

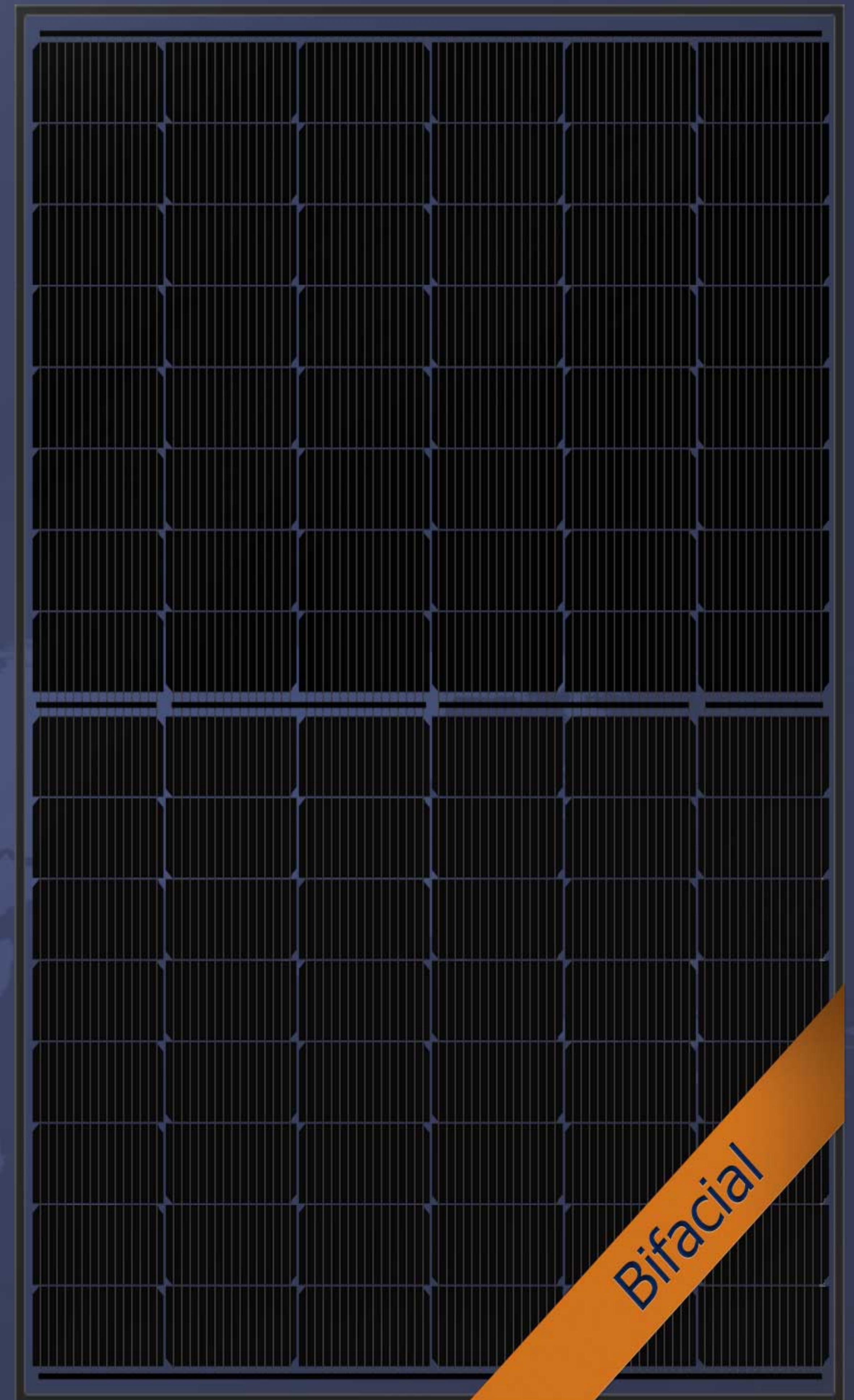
# CLASSIC PLUS G™



## ECO-440-460M-48RHC-DGBFblack(HJT)

# N-TYPE BIFACIAL DOUBLE GLASS MODULE G12R

### HJT



**30 YEARS**  
Product material  
& workmanship  
**30 YEARS 90.3%**  
Linear performance  
warranty

G12R Smbb  
and half-cut cells  
technology

Reduce  
internal loss  
Reduce  
shadow loss

Advanced HJT  
cell/module design,  
higher reliability  
and outstanding  
performance

Harsh environ-  
ment resistance  
Damage-free laser  
cutting, lower  
micro-crack risk

Up to 85% power  
bifaciality



# ECO DELTA Mono HJT Half-cut Cell Double-glass-bifacial PV Module



## ECO-440-460M-48RHC-DGBFblack(HJT)

### ELECTRICAL DATA @ STC

Peak Power(Pmax)	(W)	440	445	450	455	460
Maximum Power Voltage (Vmp)	(V)	30.61	30.72	30.83	30.94	31.05
Maximum Power Current(Imp)	(A)	14.38	14.49	14.60	14.71	14.82
Open-circuit Voltage (Voc)	(V)	36.52	36.62	36.72	36.82	36.92
Short-circuit Current(Isc)	(A)	15.31	15.42	15.53	15.64	15.75
Module Efficiency	(%)	22.0	22.3	22.5	22.8	23.0
Operating Temperature		-40°C~+85°C				
Maximum System Voltage		1500V				
Maximum Series Fuse Rating		30A				
Mechanical Test Load		Front 5400Pa Rear 2400Pa				

\*STC (Standard Test Condition): Irradiance 1000W/ m<sup>2</sup> , Module Temperature 25°C, AM 1.5

### ELECTRICAL DATA @ NMOT

Peak Power(Pmax)	(W)	335	339	343	347	351
MPP Voltage (Vmp)	(V)	29.23	29.34	29.45	29.55	29.65
MPP Current(Imp)	(A)	11.49	11.58	11.67	11.76	11.84
Open Circuit Voltage (Voc)	(V)	34.86	34.95	35.05	35.14	35.24
Short Circuit Current(Isc)	(A)	12.24	12.32	12.41	12.50	12.59

\*Under Nominal Module Operating Temperature (NMOT), Irradiance of 800W/ m<sup>2</sup> , Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

### Electrical characteristics @ Rear Power Gain

5% Max Power:Pmax	(W)	462	467	472	477	483
5% Module Efficiency:η	(%)	23.1	23.4	23.6	23.9	24.2
15% Max Power:Pmax	(W)	506	511	517	523	529
15% Module Efficiency:η	(%)	25.3	25.6	25.9	26.2	26.5
25% Max Power:Pmax	(W)	550	556	562	568	575
25% Module Efficiency:η	(%)	27.5	27.8	28.1	28.4	28.8

### TEMPERATURE CHARACTERISTICS

Temperature coefficient of Pmax	-0.24%/°C
Temperature coefficient of Voc	-0.22%/°C
Temperature coefficient of Isc	0.04%/°C
NMOT	44±2°C

### MECHANICAL DATA

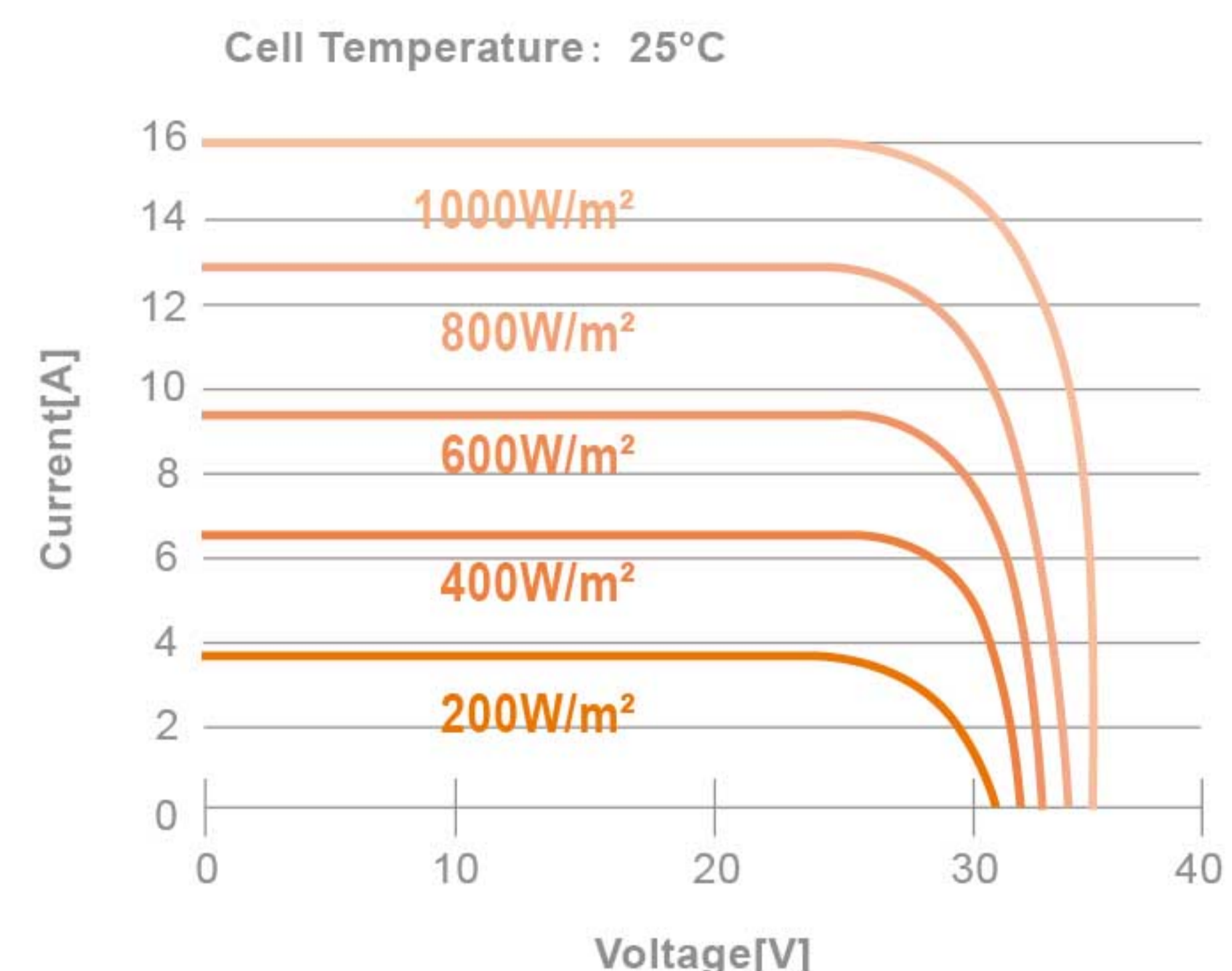
Cell Type	Mono-Crystalline HJT
Cell Arrangement	96pcs (2(6×8))
Dimension (L×W×H)	1762 x 1134 x 30 mm
Weight	21.6 kg
Front Glass	1.6mm high transmittance, AR coated tempered glass
Rear Glass	1.6mm heat strengthened glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Cable Type	4mm <sup>2</sup>
Length of Cable	1000mm,length can be customized
Connector	Compatible with MC4 PV Connector

### PACKING MANNER

Packing Type	40'HQ
Piece/Pallet	36
Piece/Container	936

\*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 products described herein.

### Current-Voltage Curve under different irradiance



### Current-Voltage Curve under different working temperatures

