

C2 Residential Solar Panel TCL Solar Back Contact

HSM-BE54-HD480-485

485W

Maximum Power Output

Up to 23.8% efficiency



Full Screen, Shingled
Back Contact



Ammonia
corrosion certified



Framed glass-glass
with black tint



Salt mist corrosion
certified

Higher energy density

Lower operating temperature

Lower hotspot temperature

Reduced risk of micro-cracks

Refined design

Busbar-free front side

Comprehensive warranty coverage

25-year Product warranty

30-year Linear power coverage

99.0% minimum warranted output at Year 1

Maximum annual degradation 0.35%



Comprehensive Products and System Certificates



IEC 61215 / IEC 61730 ISO 9001:2015 ISO 45001:2018 ISO 14001:2015



Learn more about TCL Solar panels
www.tclsolar.com/resources

Made in China
TCL Zhonghuan Energy Technology (Jiangsu) Co., Ltd.

Measurement Tolerance: P_{max} (W) ±3%; V_{oc} (V) ±3%; I_{sc} (A) ±5%
* STC: Irradiance 1000W/m², Cell Temperature 25°C, AM1.5

Electrical Parameters (STC*)

Maximum Power	P _{max} (W)	480	485
Open Circuit Voltage	V _{oc} (V)	40.33	40.45
Short Circuit Current	I _{sc} (A)	15.08	15.18
Maximum Power Voltage	V _{mp} (V)	33.52	33.64
Maximum Power Current	I _{mp} (A)	14.32	14.42
Module Efficiency	(%)	23.6	23.8

Temperature Coefficient

Nominal Module Operating Temperature* 42±2°C

*NMOT: Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Temperature Coefficient of I_{sc} +0.05%/°C

Temperature Coefficient of V_{oc} -0.22%/°C

Temperature Coefficient of P_{max} -0.26%/°C

Operating Parameters

Operation Temperature -40°C to +70°C (IEC TS 63126)

Maximum System Voltage 1500V DC

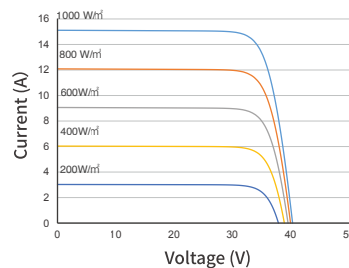
Maximum Series Fuse Rating 30A

Safety Protection Class II

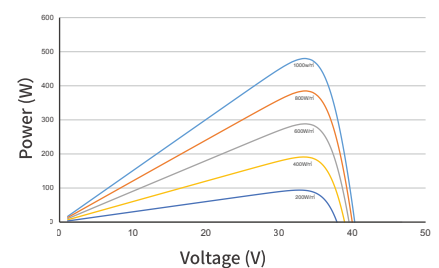
Fire Rating Class A

Curve Graph

I-V Curves (480W)



P-V Curves (480W)



Engineering Drawing

[Unit: mm]

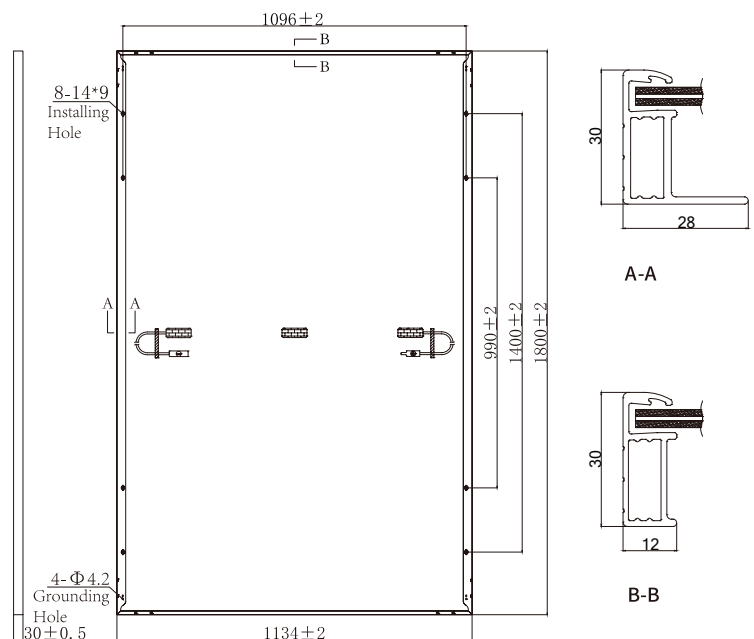
Mechanical Data

* Please refer to installation manual for details

No. of Cells	108pcs
Dimension	1800×1134×30 mm
Weight	24.7kg±3%
Front Glass	2.0mm, Heat Strengthened, AR coating Glass
Back Sheet	2.0mm, Heat Strengthened Glass
Frame	Black Anodized Aluminium Alloy
J-Box	IP68, 3 bypass diodes
Cables	4.0mm ² , +1200mm, -1200mm (can be customized)
Maximum Static Load	Front: 5400Pa/Back: 2400Pa*
Connectors	Stäubli MC4-EVO2A

Packaging Configuration

Modules per Pallet	36pcs
Modules per 40'HQ Container	936pcs
Pallets per 40'HQ Container	26pcs



Please read the safety and installation instructions. Visit www.tclsolar.com/resources

1 Tier1 BloombergNEF based on <https://taiyangnews.info/topmodules/top-solarmodules-listing-january-2026>.

2 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage.

3 Measurement tolerance is P_{max} ± 3%, V_{oc} ± 3%, I_{sc} ± 4%

4 Test load as per IEC 61215-2 is equal to design load with safety factor = 1.5. See "Safety and Installation Instructions" for details.