



BIFACIAL N-TYPE TOPCon BLACK PATTERNED BACKSHEET

108 CELL HALF CUT

GTB54HM10XXX = 420 to 445Wp

22.80%
MODULE
CONVERSION
EFFICIENCY

12
YEARS
PRODUCT
WARRANTY*

25
YEARS
LINEAR
PERFORMANCE
WARRANTY**

ASSURED
89.40%
**POWER
OUTPUT**
AT THE END OF
25TH YEAR

**MADE IN
INDIA**

KEY FEATURES



Cutting Edge
Manufacturing
Technology



Seamless Rooftop Integration
with Striking Aesthetics and
Improved Winter Energy Yield



100% String Level
EL and Triple
Stage EL Testing



PID Resistance and Minimized LID and
LeTID by Adopting Advanced Cell
Technology



Excellent Performance
at Dawn, Dusk and
Low Light



Advance MBB Technology Enhances
Redundancy, Minimizes Performance
Loss from Micro Cracks & Ensures
Long-term Durability and Efficiency

QUALITY & RELIABILITY

1

Qualified Premium Quality Raw
Materials

3

IP-68 Junction Box for Long-Term
Weather Endurance

2

In-House Laboratory Checks
at Multiple Stages

4

Suitable for 1500 VDC

CERTIFICATIONS[#]

IEC 61730 | IEC 61215 | IEC 62804 | IEC 61701 | IEC 62716 | IEC 62782 | IEC 61853-1 & 2 |
IEC 60068 | IEC 62759 | UL 61730 – 1 & 2



• Manufactured in an ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 certified facility.

[#]Certifications in process

Technical Data for GTB54HM10XXX - TOPCon Module

Electrical Parameter at STC

Module Type	GTB54HM10XXX					
Peak Power - (0~+4.99 Wp)	420	425	430	435	440	445
Pmax(Wp)						
Open Circuit Voltage - Voc (V)	38.87	38.99	39.11	39.23	39.35	39.47
Short Circuit Current - Isc (A)	13.71	13.81	13.91	14.01	14.11	14.21
Rated Voltage - Vmp (V)	32.11	32.24	32.38	32.51	32.65	32.79
Rated Current - Imp (A)	13.08	13.18	13.28	13.38	13.48	13.58
Module Efficiency (%)	21.51	21.76	22.02	22.28	22.53	22.80
NOCT - P (Wp)	315	318	322	326	330	334

Under Standard Test Conditions (STC) of irradiance 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.
NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec.

Temperature Coefficient (TC)

Temperature Coefficient (β)	-0.18% /°C
Temperature Coefficient (α)	0.035% /°C
Temperature Coefficient (γ)	-0.27% /°C

Packing Configuration

Container	40'FT
Modules per Pallet	37
Pallets per Container	26
Modules per Container	962

Electrical Parameters at BNPI

Maximum Power - Pmax (Wp)	464	469	475	480	485
Maximum Power Current - Imp (A)	14.31	14.39	14.47	14.54	14.61
Maximum Power Voltage - Vmp (V)	32.43	32.63	32.83	33.03	33.23
Short-Circuit Current - Isc (A)	15.14	15.23	15.33	15.42	15.51
Open - Circuit Voltage - Voc (V)	38.95	39.15	39.15	39.25	39.35

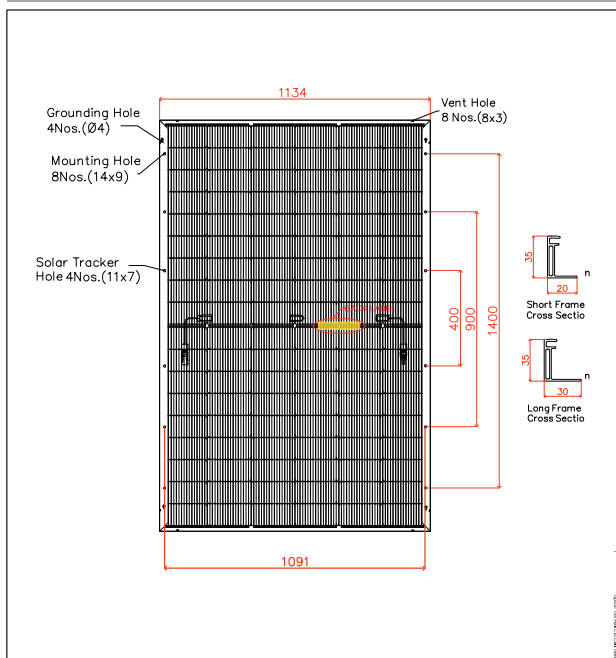
For STC and BNPI, except Pmax, all other parameters have a tolerance of ±3%.
Measurement uncertainty of ±3%.

BNPI: Irradiance front 1000W/m² and rear 135 W/m², cell temperature 25°C, AM=1.5.

Electrical Parameters | NOCT³

Maximum Power - Pmax (Wp)	315	318	322	326	330	334
Maximum Power Current - Imp (A)	10.46	10.52	10.60	10.69	10.78	10.86
Maximum Power Voltage - Vmp (V)	30.12	30.24	30.37	30.49	30.63	30.76
Short-Circuit Current - Isc (A)	10.97	11.05	11.13	11.21	11.29	11.37
Open - Circuit Voltage - Voc (V)	36.54	36.65	36.76	36.88	36.99	37.10

Mechanical Drawing



- All measurements are in mm
- Mechanical Tolerance for ≤40mm is ±0.5mm
- Mechanical Tolerance for >40mm is ±2mm

GREW Solar reserves the right to modify the specifications and features outlined in this datasheet at any time without prior notice.

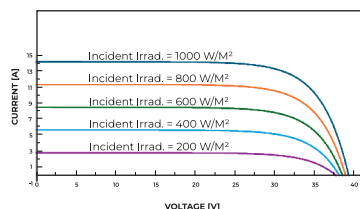
Mechanical Specification

Specification	Details
Solar Cells	N-Type Bifacial TOPCon, MBB, 108 Half-Cut
Front Glass	3.2 mm, High Transmission, ARC Tempered Glass
Encapsulation	Ultra - Clear PID Free
Backside	Black Mesh/Patterned Transparent Backsheet
Frame	Black Anodized Aluminium Alloy
Dimensions	(L) 1722 mm x (W) 1134 mm x (H) 35 mm
Weight	~21 kg±3%
J - Box	IP 68 certified, 3 Diodes
Cable	Solar Cable 4mm ² 400mm can be Customized
Connectors	MC4-Compatible Connectors or Stäubli MC4
Application Class	Class A
Electrical Safety	Class II
Fire Safety	Class C (Type 1)
Surface Load	Snow Load - 5400 Pa Wind Load - 2400 Pa
Overcurrent Protection Rating	30 A

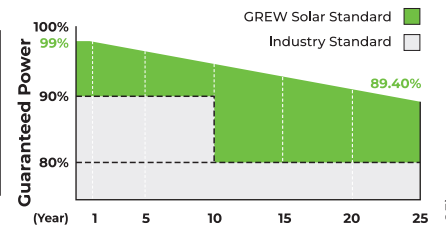
Permissible Operating Conditions

Temperature Range	-40°C to + 85°C
Maximum System Voltage	1500 VDC
NOCT	47± 2°C
Bifaciality	80 ± 5%

IV Curve



Linear Performance Warranty



*Warranty claims are applicable as per GEPL's manual guidelines.

**Linear Performance Warranty with 1% degradation in the 1st year and only 0.4% from year 2 to 25.

- When unpacking and installing this product, it is crucial to diligently consult the guidelines outlined in the company manual. Doing so will enable you to handle and install the product accurately and mitigate any potential risk of damage.
- Ensure proper disposal of the product as E-waste when it reaches the end of its operational lifespan, to safeguard the environment.

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