



Mono

465W MBB Half-Cell Module HHM72-6H440-465 Series

Introduction

Assembled with multi-busbar PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.



Higher output power



Lower LCOE



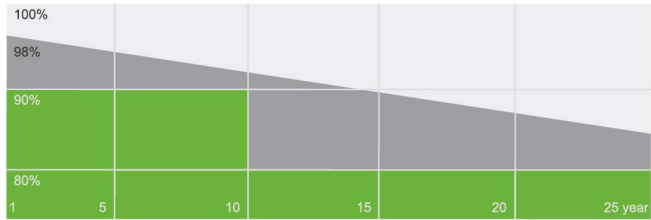
Less shading and lower resistive loss



Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



■ HHLinear Power Warranty ■ Industry Warranty

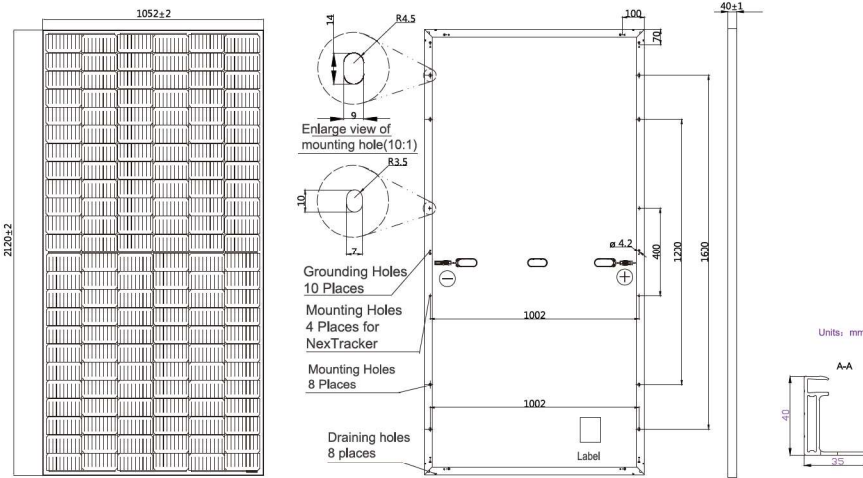
Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval



MECHANICAL DIAGRAMS

SPECIFICATIONS



Remark: customized frame color and cable length available upon request

Cell	Mono
Weight	25.0kg±3%
Dimensions	2120±2mm×1052±2mm×40±1mm
Cable Cross Section Size	4mm ² (IEC) , 12 AWG(UL)
No. of cells	144 (6×24)
Junction Box	IP68, 3 diodes
Connector	QC 4.10(1000V) QC 4.10-35(1500V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Packaging Configuration	27pcs/pallet 594pcs/40ft Container

ELECTRICAL PARAMETERS AT STC

TYPE	HHM72-6H440	HHM72-6H445	HHM72-6H450	HHM72-6H455	HHM72-6H460	HHM72-6H465
Rated Maximum Power(P _{max}) [W]	440	445	450	455	460	465
Open Circuit Voltage(V _{oc}) [V]	49.40	49.56	49.70	49.85	50.01	50.15
Maximum Power Voltage(V _{mp}) [V]	40.90	41.21	41.52	41.82	42.13	42.43
Short Circuit Current(I _{sc}) [A]	11.28	11.32	11.36	11.41	11.45	11.49
Maximum Power Current(I _{mp}) [A]	10.76	10.80	10.84	10.88	10.92	10.96
Module Efficiency [%]	19.7	20.0	20.2	20.4	20.6	20.8
Power Tolerance	0~+5W					
Temperature Coefficient of I _{sc} (α _{Isc})	+0.044%/°C					
Temperature Coefficient of V _{oc} (β _{Voc})	-0.272%/°C					
Temperature Coefficient of P _{max} (γ _{Pmp})	-0.350%/°C					
STC	Irradiance 1000W/m ² , cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

ELECTRICAL PARAMETERS AT NOCT

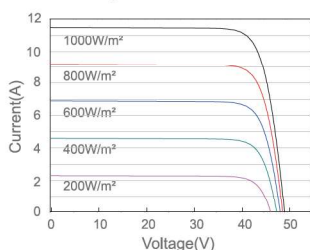
OPERATING CONDITIONS

TYPE	HHM72-6H440	HHM72-6H445	HHM72-6H450	HHM72-6H455	HHM72-6H460	HHM72-6H465	OPERATING CONDITIONS	
Rated Max Power(P _{max}) [W]	333	336	340	344	348	352	Maximum System Voltage	1000V/1500V DC
Open Circuit Voltage(V _{oc}) [V]	46.40	46.65	46.90	47.15	47.38	47.61	Operating Temperature	-40°C~+85°C
Max Power Voltage(V _{mp}) [V]	38.70	38.95	39.19	39.44	39.68	39.90	Maximum Series Fuse	20A
Short Circuit Current(I _{sc}) [A]	9.16	9.20	9.25	9.29	9.33	9.38	Maximum Static Load, Front*	5400Pa(112 lb/ft ²)
Max Power Current(I _{mp}) [A]	8.60	8.64	8.68	8.72	8.76	8.81	Maximum Static Load, Back*	2400Pa(50 lb/ft ²)
NOCT	Irradiance 800W/m ² , ambient temperature 20°C, wind speed 1m/s, AM1.5G						NOCT	45±2°C
							Safety Class	Class II
							Fire Performance	UL Type 1

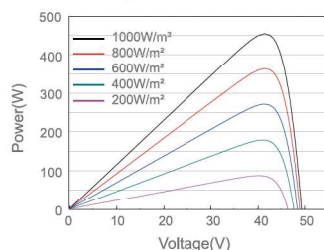
*For NexTracker installations, Maximum Static Load, Front is 2400Pa while Maximum Static Load, Back is 2400Pa.

CHARACTERISTICS

Current-Voltage Curve HHM72-6H455



Power-Voltage Curve HHM72-6H455



Current-Voltage Curve HHM72-6H455

