# ECO DELTA High Efficiency Mono SHINGLED MODULE

# ECO-415-435M-72SA





## Higher Module Efficiency

Brings 0-+3W positive tolerance on label rating power provides higher Kwh



## INNOVATIONAL SHINGLED MODULE TECHNOLOGY

Larger light receiving area to improves the module output, decreases the risk of mirco-crack, enhances the module reliability.



#### **INNOVATIVE PERC CELL TECHNOLOGY**

Excellent cell efficiency and output.



#### **REDUCE SHADOW LOSS**

Effectively reduces the effect of shadow on the module surface.



## REDUCE INTERNAL MISMATCH LOSS

Reduces mismatch loss and improves output.



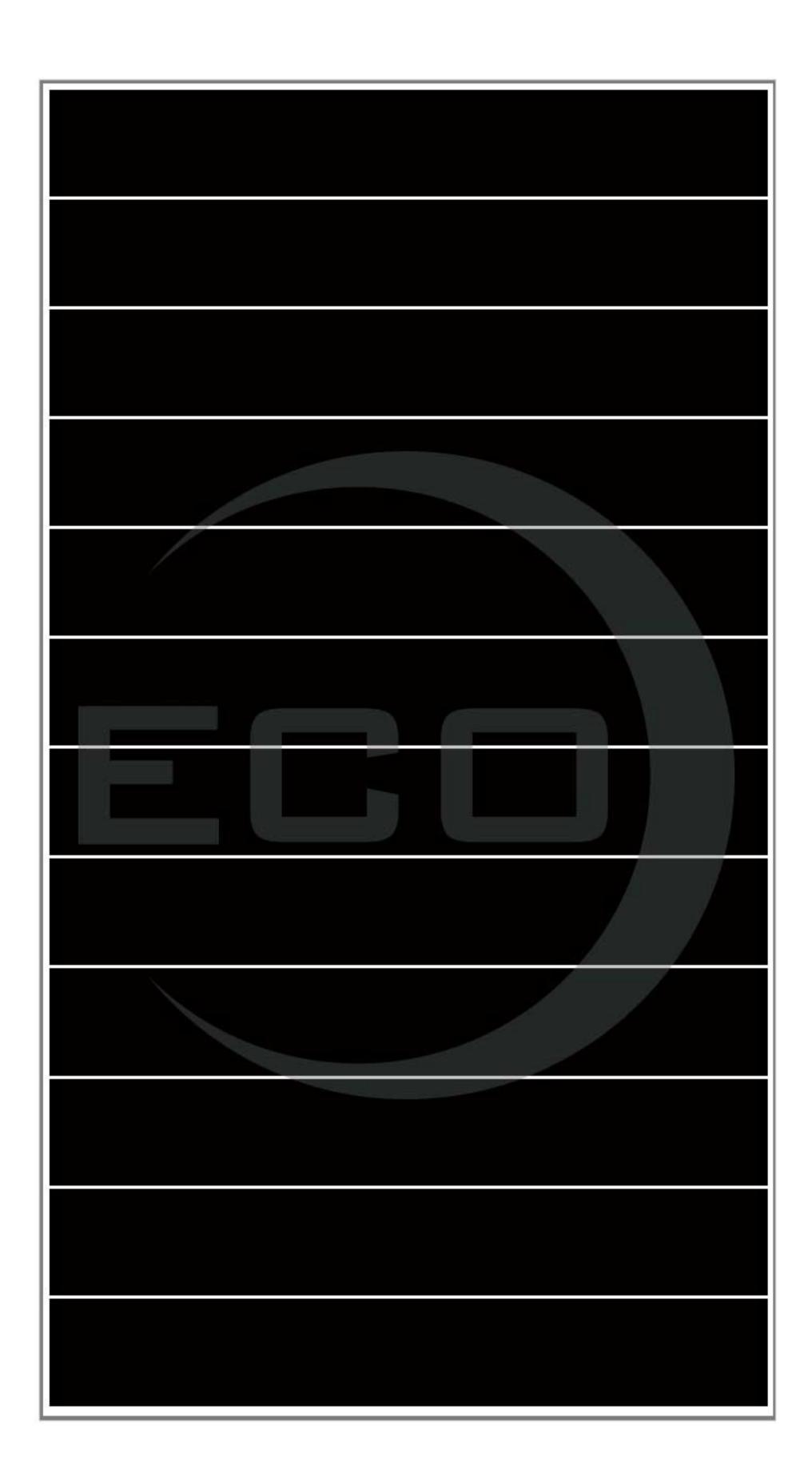
## **PASSED HAIL TEST**

Certified to hail resistence: ice ball size (d=45mm) and ice ball velocity (v=30.7m/s).

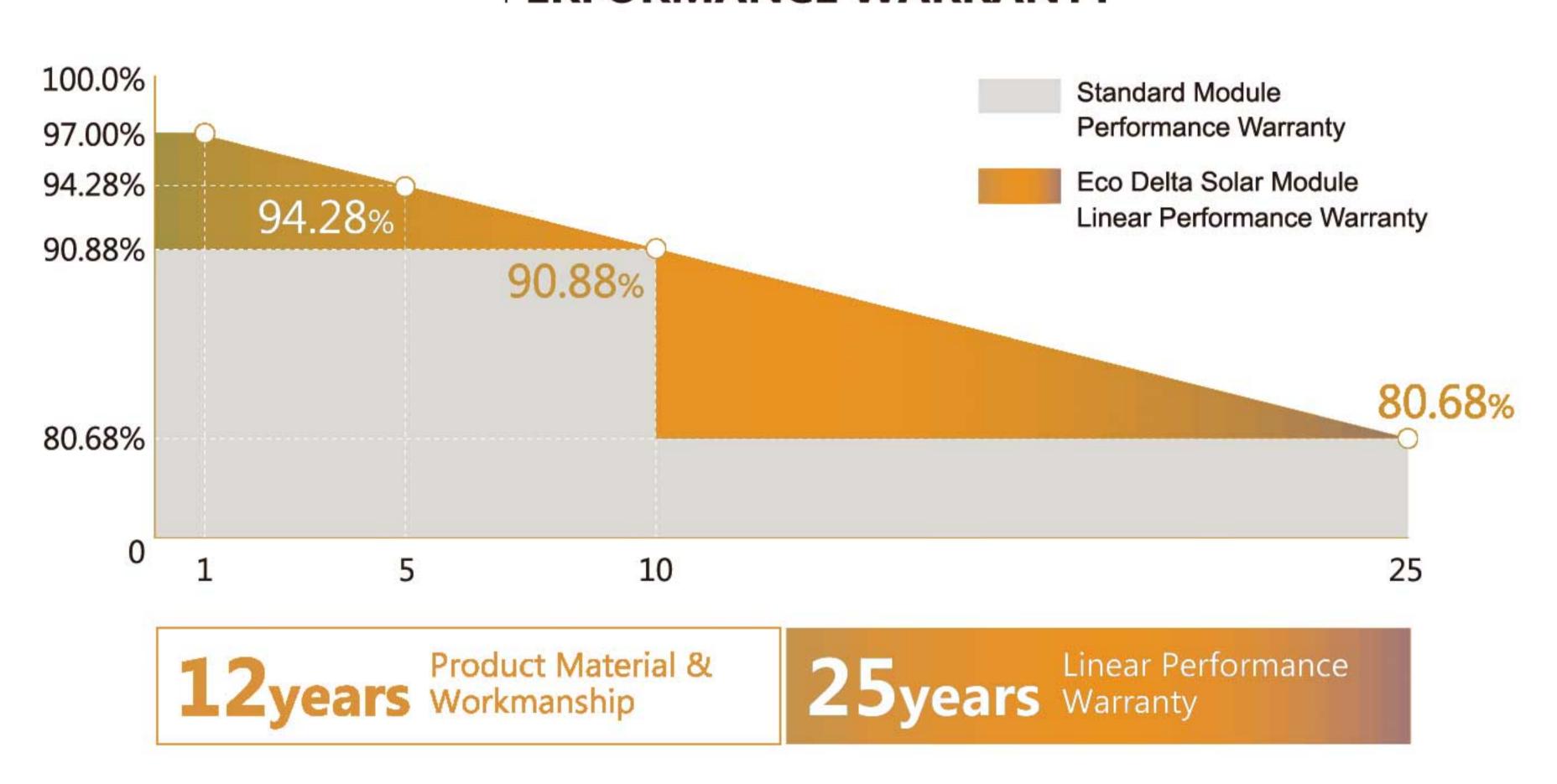


#### PID RESISTANCE

Excellent PID resistance at 96 hours (@85°C/85%) test, and also can be improved to meet higher standards for the particularly harsh environment



# **PERFORMANCE WARRANTY**



# **QUALITY WARRANTY**

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

ISO9001 ISO14001 OHSAS18001



















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ELECTRICAL DATA @ STC		ECO-415M-72S	A ECO-420M-72S	A ECO-425M-72S	AECO-430M-72S	A ECO-435M-728
Peak Power(Pmax)	(W)	415	420	425	430	435
Maximum Power Voltage (Vmp)	(V)	37.20	37.40	37.60	37.80	38.00
Maximum Power Current(Imp)	(A)	11.16	11.23	11.30	11.38	11.45
Open-circuit Voltage (Voc)	(V)	45.90	46.00	46.00	46.10	46.20
Short-circuit Current(Isc)	(A)	11.87	11.93	11.98	12.03	12.08
Module Efficiency	(%)	19.44	19.68	19.91	20.15	20.38
Operating Temperature				-40°C~+85°C		
Maximum System Voltage				□1000V □1500\	/	
Maximum Series Fuse Rating				15A		
Power Telorance				0~+3%		

<sup>\*</sup>STC (Standard Test Condition): Irradiance 1000W/ m², Module Temperature 25°C, AM 1.5

(V)

(A)

#### **ELECTRICAL DATA @ NMOT** ECO-415M-72SA ECO-420M-72SA ECO-425M-72SA ECO-430M-72SA ECO-435M-72SA Peak Power(Pmax) (W) 312 316 320 324 328 MPP Voltage (Vmp) (V) 35.84 36.23 35.46 35.65 MPP Current(Imp) (A) 9.04 8.81 8.87 8.93 8.98

43.85

9.61

43.85

9.65

43.95

9.69

44.04

9.73

\*Under Nominal Module Operating Temperature (NMOT), Irradiance of 800W/ m², Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

43.76

9.56

#### TEMPERATURE CHARACTERISTICS

Open Circuit Voltage (Voc)

Short Circuit Current(Isc)

Temperature coefficient of Pmax	-0.34%
Temperature coefficient of Voc	-0.27%
Temperature coefficient of Isc	0.04%
NMOT	42±2°C

### **MECHNICAL DATA**

Cell Type	Mono-Crystalline, 158.75*158.75mm	
Cell Arrangement	60pcs	
Dimension (L×W×H)	1969 x 1084 x 35 mm	
Weight	25kg	
Front Cover	3.2mm Tempered Glass	
Frame	Anodized Aluminium Alloy	
Junction Box	IP67, 3 Bypass Diodes	
Cable Type	4mm²	
Length of Cable	1200mm	
Connector	PV Connector	

# **OPTIONAL**

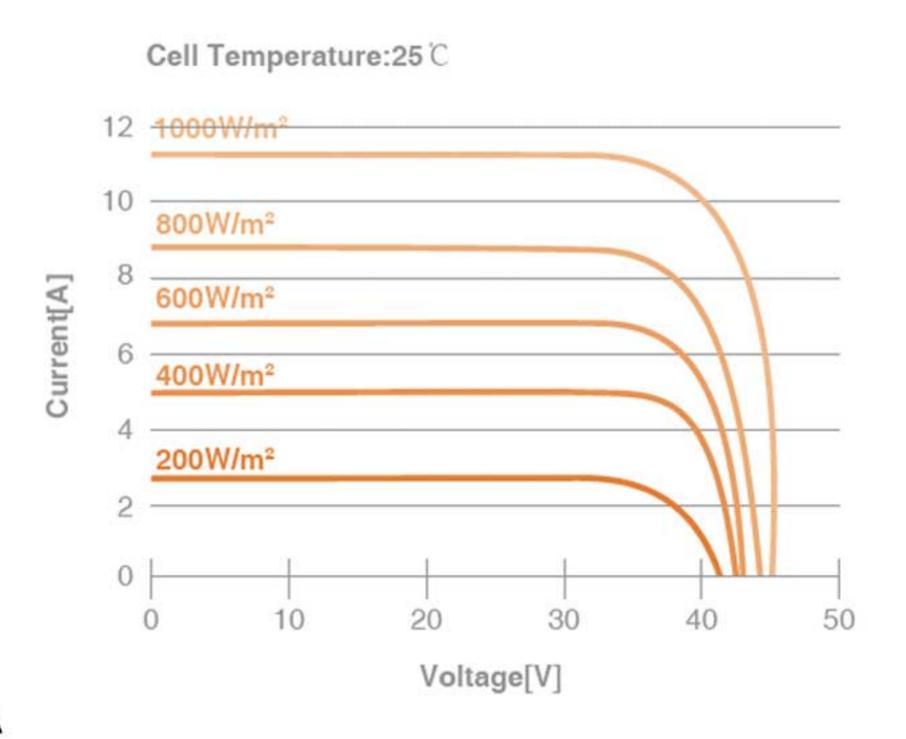
THONAL	
Frame	□Black
Backsheet	□Black
Connector	□Original MC4
Cable	□ Customized
Module Size	□ Customized

## DACKING MANNED

PACKING MANNER	
Packing Type	40'HQ
Piece/Pallet	30
Piece/Container	660

\*The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, ECO DELTA POWER CO., LTD 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 produccts described herein.

## **Current-Voltage Curve under** different irradiance



## **Current-Voltage Curve under** different working temperatures

