TCL SOLAR

BC 192R N-type TBC

G11RA-72P

N-type Bifacial Double Glass Module

HSM-BD72-GC635~665

665W
Maximum Power Output

24.6%
Maximum Efficiency

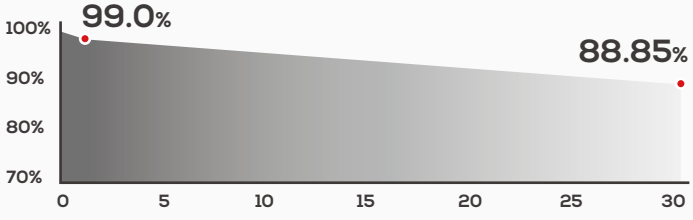
TIER 1 BloombergNEF

- Higher energy density; lower operating temperature
- Lower hotspot temperature; reduce risk of micro-cracks
- Refined design, Busbar-free front side
- Comprehensive supply chain integration, redefining BC standards

Linear Performance Warranty

15 Years Product Warranty

30 Years Linear Performance Warranty



* Please refer to product warranty for details

Comprehensive Products and System Certificates

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

Version No.:HC-N-HSM2025-0910-EN

HSM-BD72-GC635~665 | TBC

665W Maximum Power | **24.6%** Maximum Efficiency | **0~+3%** Power Tolerance

Electrical Parameters (STC* & BNPI*)

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

Testing Condition		STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
Maximum Power	Pmax (W)	635	694	640	699	645	705	650	710	655	716	660	721	665	727
Open Circuit Voltage	Voc (V)	53.70	53.84	53.80	53.92	53.90	54.06	54.00	54.15	54.10	54.25	54.20	54.33	54.30	54.45
Short Circuit Current	Isc (A)	14.96	16.30	15.04	16.38	15.12	16.48	15.20	16.56	15.28	16.66	15.36	16.74	15.44	16.83
Maximum Power Voltage	Vmp (V)	45.00	44.98	45.10	45.07	45.20	45.20	45.30	45.29	45.40	45.41	45.50	45.49	45.60	45.61
Maximum Power Current	Imp (A)	14.12	15.43	14.20	15.51	14.27	15.60	14.35	15.68	14.43	15.77	14.51	15.85	14.59	15.94
Module Efficiency	(%)	23.5		23.7		23.9		24.1		24.2		24.4		24.6	

Electrical Characteristics with Different Bifacial Gain*

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

Bifacial Gain		5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Maximum Power	Pmax (W)	667	699	672	704	677	710	683	715	688	721	693	726	698	732
Open Circuit Voltage	Voc (V)	53.70	53.70	53.80	53.80	53.90	53.90	54.00	54.00	54.10	54.10	54.20	54.20	54.30	54.30
Short Circuit Current	Isc (A)	15.71	16.46	15.79	16.54	15.88	16.63	15.96	16.72	16.04	16.81	16.13	16.90	16.21	16.98
Maximum Power Voltage	Vmp (V)	45.00	45.00	45.10	45.10	45.20	45.20	45.30	45.30	45.40	45.40	45.50	45.50	45.60	45.60
Maximum Power Current	Imp (A)	14.83	15.53	14.91	15.62	14.98	15.70	15.07	15.79	15.15	15.87	15.24	15.96	15.32	16.05

Temperature Coefficient

Nominal Module Operating Temperature*	43±2°C
Temperature Coefficient of Isc	+0.05%/°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Pmax	-0.26%/°C

Operating Parameters

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

Mechanical Data

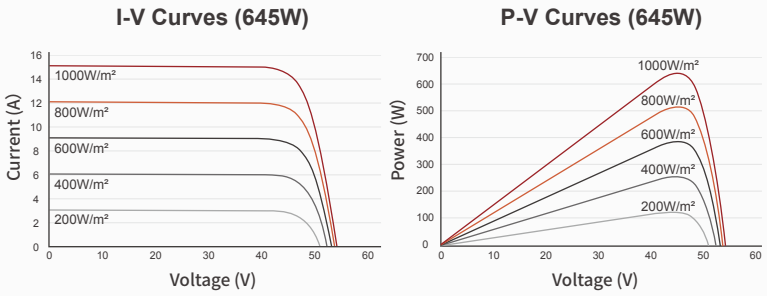
* Please refer to installation manual for details

No.of Cells	144pcs (6×24)
Dimension	2382×1134×30 mm
Weight	32.3kg ±3%
Front Glass	2.0mm, Heat Strengthened, AR coating Glass
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
J-Box	IP68, three diodes
Cables	4.0mm², +300mm, -200mm (can be customized)
Maximum Static Load	Front: 5400Pa/Back: 2400Pa*

Packaging Configuration

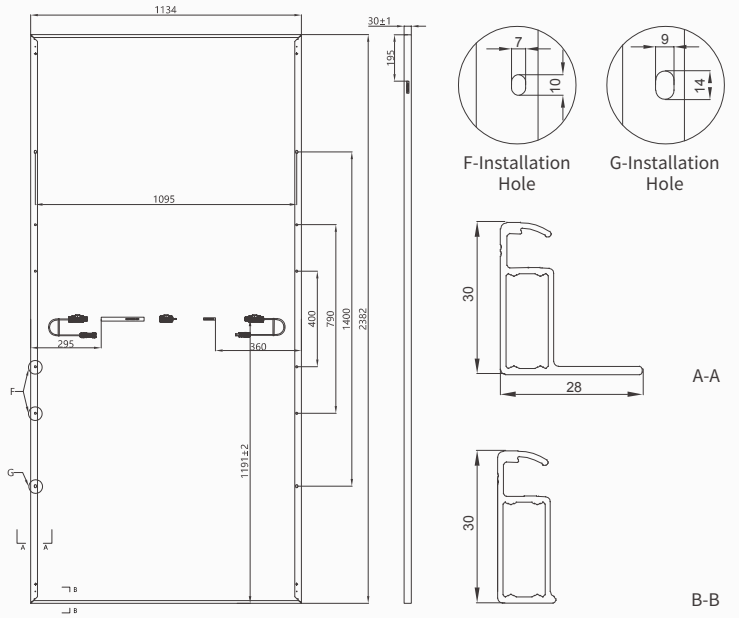
Modules per Pallet	36pcs
Modules per 40'HQ Container	720pcs
Pallets per 40'HQ Container	20pcs

Curve Graph



Engineering Drawing

[Unit: mm]



TCL SOLAR

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Datasheets