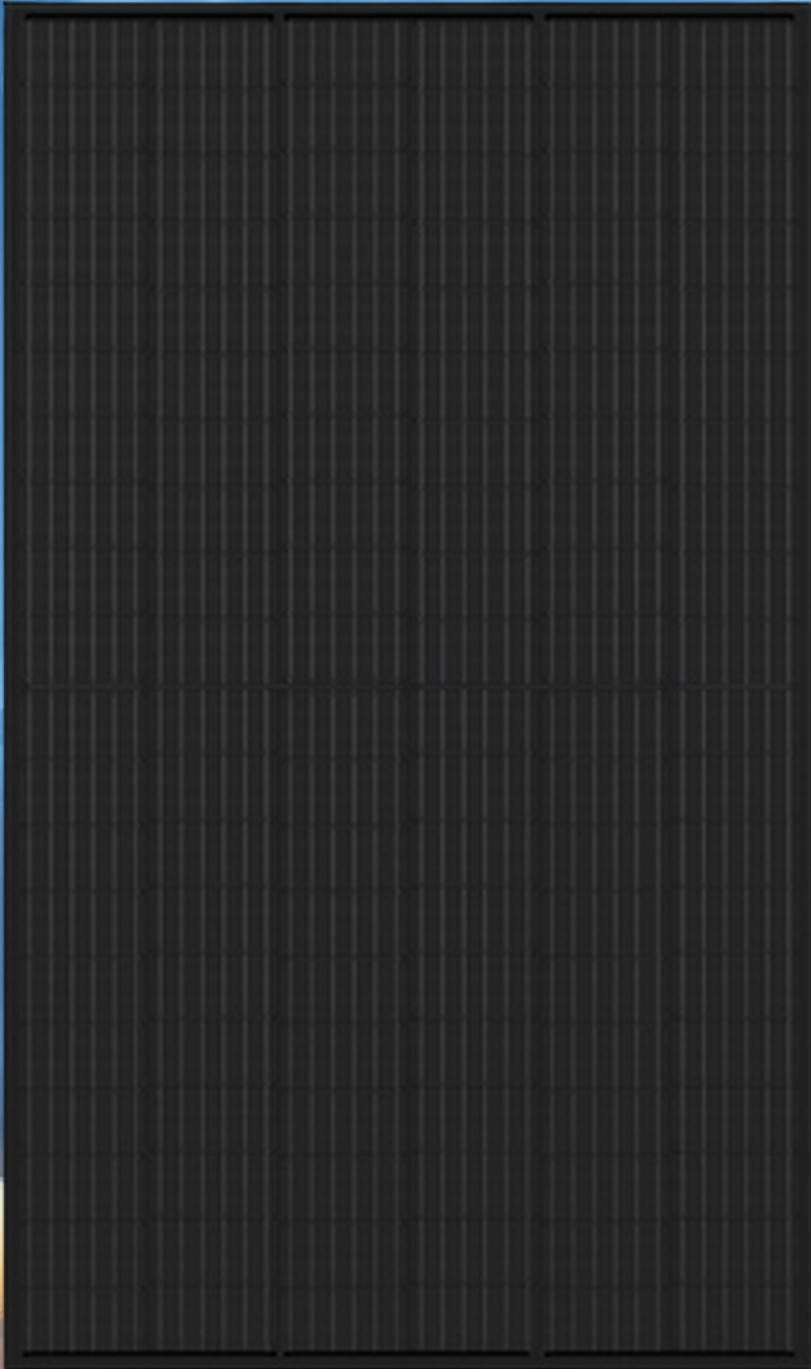


Z^{460M-}
72Hb



460
WP
POWER

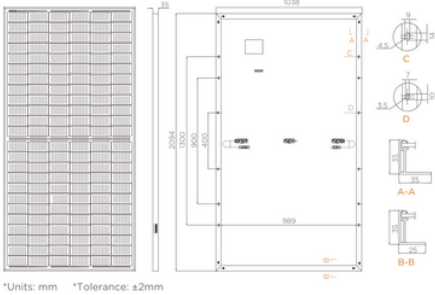


Z460M-72HB

460 Watt, High Efficiency, Low LID Mono Perc with Half-Cut Technology

25 year Product Warranty and Energy Performance Warranty

Design (mm)



Cell Orientation	144 (6x24)
Junction Box	IP68, three diodes
Output Cable	4mm ² , 1.2meter in length, length can be customized
Glass	Single glass 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight:	23.5kg
Dimension	2108*1048*40mm
Packaging	27pcs per pallet 150pcs per 20'GP 594pcs per 40'HC

Operational Temperature	-40°C:+85°C
Power Output Tolerance	0-+5W
Voc & Isc Tolerance	±3%
Max. System Voltage	DC1500V(IEC/UL)
Max. Series Fuse Rating	20A
NOCT	45±2°C
Safety Class	II
Fire Rating	UL type 1 or 2
Max. Static Load(Front)	5400Pa
Max. Static Load(Back)	3600Pa

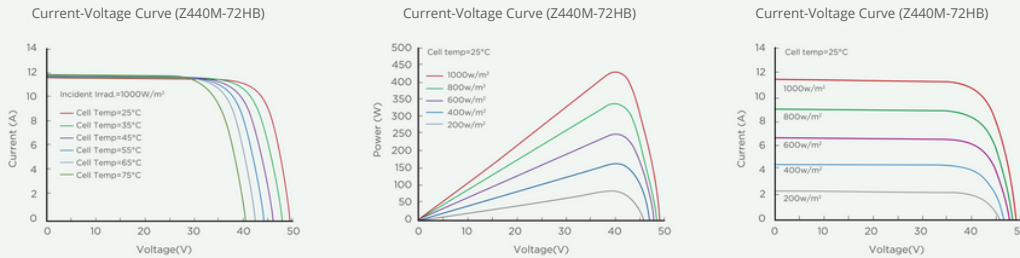
*Units: mm **Tolerance: ±2mm

Electrical Characteristics

Model Number	Z425M-72HB		Z430M-72HB		Z435M-72HB		Z440M-72HB		Z445M-72HB		Z450M-72HB		Z455M-72HB		Z460M-72HB	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	425	317.4	430	321.1	435	324.9	440	328.6	445	332.3	450	336.1	455	339.8	460	343.8
Open Circuit Voltage (Voc/V)	48.3	45.3	48.5	45.5	48.7	45.7	48.9	45.8	49.1	46.0	49.3	46.2	49.5	46.4	49.7	46.6
Short Circuit Current (Isc/A)	11.23	9.08	11.31	9.15	11.39	9.21	11.46	9.27	11.53	9.33	11.60	9.38	11.66	9.43	11.73	9.48
Voltage at Maximum Power (Vmp/V)	40.5	37.7	40.7	37.9	40.9	38.1	41.1	38.3	41.3	38.5	41.5	38.6	41.7	38.8	41.9	38.8
Current at Maximum Power (Imp/A)	10.50	8.42	10.57	8.47	10.64	8.53	10.71	8.59	10.78	8.64	10.85	8.70	10.92	8.75	10.98	8.81
Module Efficiency(%)	19.6		19.8		20.0		20.2		20.5		20.7		20.9		21.1	
Temperature Coefficient of Isc																
	+0.048%/°C															
Temperature Coefficient of Voc																
	-0.270%/°C															
Temperature Coefficient of Pmax																
	-0.350%/°C															

* STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25°C, Spectra at AM1.5
 * NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s
 * Test uncertainty for Pmax: ±3%

I-V Curve



Positive power tolerance:
(0 +5W)
guaranteed

High module conversion efficiency:
(21.1% Energy Efficiency)

Reduced resistive loss:
with lower operating current

Slower power degradation:
enabled by Low LID Mono PERC technology first year <2%, 0.55% year 2-25

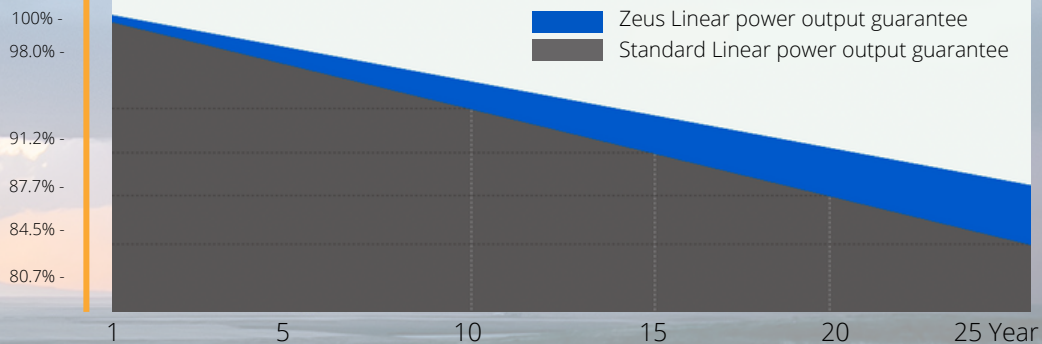
Solid PID resistance:
ensured by solar cell process optimization and careful module BOM selection

Higher Energy Yield:
with lower operating temperature

Reduced hot spot risk:
with optimized electrical design and lower operating current

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730
 ISO 9001:2008 ISO Quality Management System
 ISO 14001:2004 ISO Environment Management System
 OHSAS 18001:2007 Occupational Health and Safety



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*Specifications subject to technical changes and tests. Zeus Solar reserves the right of interpretation.

