

T5 Pro L

Solar panel: HSM-NT66-GH

640-670 W | Up to 24.8 % efficiency



210R+
N-type TOPCon

G12 wafer, larger
production area



Up to 85 %
power bifaciality



Silver framed
glass-glass with white tint



Multi-cut
shingled

Higher output per installed MW

N-Type TOPCon bifacial technology and shingled structure deliver higher conversion efficiency, increasing energy yield from every installed megawatt.

Stable yield in real world conditions

Optimized circuit architecture helps maintain production under partial shading and low light conditions, reducing yield risk across diverse site conditions.

Long term performance security

Multi-cut shingled glass-glass construction, 0.35 % annual degradation, and 30-year power warranty ensure predictable lifetime energy and bankable returns.

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 %

S&P Global



Comprehensive Products and System Certificates



IEC 61215 / IEC 61730



ISO 9001:2015



ISO 45001:2018



ISO 14001:2015



Electrical Parameters (STC* & BNPI*)

Test Conditions		STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
Maximum Power	P _{max} (W)	640	713	645	719	650	725	655	730	660	736	665	741	670	747
Power Binning	(%)	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0	+3/0
Open-Circuit Voltage	V _{oc} (V)	49.7	49.7	49.85	49.85	50.0	50.0	50.15	50.15	50.3	50.3	50.43	50.43	50.58	50.58
Short-Circuit Current	I _{sc} (A)	16.10	17.95	16.17	18.03	16.24	18.10	16.31	18.18	16.38	18.26	16.45	18.34	16.52	18.42
Rated Voltage	V _{mp} (V)	41.74	41.74	41.87	41.87	42.0	42.0	42.14	42.14	42.27	42.27	42.4	42.4	42.53	42.53
Rated Current	I _{mp} (A)	15.34	17.10	15.41	17.18	15.48	17.26	15.55	17.33	15.62	17.41	15.69	17.49	15.76	17.57
Panel Efficiency	(%)	23.7		23.9		24.1		24.2		24.4		24.6		24.8	

* STC: Irradiance 1000 W/m², Cell Temperature 25 °C, AM1.5, Measuring Tolerance: ±3 %
* BNPI: Back Irradiance 135 W/m², Cell Temperature 25 °C, AM1.5, Measuring Tolerance: ±3 %

Electrical Characteristic with Different Bifacial Gain*

Bifacial Gain		5 %	10 %	5 %	10 %	5 %	10 %	5 %	10 %	5 %	10 %	5 %	10 %	5 %	10 %
Maximum Power	P _{max} (W)	672	704	677	710	683	715	688	721	693	726	698	732	704	737
Open Circuit Voltage	V _{oc} (V)	49.7	49.7	49.85	49.85	50.0	50.0	50.15	50.15	50.3	50.3	50.43	50.43	50.58	50.58
Short Circuit Current	I _{sc} (A)	16.91	17.71	16.98	17.79	17.05	17.86	17.13	17.94	17.20	18.02	17.27	18.10	17.35	18.17
Maximum Power Voltage	V _{mp} (V)	41.74	41.74	41.87	41.87	42.0	42.0	42.14	42.14	42.27	42.27	42.4	42.4	42.53	42.53
Maximum Power Current	I _{mp} (A)	16.11	16.87	16.18	16.95	16.20	17.03	16.33	17.11	16.40	17.18	16.47	17.26	16.55	17.34

* The additional gain from the back side depends on the mounting (structure, height, tilt angle etc.) and albedo of the ground

Temperature Coefficient

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

Operating Parameters

Operating Temperature	-40~+70 °C
Maximum System Voltage	1500 V DC
Maximum Series Fuse Rating	30 A
Power Bifaciality	85±5 %
Safety Protection	Class II
Fire Rating	Class C

Mechanical Data

* Please refer to installation manual for details

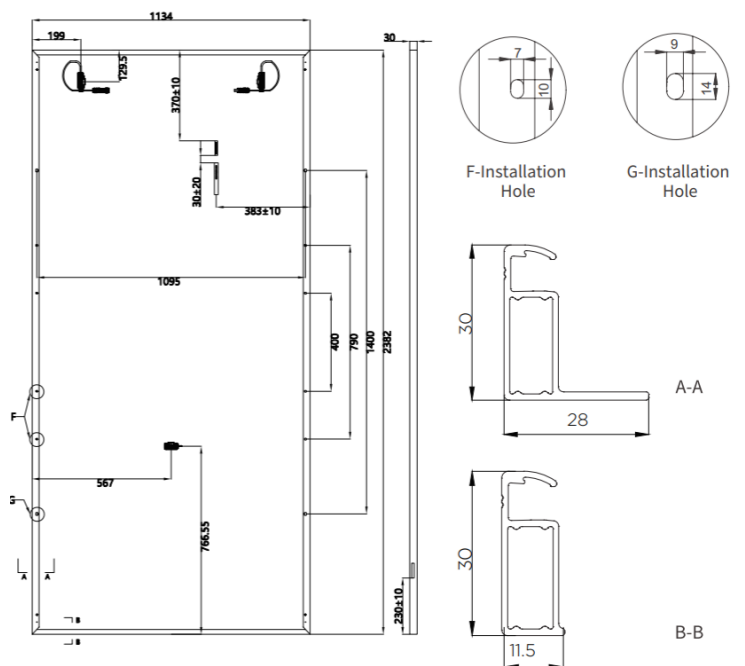
No. of Cells	198 pcs (6×33)
Dimension	2382×1134×30 mm
Weight	32.6 kg ±3 %
Front Glass	2.0 mm, Heat Strengthened, AR coating Glass
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
J-Box / Diodes	IP68 / three diodes
Cables	4.0 mm ² / ±1400 mm
Connector	Huanxin H4 or Stäubli EVO2A
Maximum Static Load	Front: 5400 Pa / Back: 2400 Pa*

Packaging Configuration

Modules per Pallet	36 pcs
Modules per 40'HQ Container	720 pcs

Engineering Drawing

[Unit: mm]



Please read the safety and installation instructions.
Visit www.tclsolar.com/resources
Paper version can be requested through
techsupport.EN@sunpowerglobal.com