

Black Series

ERA-RA54HD(BK)

Product Range

430-455W

N-Type Rectangle Bifacial
Double Glass High Efficiency

455W

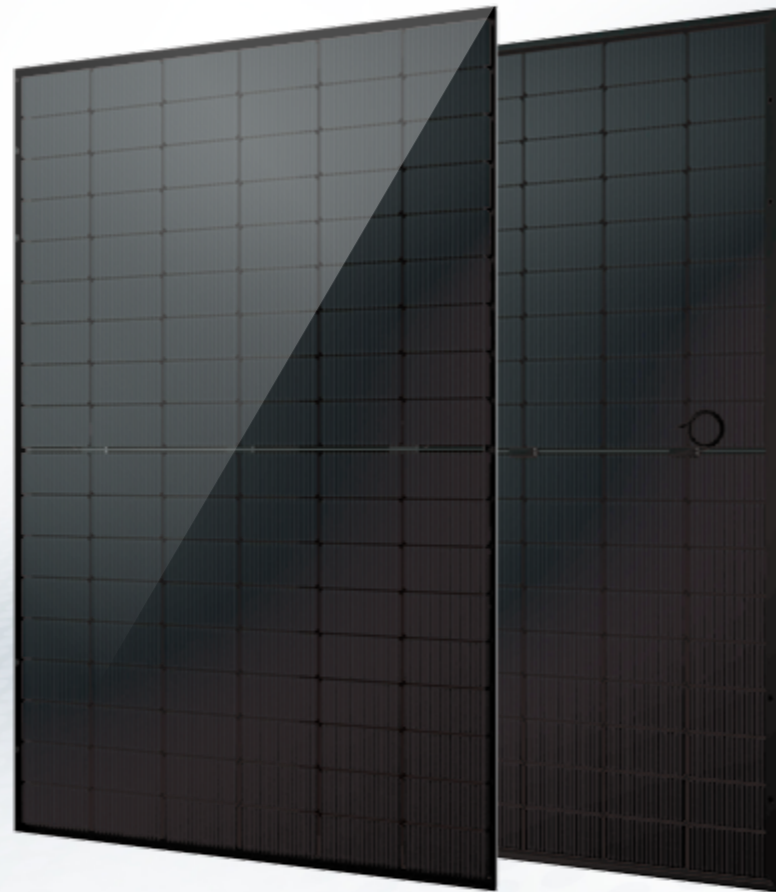
Maximum Power Output

0~+5W

Positive Power Tolerance

22.8%

Maximum Efficiency



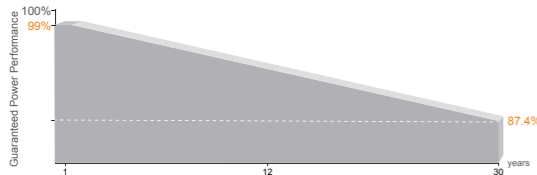
Linear Performance Warranty

25 Year Product Warranty

30 Year Linear Power Warranty

<1% First year Power Degradation

<0.4% Year 2-30 Power Degradation



Certifications

Quality Management System and Product Certification.

IEC61215(2021), IEC61730(2023), IEC61701

IEC61215-2 (bifaciality): 2021

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018: Occupational health and safety management systems



MBB Half-Cut Rectangle Solar Cell

182x94mm, 108 cells.

Small In Size, Bigger On Power

Up to 455W, 22.8% module efficiency with high density interconnect technology.

Transparent Dual-glass Design

Excellent fire rating, with better temperature coefficient.

Universal Solution For Residential And C&I Rooftops

Perfect size and low weight for handling and installation.

Double Glass, 54-CELL HALF-CUT SERIES

ELECTRICAL PARAMETERS AT STC

Module Type: ERA-RA54HD(BK)	430M	435M	440M	445M	450M	455M
Maximum Power(Wp)	430W	435W	440W	445W	450W	455W
Open Circuit Voltage(Voc)	38.50V	38.70V	38.90V	39.10V	39.30V	39.50V
Short Circuit Current(Isc)	14.14A	14.23A	14.31A	14.40A	14.48A	14.56A
Maximum Power Voltage(Vm)	32.12V	32.29V	32.47V	32.65V	32.82V	33.00V
Maximum Power Current(Imp)	13.39A	13.47A	13.55A	13.63A	13.71A	13.79A
Module Efficiency	21.50%	21.80%	22.00%	22.30%	22.50%	22.80%
Maximum Series Fuse	30A					
Watts Positive Tolerance	0~+5W					
Number Of Diode	3					
Standard Test Conditions	1000W/M ² ,25°C,AM1.5					
Maximum System Voltage	1500V/DC					
Temperature-Coefficient Isc	+0.046%/°C					
Temperature-Coefficient Voc	-0.26%/°C					
Temperature-Coefficient Pmpp	-0.30%/°C					
Operating Temperature	-40°C...+85°C					
Normal Operating Cell Temperature	45±2					
Load Capacity For The Cover Of The Module (Glass)	3600Pa(IEC61215)(snow)					
Load Capacity For The Front & Back Of The Module	2400Pa(IEC61215)(wind)					

ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

Module Type: ERA-RA54HD(BK)	430M	435M	440M	445M	450M	455M
Maximum Power(Wp)	464W	470W	475W	481W	486W	491W
Open Circuit Voltage(Voc)	38.50V	38.70V	38.90V	39.10V	39.30V	39.50V
Short Circuit Current(Isc)	15.27A	15.36A	15.46A	15.55A	15.64A	15.73A
Maximum Power Voltage(Vm)	32.11V	32.29V	32.47V	32.65V	32.82V	32.99V
Maximum Power Current(Imp)	14.46A	14.55A	14.63A	14.72A	14.81A	14.89A
Irradiation Ratio (Rear/Front)	10%					

*Bifaciality=Pmax,Rear/Rated Pmax,Front

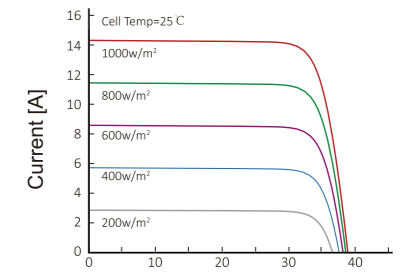
MECHANICAL CHARACTERISTICS

Front/Back Cover (Material / Thickness)	low-iron tempered glass 2.0 / 2.0 mm
Cell (Quantity / Material / Dimensions)	108(6x18) / monocrystalline silicon
Frame (Material / Color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / Black
Junction Box (Protection Degree)	≥IP68
Cables & Plug Connectors	4mm ² , 300mm in length,length can be customized
Module Dimensions (L / W / H)	1762(±2)x1134(±2)x30(±1)mm
Module Weight	22.5 kg
Application Class	Class A
Electrical Protection Class	Class II
Fire Safety Class	Class A

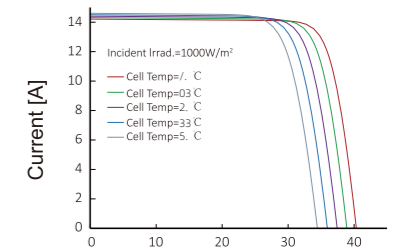
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurement (mm)	Units/Container (PCS)
40HQ	36	845	1790x1120x1260	936

CURRENT-VOLTAGE CURVES:



Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:

