EN156M-120-310/315/320/325/330W

Bifacial High Efficiency Monocrystalline Solar Module
120 Half-Cell Series

ABOUT ECONESS ENERGY

Established in 2009 by Jiangsu Huadong Group (founded in 1997), Econess Energy is a world's leading solution provider for solar energy.With annual production capacity of 800MW cells and 1.2GW modules.Econess Energy now distributes its PVproducts to over 36 countries with cumulative module shipment of 4GW.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 330W

Bifacial Power Generation
Bifacial cell technology, 5%~50% more yield depends on different conditions

IP67 junction box
The highest waterproof level

Excellent Anti-PID performance
2 times of industry standard Anti-PID test by TUV

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 / UL 1703
- ISO 9001 : 2015 Quality Management System
- ISO 14001 : 2015 Environment Mangement System
- OHSAS 18001 : 2007 Occupational Health and Safety Management System

QUALITY WARRANTY

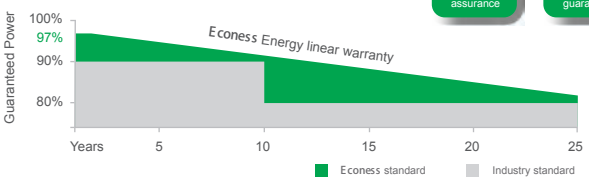
Econess Energy guarantees that defects will not appear in materials and workmanship defined by IEC61215, IEC61730 or UL1703 under normal installation, use and maintenance as specified in Econess Energy's installation manual for 10 years from the warranty starting date.

PERFORMANCE WARRANTY

Monocrystalline Solar Module

10 years — Quality assurance

25 years — Power output guarantee



ELECTRICAL PARAMETERS

Performance at STC (Power Tolerance 0 - +3%)					
Maximum Power(Pmax/W)	310	315	320	325	330
Operating Voltage (Vmpp/V)	33.53	33.85	34.16	34.45	34.76
Operating Current(Impp/A)	9.25	9.31	9.37	9.42	9.48
Open-Circuit Voltage (Voc/V)	40.12	40.34	40.55	40.75	40.96
Short-Circuit Current(Isc/A)	9.71	9.78	9.86	9.92	9.99
Module Efficiency ηm (%)	18.66	18.96	19.26	19.56	19.86
Performance at NMOT					
Maximum Power(Pmax/W)	229	233	237	241	244
Operating Voltage(Vmpp/V)	30.99	31.36	31.73	32.08	32.44
Operating Current(Impp/A)	7.39	7.43	7.47	7.51	7.55
Open-Circuit Voltage(Voc/V)	36.96	37.12	37.31	37.42	37.53
Short-Circuit Current(Isc/A)	7.84	7.88	7.92	7.96	8.01

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

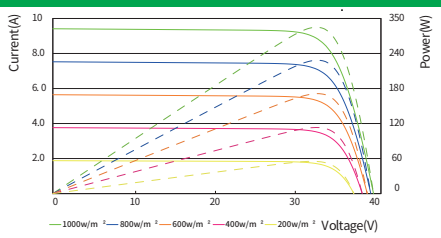
Electrical characteristics with different rear side power again(reference to 330W front)

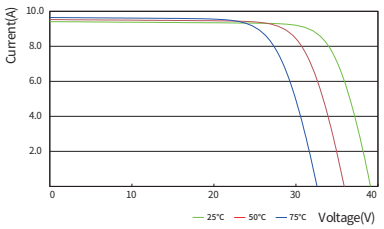
Pmax gain(%)	10%	20%	30%	40%	50%
Maximum Power (Pmax/W)	363	396	429	462	495
Maximum Power Voltage (Vmpp/V)	34.76	34.76	34.76	34.76	34.76
Maximum Power Current (Impp/A)	10.43	11.38	12.32	13.27	14.22

MECHANICAL SPECIFICATION

Cell Type	Half-cell · Mono · 5BB · Bifacial
Cell Dimensions	6 inch (156.75 x 156.75 mm)
Cell Arrangement	120 [2 x (10 x 6)]
Weight	20 kg
Module Dimensions	1675(1650) x 992 x 35mm
Front Glass	3.2 mm High Transmission, Tempered Glass
Backsheet	KPF
Packing Configuration (1)	31pcs/Pallet, 868pcs/40hq
Packing Configuration (2)	31pcs+4pcs/Pallet, 924pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP67, Bypass Diodes x 3

I-V CURVE





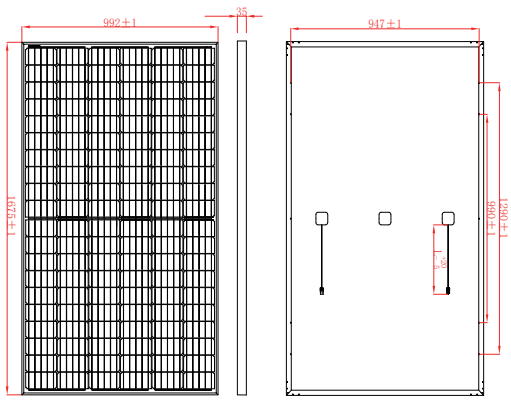
OPERATING CONDITIONS

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	42±2°C

TECHNICAL DRAWINGS (mm)



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