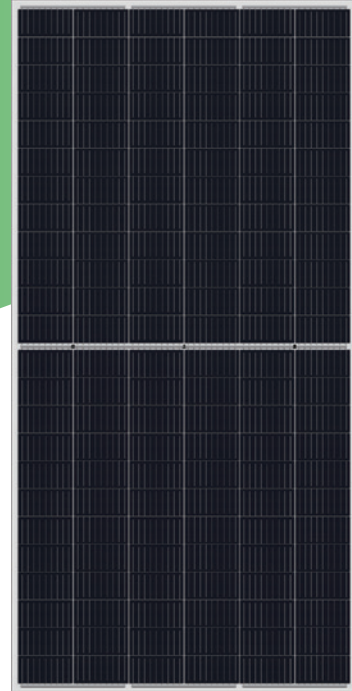


# EN158M-144D-390/395/400/405/410W







## Bifacial Dual Glass Monocrystalline Solar Module 144 Half-Cell Series

### ABOUT ECONESS

Established in 2009 by Jiangsu Huadong Group (founded in 1997), Econess Energy is a world's leading solution provider for solar energy. With current annual production capacity of 1 GW cells and 3GW modules, Econess Energy now distributes its PV products to over 36 countries. As a strong, bankable partner, we are committed to building strategic, mutually beneficial collaboration with installers and developers.



### KEY FEATURES

- 
**Maximize limited space**  
 Half cell technology (low Rs) combine more internal reflection, maximum power output 410W
- 
**Bifacial Power Generation**  
 Bifacial cell technology, 5%~25% more yield depends on different conditions
- 
**IP68 junction box**  
 The highest waterproof level
- 
**ZERO PID**  
 Bifacial double glass design, PID free
- 
**Lower temperature coefficients**  
 Enhance power generation
- 
**Certified to withstand the most challenging environmental conditions**  
 2400 Pa wind load · 5400 Pa snow load · 25mm hail stones at 82 km/h

### SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730
- ISO 9001 : 2015 Quality Management System
- ISO 14001 : 2015 Environment Management System
- ISO 45001 : 2018 Occupational Health and Safety Management System



### QUALITY WARRANTY

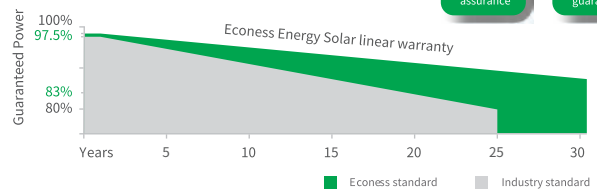
Econess Energy guarantees that defects will not appear in materials and workmanship defined by IEC61215 or IEC61730 under normal installation, use and maintenance as specified in Econess Energy's installation manual for 12 years from the warranty starting date.

### PERFORMANCE WARRANTY

#### Bifacial Dual Glass Monocrystalline Solar Module

**12** years  
Quality assurance

**30** years  
Power output guarantee



## ELECTRICAL PARAMETERS

### Performance at STC (Power Tolerance 0 - +3%)

Maximum Power(Pmax/W)	390	395	400	405	410
Operating Voltage (Vmpp/V)	40.69	40.94	41.20	41.47	41.72
Operating Current(Imp/A)	9.59	9.66	9.72	9.78	9.87
Open-Circuit Voltage (Voc/V)	49.34	49.55	49.79	50.04	50.31
Short-Circuit Current(Isc/A)	10.15	10.22	10.31	10.39	10.47
Module Efficiency $\eta_m$ (%)	18.95	19.19	19.43	19.68	19.92

### Performance at NMOT

Maximum Power(Pmax/W)	290	293	297	300	304
Operating Voltage(Vmpp/V)	37.62	37.84	38.11	38.35	38.59
Operating Current(Imp/A)	7.71	7.76	7.82	7.88	7.96
Open-Circuit Voltage(Voc/V)	45.67	45.92	46.18	46.42	46.69
Short-Circuit Current(Isc/A)	8.17	8.22	8.28	8.34	8.39

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s

## Electrical characteristics with different rear side power again (reference to 410W front)

Pmax gain(%)	5%	10%	15%	20%	25%
Maximum Power (Pmax/W)	431	451	472	492	513
Maximum Power Voltage (Vmpp/V)	41.72	41.72	41.72	41.72	41.72
Maximum Power Current (Imp/A)	10.36	10.86	11.35	11.84	12.34

## MECHANICAL SPECIFICATION

Cell Type	Half-cell · Mono PERC · Bifacial · 9BB
Cell Dimensions	6 inch (158.75 x 158.75 mm)
Cell Arrangement	144 [2 x (12 x 6)]
Weight	26.3 kg (57.98 lb)
Module Dimensions	2038 x 1010 x 30 mm (80.24 x 39.76 x 1.18 inch)
Cable	300 mm (11.81 inch) · 4 mm <sup>2</sup> (0.006 sq.in)
Front Glass	2.5 mm High Transmission, Tempered Glass
Packing Configuration (1)	36pcs/Pallet, 792pcs/40hq
Packing Configuration (2)	36pcs+4pcs/Pallet, 836pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP68, Bypass Diodes x 3

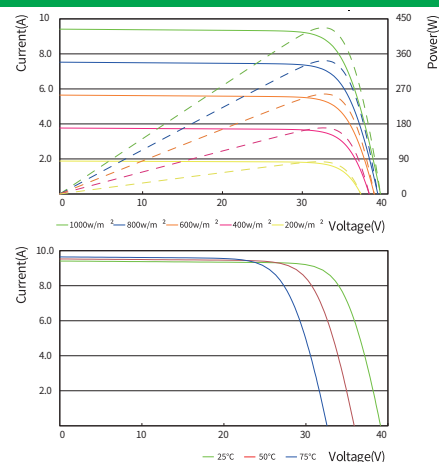
## OPERATING CONDITIONS

Maximum System Voltage	1000V/DC(IEC)/1500V/DC(IEC)
Operating Temp	-40°C ~ +85°C
Maximum Series Fuse	20 A
Static Loading	5400 Pa
Connector	MC4 Compatible

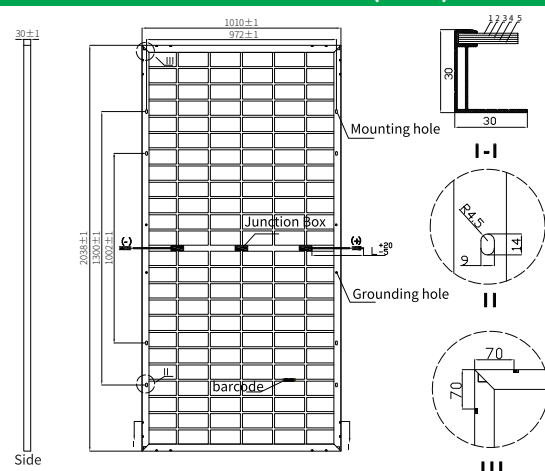
## TEMPERATURE COEFFICIENT

Temperature Coefficient(Pmax)	-0.39%/°C
Temperature Coefficient(Voc)	-0.30%/°C
Temperature Coefficient(Isc)	+0.05%/°C
NMOT	45 ± 2°C

## I-V CURVE



## TECHNICAL DRAWINGS (mm)



## Econess Energy Co., Ltd.

58 Haida Road, Huashi, Jiangyin, Jiangsu, P.R. China 214421 +86-510-86076868 sales@eco-pv.com www.eco-pv.com

\* This is preliminary datasheet and for reference only. The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Econess Energy reserves the right to make necessary adjustment to the information described herein at any time without further notice.