

# TCL 182

## TCL-MR420~435DH182-54NTB

TOPCon Bifacial (All Black) High Efficiency PV Module

### PRODUCT FEATURES



#### HIGHER POWER DENSITY

- Output up to 435watt on 1.952M<sup>2</sup>
- Module efficiency high to 22.3%
- Gain more solar power per square meter



#### SEMI+SMBB

- Semi design deduce working temperature of operation and minimize hot-spot risk
- SMBB design deduce cover of busbars and improve current collection ability on windy days
- Improve the output/watt



#### ENHANCED MECHANICAL LOAD

- Wind load 2400 Pascal
- Snow load 5400 Pascal



#### APPLIED UNDER STRICT CONDITIONS

- Modules could be applied under ammonia, salt mist, high temperature, high humidity condition



#### IP68

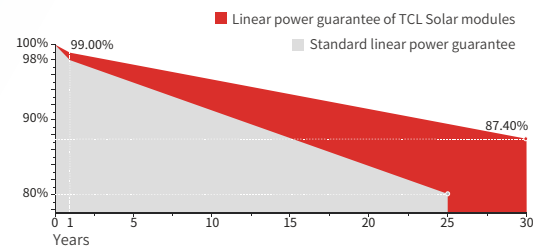
- IP68 junction boxes improve water-proof performance



#### EXCELLENT FIRE-PROOF PERFORMANCE

- Modules have passed anti-fire test

### LINEAR PERFORMANCE WARRANTY



**15 YEARS** product warranty

**0.40%** Linear attenuation of 0.40% per year within 30 years

**30 YEARS** linear power warranty

### CERTIFICATES

- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational health and safety management systems



## Electrical Data (STC)

Rated Power In Watts-Pmax (Wp)	420	425	430	435
Maximum Power Voltage-Vmpp (V)	31.84	32.05	32.26	32.47
Maximum Power Current-Impp (A)	13.19	13.26	13.33	13.40
Open Circuit Voltage-Voc (V)	38.04	38.23	38.42	38.61
Short Circuit Current-Isc (A)	14	14.08	14.16	14.24
Module Efficiency (%)	21.5%	21.8%	22.0%	22.3%

STC: Irradiation 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

## Electrical Data (NMOT)

Maximum Power-Pmax (Wp)	318	322	326	330
Maximum Power Voltage-Vmpp (V)	29.95	30.11	30.24	30.39
Maximum Power Current-Impp (A)	10.62	10.7	10.78	10.86
Open Circuit Voltage-Voc (V)	36.2	36.38	36.56	36.74
Short Circuit Current-Isc (A)	11.21	11.27	11.33	11.39

NMOT: Irradiation: 800 W/m<sup>2</sup>, ambient temperature: 20°C, air mass: 1.5, wind speed 1 m/s

## Electrical Characteristics With Different Rear Side Power Again (Reference To 435w Front)

Pmax gain (%)	5%	10%	15%	20%	25%
Maximum Power (Pmax/W)	457	479	500	522	544
Maximum Power Voltage (Vmpp/V)	32.47	32.47	32.47	32.47	32.47
Maximum Power Current (Impp/A)	14.07	14.74	15.41	16.08	16.75

## Mechanical Characteristics

Solar Cells	Monocrystalline N-type, SMBB
Cell Configuration	108 cells (6 x 9 x 2)
Module Dimensions	1722 x 1134 x 30 mm
Weight	22.0 kg
Glass	1.6mm Tempered ARC Glass
Back Sheet	1.6mm Glass, Black
Frame	Anodized Aluminium Alloy, Black
J-Box	IP68, 3 bypass diodes
Cables	4.0mm <sup>2</sup> , (+) 380mm, (-) 380mm or customized length
Connector	MC4 EVO2 & Compatible

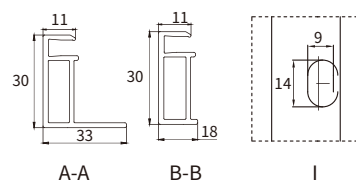
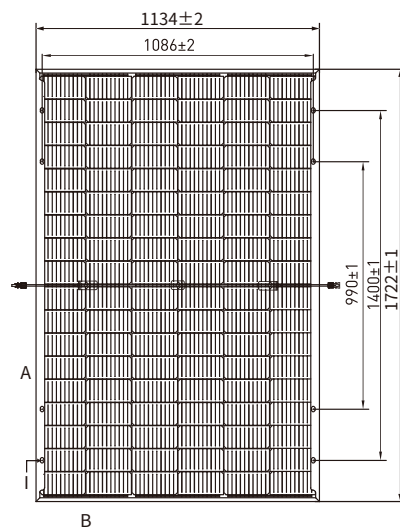
## Temperature & Maximum Ratings

Nominal Module Operating Temperature (NMOT)	44 ± 2°C
Temperature Coefficient of VOC	-0.25% / °C
Temperature Coefficient of ISC	0.045% / °C
Temperature Coefficient of PMAX	-0.30% / °C
Operational Temperature	-40 °C ~ +85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	25A

## Packaging Configuration

	40 FT (HQ)
Number of Modules Per Container	936
Number of Modules Per Pallet	36
Number of Pallets Per Container	26

## Module Dimensions (mm)



## I-V Curve

