

PERC Technology

Half-cell Mono PERC GHM-144HL Series



High Efficiency Monocrystalline Half-cut Cell Solar
Module with Perc Technology (1500V)

390-410W



Higher Module Efficiency

Brings 5-10W power gain due to half-cut production system



More Energy Yield

Lower NMOT and better temperature coefficient by lower cell series resistance, helps boost energy yield



Lower Operating Temperature, More Reliable

Lower operating temperature and hot spot temperature during the sunny day, making the module prevail during the sunny days



Better Shading Tolerance

Thanks to Paralleling circuit design, more power generated under shading condition and during morning & evening time



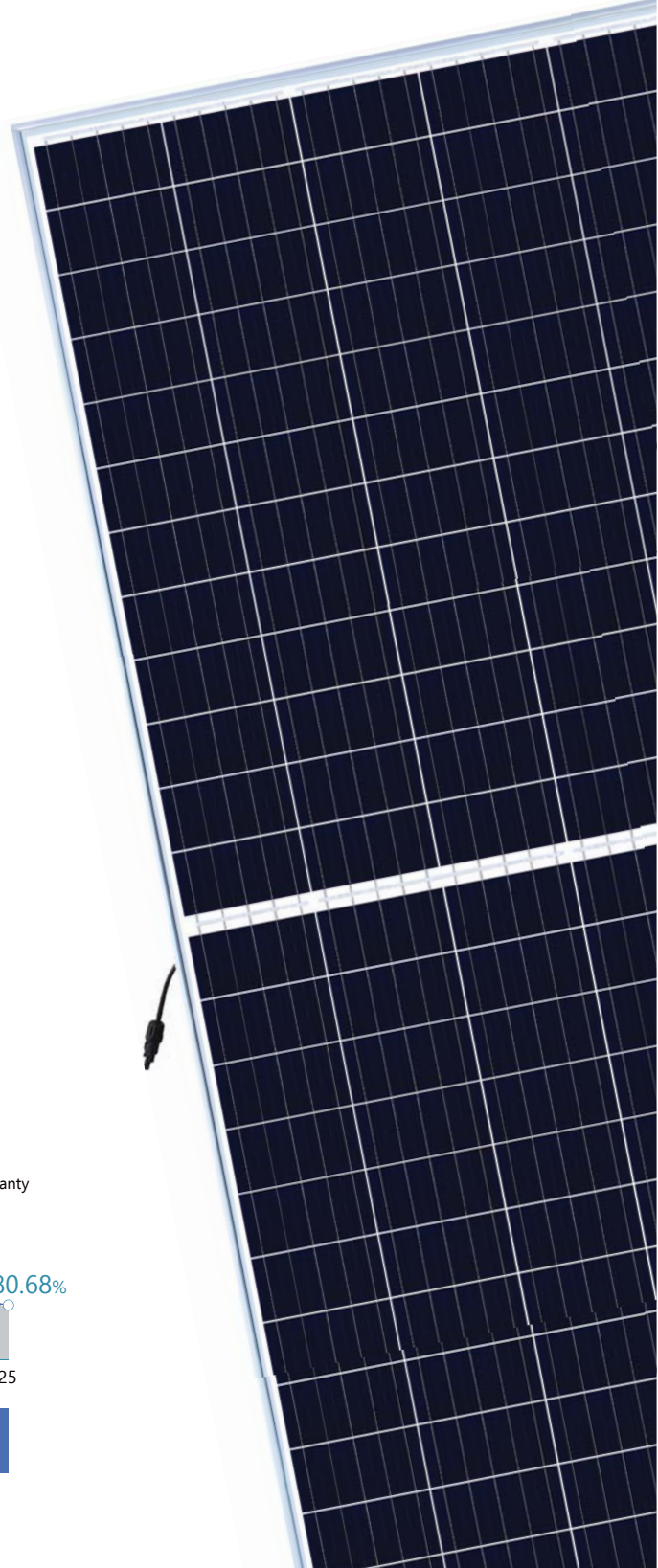
Better Micro Crack Resistance

Minimize the impact by micro crack by limiting cell damage and potentially extending area by half-cut module architecture

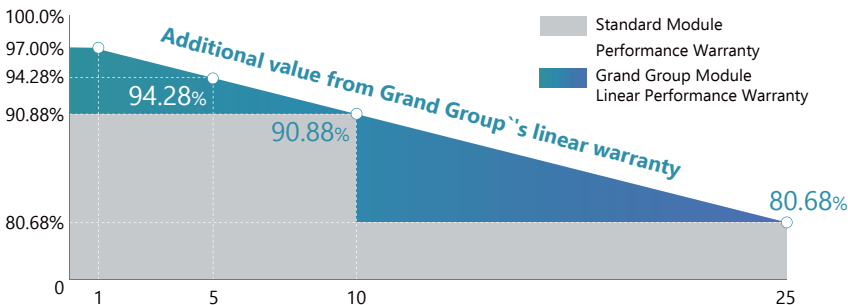


1500V System Voltage

Approved IEC1500Vdc system voltage, saving on BoS cost



LINEAR PERFORMANCE WARRANTY



10years Product Material & Workmanship

25years Linear Performance Warranty

ELECTRICAL DATA @ STC*		GHM390-144HL	GHM395-144HL	GHM400-144HL	GHM405-144HL	GHM410-144HL
Peak Power (Pmax)	(W)	390	395	400	405	410
Maximum Power Voltage (Vmp)	(V)	40.93	41.07	41.28	41.46	41.64
Maximum Power Current (Imp)	(A)	9.53	9.62	9.69	9.77	9.85
Open-circuit Voltage (Voc)	(V)	49.26	49.48	49.71	49.94	50.16
Short-circuit Current (Isc)	(A)	10.32	10.39	10.46	10.53	10.60
Module Efficiency	(%)	19.40	19.65	19.90	20.15	20.40
Operating Temperature		-40°C~+85°C				
Maximum System Voltage		1500V				
Maximum Series Fuse Rating		20A				
Fire Class		Class C				
Power Sorting		0~+4.99W				

*STC (Standard Test Condition): Irradiance 1000W/ m², Module Temperature 25°C, AM 1.5

ELECTRICAL DATA @ NMOT*		GHM390-144HL	GHM395-144HL	GHM400-144HL	GHM405-144HL	GHM410-144HL
Peak Power (Pmax)	(W)	288	295	298	302	306
MPP Voltage (Vmp)	(V)	37.94	38.23	38.43	38.60	38.77
MPP Current (Imp)	(A)	7.60	7.70	7.76	7.82	7.89
Open Circuit Voltage (Voc)	(V)	46.51	46.87	47.09	47.31	47.52
Short Circuit Current (Isc)	(A)	8.33	8.38	8.44	8.50	8.55

*Under Nominal Module Operating Temperature (NMOT), Irradiance of 800W/ m², Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

TEMPERATURE CHARACTERISTICS	
Temperature coefficient of Pmax	-0.38%/°C
Temperature coefficient of Voc	-0.31%/°C
Temperature coefficient of Isc	0.05%/°C
NMOT	41±3°C

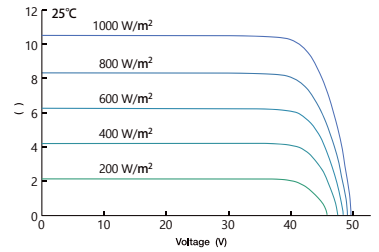
MECHANICAL DATA	
Cell Type	Mono-Crystalline, 158.75×79.38mm
Cell Arrangement	144pcs (2×(6×12))
Dimension (L×W×H)	2008×1002×35mm
Weight	22.5kg
Front Cover	3.2mm Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Cable Type	4mm ²
Length of Cable	1250mm
Connector	PV Connector: Renhe 05-8

PACKING MANNER	
Packing Type	40HQ
Piece/Pallet	30
Pallet/Container	22
Piece/Container	660

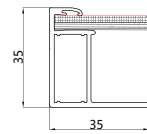
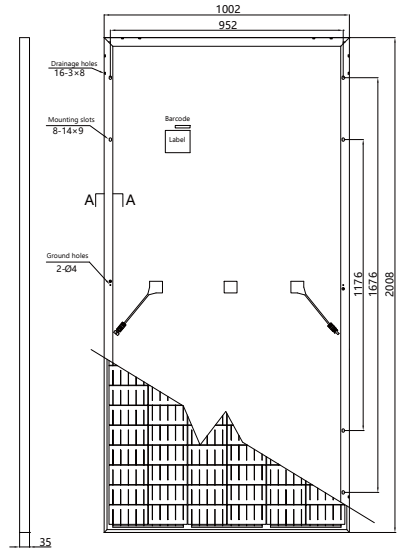
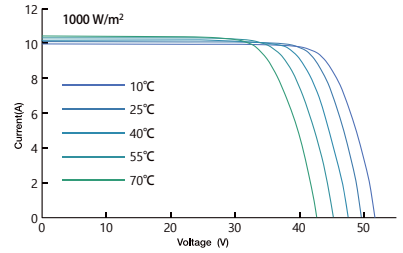
*The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, Grand Group Australia PTY LTD. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

- *Power measurement tolerance: ±3%
- *Voc measurement tolerance: ±3%
- *Isc measurement tolerance: ±3%
- *All the modules are produced in China and shipped to Australia

Current-Voltage Curve under different irradiance



Current-Voltage Curve under different working temperatures



Section A-A

Dimension (unit: mm)