

# DuDrive Series

## MSHM-144HL



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

420-440W



**Higher Module Efficiency**  
More energy yield



**Positive Tolerance**  
Positive tolerance brings more power for free



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



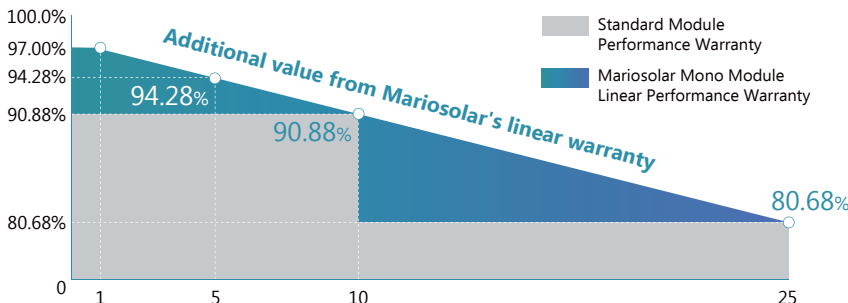
**Mechanical Load Endurance**  
Excellent mechanical load resistance: wind loads (2400Pa) & snow loads (5400Pa)



**1500V System Voltage**  
Approved IEC1500Vdc system voltage, saving on BoS cost



### LINEAR PERFORMANCE WARRANTY



**12years** Product Material & Workmanship

**25years** Linear Performance Warranty

#### About Mariosolar

Mariosolar, established in 2018, is dedicated to providing solar products with high quality, excellent performance and strong after-sales support. The company not only has strong financial support but also never stops innovating. Mariosolar will keep delivering the diversified solar products for all kinds of renewable energy generation systems around the world.

# DuDrive Series MSHM-144HL Mariosolar High Efficiency Monocrystalline Half-cut Cell Solar Module with Perc Technonoly (1500V)

ELECTRICAL DATA @ STC*		420W	425W	430W	435W	440W
Peak Power (Pmax)	(W)	420	425	430	435	440
Maximum Power Voltage (Vmp)	(V)	40.2	40.4	40.6	40.8	41.0
Maximum Power Current (Imp)	(A)	10.45	10.52	10.60	10.67	10.74
Open-circuit Voltage (Voc)	(V)	48.8	49.0	49.2	49.4	49.6
Short-circuit Current (Isc)	(A)	11.04	11.11	11.19	11.26	11.33
Module Efficiency	(%)	18.9	19.1	19.3	19.6	19.8
Operating Temperature		-40°C~+85°C				
Maximum System Voltage		1500V				
Maximum Series Fuse Rating		15A				
Application Class		Class A				
Power Tolerance		0~+3%				

\*STC (Standard Test Condition): Irradiance 1000W/ m<sup>2</sup>, Module Temperature 25°C, AM 1.5

ELECTRICAL DATA @ NMOT*		420W	425W	430W	435W	440W
Peak Power (Pmax)	(W)	311.1	314.8	318.5	322.2	326
MPP Voltage (Vmp)	(V)	37.1	37.30	37.5	37.7	37.9
MPP Current (Imp)	(A)	8.38	8.44	8.50	8.56	8.61
Open Circuit Voltage (Voc)	(V)	45.5	45.7	45.9	46.1	46.3
Short Circuit Current (Isc)	(A)	8.90	8.95	9.02	9.08	9.13

\*Under Nominal Module Operating Temperature (NMOT), Irradiance of 800W/ m<sup>2</sup>, Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

### TEMPERATURE CHARACTERISTICS

Temperature coefficient of Pmax	-0.37%/°C
Temperature coefficient of Voc	-0.286%/°C
Temperature coefficient of Isc	0.057%/°C
NMOT	45±2°C

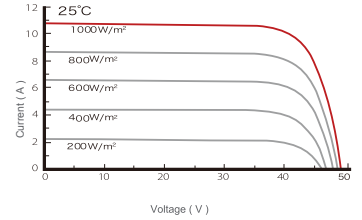
### MECHANICAL DATA

Cell Type	Mono-Crystalline, 166mmx83mm
Cell Arrangement	144pcs (2x(6x12))
Dimension (LxWxH)	2115x1052x35mm
Weight	24kg
Front Cover	3.2mm Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67, 3 Bypass Diodes
Cable Type	4mm <sup>2</sup>
Length of Cable	1200mm
Connector	PV Connector

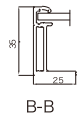
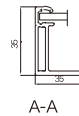
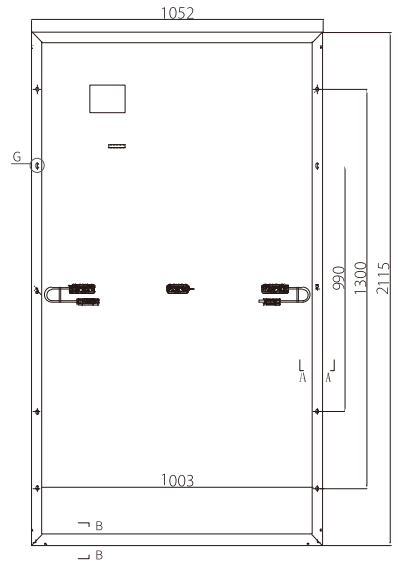
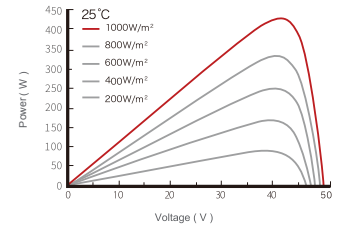
### PACKING MANNER

Packing Type	40HQ
Piece/Pallet	30
Piece/Container	660

Current-Voltage Curves (430W)



Power-Voltage Curves (430W)



\*The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, Mariosolar, 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%

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