

## T5 Pro S

Solar panel - HSM-NT48-JH

450-475 W | Up to 24.0 % efficiency



### More energy from your system

High efficiency N Type cells generate more power from the same space-maximizing savings without expanding your system

### Consistent power, all day long

Smart design helps maintain energy production even with shade or low light conditions

### Built to protect your investment

Durable glass glass construction combined with proprietary multi-cut shingled technology enables ultra-low degradation to keep your system producing for decades

### 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](http://www.tclsolar.com/resources)

## Electrical Parameters (STC\*)

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM1.5, Measuring Tolerance: ±3 %

Maximum Power	P <sub>max</sub> (W)	450	455	460	465	470	475
Open Circuit Voltage	V <sub>oc</sub> (V)	52.99	53.39	53.79	54.19	54.59	54.89
Short Circuit Current	I <sub>sc</sub> (A)	10.74	10.78	10.82	10.87	10.91	10.95
Maximum Power Voltage	V <sub>mp</sub> (V)	44.50	44.90	45.30	45.70	46.10	46.40
Maximum Power Current	I <sub>mp</sub> (A)	10.12	10.14	10.16	10.18	10.20	10.24
Module Efficiency	(%)	22.5	22.8	23.0	23.3	23.5	23.8

## Temperature Coefficient

Nominal Module Operating Temperature*	43±2 °C
Temperature Coefficient of I <sub>sc</sub>	+0.046 %/°C
Temperature Coefficient of V <sub>oc</sub>	-0.24 %/°C
Temperature Coefficient of P <sub>max</sub>	-0.26 %/°C

## Operating Parameters

Operating Temperature	-40~+70 °C
Maximum System Voltage	1500 V DC
Maximum Series Fuse Rating	25 A
Safety Protection	Class II
Fire Rating	Class C

## Mechanical Data

\* Please refer to installation manual for details

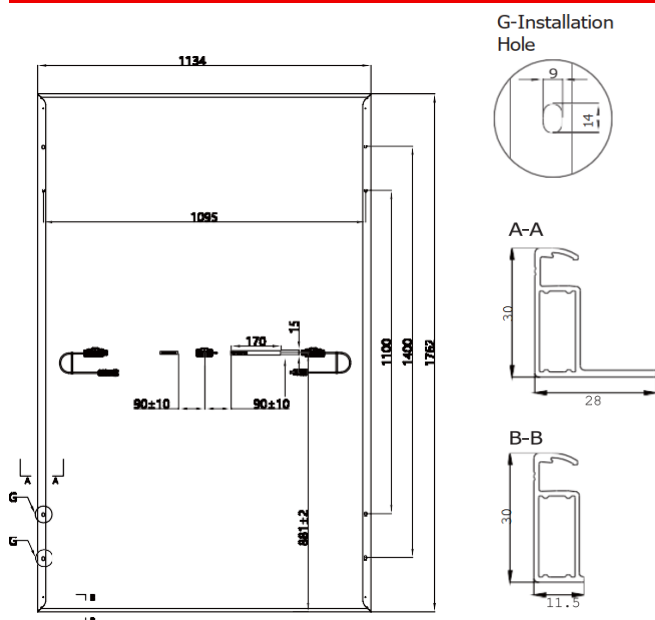
No. of Cells	144 pcs (6×24)
Dimension	1762×1134×30 mm
Weight	24.5 kg ±3 %
Front Glass	2.0 mm, Heat Strengthened, AR coating Glass
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Black Anodized Aluminium Alloy
J-Box / Diodes	IP68 / three diodes
Cables / Connector	4.0 mm <sup>2</sup> / ±1200 mm / EVO2
Maximum Static Load	Front: 5400 Pa / Back: 2400 Pa*

## Packaging Configuration

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

## Engineering Drawing

[Unit: mm]



Please read the safety and installation instructions.  
Visit [www.tclsolar.com/resources](http://www.tclsolar.com/resources)  
Paper version can be requested through  
[techsupport.EN@sunpowerglobal.com](mailto:techsupport.EN@sunpowerglobal.com)

Publication: April 2026