | IP68, 3 diodes |
| Connector | MC4 Compatible |
| Cable Length (Including Connector) | 4mm ² Landscape: (+)1200/(-)1200mm or Customized Length |
| Packaging Configuration | Two Box=One Pallet 36pcs/Box, 72pcs/Pallet, 936pcs/40HQ Container |

I-V CURVE

I-V characteristics at different irradiations (reference to 465 W)



I-V characteristics at different temperature



Specifications included in this datasheet are subject to change without notice.

Ulica Solar reserves the right of final interpretation.

Version No.: UL-1800-108CHVNHC-30-EN-V1.0