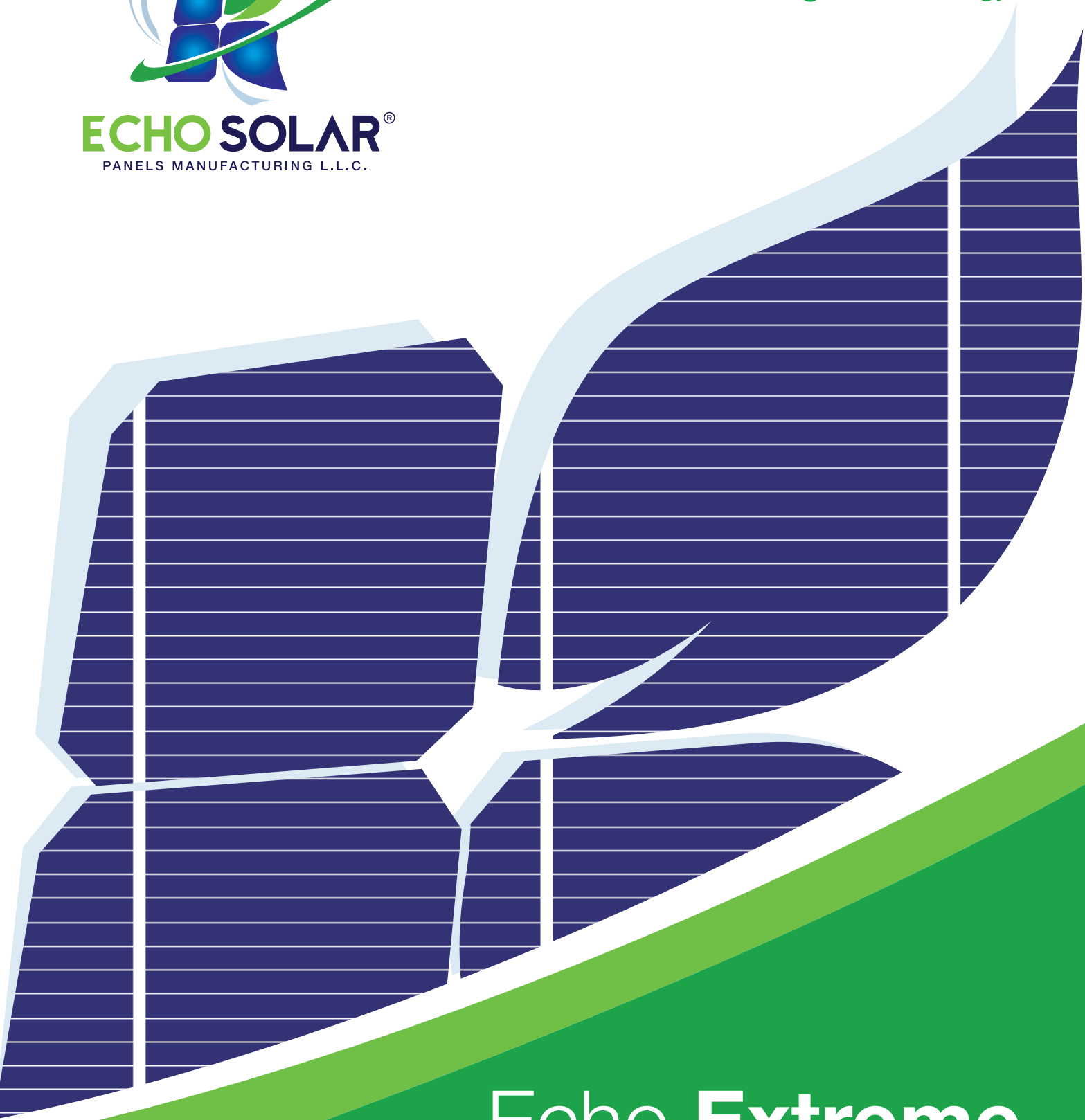




ECHO SOLAR[®]
PANELS MANUFACTURING L.L.C.

Powering Green Energy



Echo Extreme

THE PREMIUM PRODUCT



More power
per m²



Robust &
Durable Design



100%
PID FREE



Low
LID

info@echosolarae.com
www.echosolaruae.com

ECHO EXTREME

POLY-CRYSTALLINE MODULE

AAA-CLASS



AAA Class
German Technology
Positive Power + 3%



ECHO Modules are manufactured at the highest levels in Dubai with state of art manufacturing facility having elevated feature and unsurpassed performance.

ECHO QUALITY CONTROL

Material Inspection



Process Monitoring



Functionality Check



Quality Reports



Module Packaging



Multi-crystalline modules designed for residential, commercial and utility applications - rooftop or ground mount.



4 & 5Bus-bar Solar Cell

Cutting Edge Technology Thoroughly methodically & carefully designed by professionals to improve the Efficiency of module.



PID Free

PID Free

Long-term yield security with Anti-PID Technology



Resistance to Salt corrosion & Humidity

Module complies with IEC 61701



High Strength Design

Module complies with advanced load Test



IP67 Rating Junction Box

Advanced Water and Dust Proof Level



Superior Performance at High Temperature

Less power loss



Low-light Performance

Advanced glass and solar cell performance in low-light environments



Safe Electronics

Protection against short circuits and thermally induced power losses due to potted junction box and welded cables.



100 % EL testing Pre-EL & Post EL



Anti-reflective and anti-soiling surface reduces power loss from dirt and dust

PERFORMANCE | STC (I_r: 1000 W/m², Temp: 25°C, AM: 1.5)

Module Type	EP155	EP160	EP165
Maximum Power(P _{max})	155W	160W	165W
Number of Cells	36	36	36
Open Circuit Voltage(V _{oc})	22.68V	22.89V	23.07V
Short Circuit Current(I _{sc})	8.61A	8.77A	8.92A
Maximum Power Voltage(V _{pm})	19.11V	19.33V	19.56V
Maximum Power Current(I _{pm})	8.12A	8.30A	8.47A
Module Efficiency(η)	15.52%	16.04%	16.57%
Operating Temperature	-40 to 85°C		
Maximum System Voltage	1000V		
Maximum Fuse Rating	15A		
Power Tolerance	0~+5W		
Temperature Co-efficient V _{oc}	-0.28%/°C		
Temperature Co-efficient P _{max}	-0.38%/°C		
Temperature Co-efficient I _{sc}	0.03%/°C		

PERFORMANCE | NOCT (I_r: 800 W/m², Ambient Temp: 20°C, Wind speed: 1m/s)

Module Type	EP155	EP160	EP165
Maximum Power(P _{max})	115.76W	119.72W	122.63W
Open Circuit Voltage(V _{oc})	20.63V	20.89V	20.99V
Short Circuit Current(I _{sc})	7.01A	7.14A	7.26A
Maximum Power Voltage(V _{pm})	17.33V	17.53V	17.62V
Maximum Power Current(I _{pm})	6.68A	6.83A	6.96A
Nominal Operating Cell Temp.	45±2°C		

MECHANICAL PROPERTIES

Cells	ARC coated cells
Cell Type	Poly-crystalline
Cell Dimension	156X156mm
Module Dimensions	1481X675X35mm
Module Weight	11 Kgs.
Junction-Box	IP67
Connectors Type	MC4 Compatible
Cable Length	1000mm
Front Cover	Low Iron Tempered Textured Glass
Back Cover	Weather resistant back sheet
Frame	High strength Anodized aluminum frames
Front Load Capacity	5400Pa
Rear Load Capacity	2400Pa

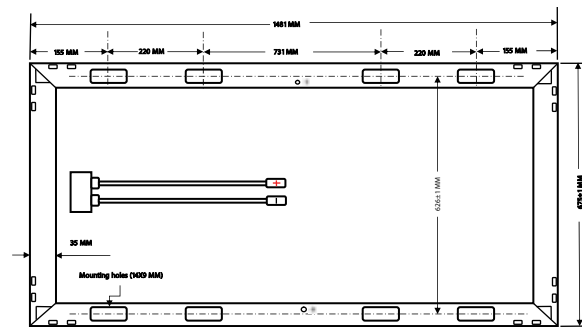
CERTIFICATES & WARRANTY

Certificates	ISO 9001:2015 IEC 61215, IEC 61730 - I & II IEC 61701 (Maximum Severity) IEC 62716
Module Fire Rating	CLASS A
Product Warranty	10 Years
Linear Output Warranty Power	25 Years

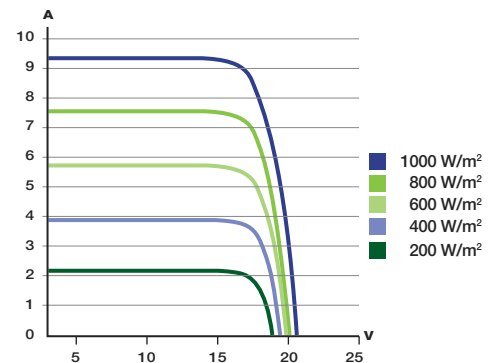
LOADING QUANTITY

No. of Modules Per Pallet	30 Modules	
No. of Palletes in 20 ft. Container	19 Palletes	570 Modules
No. of Palletes in 40ft. HQ Container	45 Palletes	1350 Modules

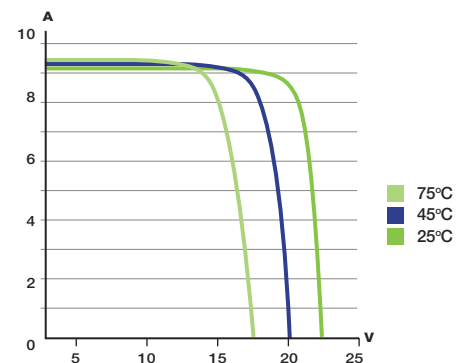
MODULE BACK VIEW



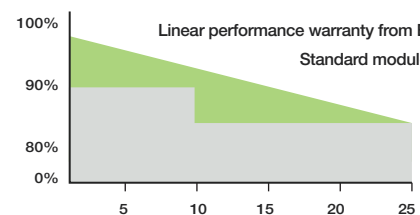
IV CHARACTERISTICS @ LOW IRRADIANCE



IV CHARACTERISTICS @ TEMPERATURES



LINEAR PERFORMANCE WARRANTY



36 Cells
Poly-Crystalline



155W - 165W
Power Output



16.57%
Efficiency



0~+5W
Power

PERFORMANCE | STC (I_r: 1000 W/m², Temp: 25°C, AM: 1.5)

Module Type	EP250	EP255	EP260	EP265	EP270	EP275
Maximum Power(P _{max})	250W	255W	260W	265W	270W	275W
Number of Cells	60	60	60	60	60	60
Open Circuit Voltage(V _{oc})	37.62V	37.68V	37.86V	38.10V	38.28V	38.40V
Short Circuit Current(I _{sc})	8.44A	8.51A	8.64A	8.74A	8.82A	8.90A
Maximum Power Voltage(V _{pm})	31.55V	31.80V	31.91V	32.15V	32.36V	32.53V
Maximum Power Current(I _{pm})	7.93A	8.02	8.15A	8.27A	8.35A	8.46A
Module Efficiency(η)	15.30%	15.69%	15.98%	16.28%	16.59%	16.90%
Operating Temperature	-40 to 85°C					
Maximum System Voltage	1000V					
Maximum Fuse Rating	15A					
Power Tolerance	0~+5W					
Temperature Co-efficient V _{oc}	-0.28%/°C					
Temperature Co-efficient P _{max}	-0.38%/°C					
Temperature Co-efficient I _{sc}	0.03%/°C					

PERFORMANCE | NOCT (I_r: 800 W/m², Ambient Temp: 20°C, Wind speed: 1m/s)

Module Type	EP250	EP255	EP260	EP265	EP270	EP275
Maximum Power(P _{max})	186W	190W	194W	198W	202W	205W
Open Circuit Voltage(V _{oc})	34.41V	34.47V	34.53V	34.75V	34.91V	35.01V
Short Circuit Current(I _{sc})	6.94A	6.99A	7.05A	7.13A	7.22A	7.30A
Maximum Power Voltage(V _{pm})	28.41V	28.60V	28.95V	29.20V	29.41V	29.72V
Maximum Power Current(I _{pm})	6.56A	6.65A	6.71A	6.79A	6.88A	6.91A
Nominal Operating Cell Temp.	45±2°C					

MECHANICAL PROPERTIES

Cells	ARC coated cells
Cell Type	Poly-crystalline
Cell Dimension	156X156mm
Module Dimensions	1640X992X35mm
Module Weight	18 Kgs.
Junction-Box	IP67
Connectors Type	MC4 Compatible
Cable Length	1000mm
Front Cover	Low Iron Tempered Textured Glass
Back Cover	Weather resistant back sheet
Frame	High strength Anodized aluminum frames
Front Load Capacity	5400Pa
Rear Load Capacity	2400Pa

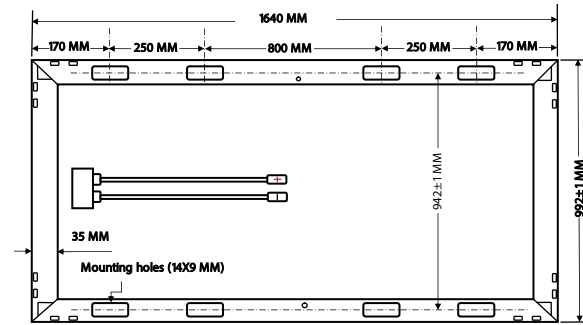
CERTIFICATES & WARRANTY

Certificates	ISO 9001:2015 IEC 61215, IEC 61730 - I & II IEC 61701 (Maximum Severity) IEC 62716
Module Fire Rating	CLASS A
Product Warranty	10 Years
Linear Output Warranty Power	25 Years

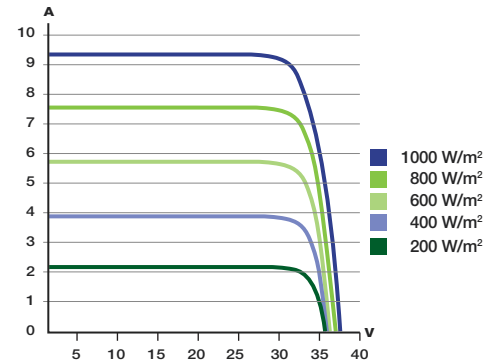
LOADING QUANTITY

No. of Modules Per Pallet	30 Modules	
No. of Palletes in 20 ft. Container	12 Palletes	360 Modules
No. of Palletes in 40ft. HQ Container	28 Palletes	840 Modules

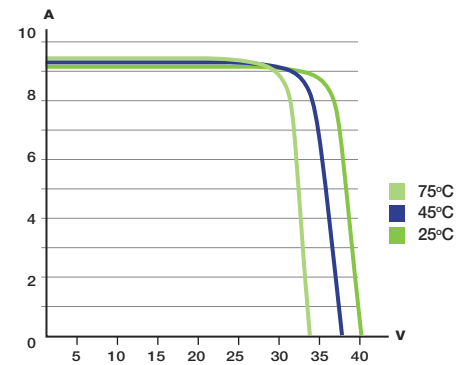
MODULE BACK VIEW



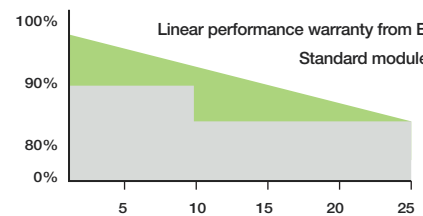
IV CHARACTERISTICS @ LOW IRRADIANCE



IV CHARACTERISTICS @ TEMPERATURES



LINEAR PERFORMANCE WARRANTY



60 Cells
Poly-Crystalline



250W - 275W
Power Output



16.90%
Efficiency



0~+5W
Power



PROUDLY MADE IN UAE

PERFORMANCE | STC (I_r: 1000 W/m², Temp: 25°C, AM: 1.5)

Module Type	EP300	EP305	EP310	EP315	EP320	EP325	EP330
Maximum Power(P _{max})	300W	305W	310W	315W	320W	325W	330W
Number of Cells	72	72	72	72	72	72	72
Open Circuit Voltage(V _{oc})	45.14V	45.21V	45.36V	45.57V	45.79V	45.93V	46.08V
Short Circuit Current(I _{sc})	8.44A	8.51A	8.61A	8.69A	8.77A	8.84A	8.90A
Maximum Power Voltage(V _{mp})	37.85V	38.13V	38.22V	38.44V	38.65V	38.93V	39.04V
Maximum Power Current(I _{mp})	7.93A	8.02A	8.12A	8.21A	8.30A	8.35A	8.46A
Module Efficiency(η)	15.46%	15.70%	15.98%	16.24%	16.50%	16.75%	17.0%
Operating Temperature	-40 to 85°C						
Maximum System Voltage	1000V						
Maximum Fuse Rating	15A						
Power Tolerance	0~+5W						
Temperature Co-efficient Voc	-0.28%/°C						
Temperature Co-efficient P _{max}	-0.38%/°C						
Temperature Co-efficient I _{sc}	0.03%/°C						

PERFORMANCE | NOCT (I_r: 800 W/m², Ambient Temp: 20°C, Wind speed: 1m/s)

Module Type	EP300	EP305	EP310	EP315	EP320	EP325	EP330
Maximum Power(P _{max})	223W	227.40W	231.59W	235.72W	239.45W	242.64W	246.16W
Open Circuit Voltage(V _{oc})	41.25V	41.32V	41.73V	41.92V	42.13V	42.25V	42.39V
Short Circuit Current(I _{sc})	6.93A	6.99A	7.02A	7.09A	7.16A	7.21A	7.26A
Maximum Power Voltage(V _{mp})	34.06V	34.31V	34.67V	34.87V	35.06V	35.32V	35.42V
Maximum Power Current(I _{mp})	6.56A	6.63A	6.68A	6.76A	6.83A	6.87A	6.95A
Nominal Operating Cell Temp.	45+2°C						

MECHANICAL PROPERTIES

Cells	ARC coated cells
Cell Type	Poly-crystalline
Cell Dimension	156X156mm
Module Dimensions	1956X992X35mm
Module Weight	21 Kgs.
Junction-Box	IP67
Connectors Type	MC4 Compatible
Cable Length	1000mm
Front Cover	Low Iron Tempered Textured Glass
Back Cover	Weather resistant back sheet
Frame	High strength Anodized aluminum frames
Front Load Capacity	5400Pa
Rear Load Capacity	2400Pa

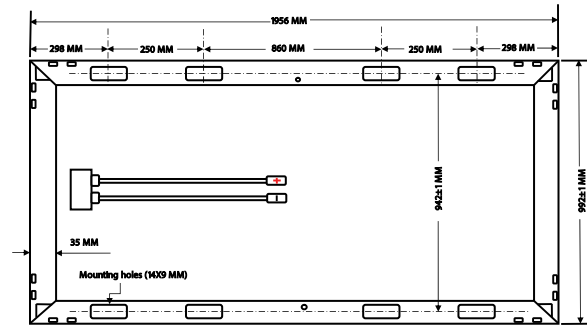
CERTIFICATES & WARRANTY

Certificates	ISO 9001:2015
	IEC 61215, IEC 61730 - I & II
	IEC 61701 (Maximum Severity)
	IEC 62716
Module Fire Rating	CLASS A
Product Warranty	10 Years
Linear Output Warranty Power	25 Years

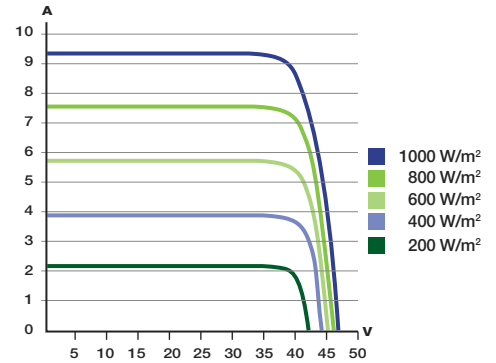
LOADING QUANTITY

No. of Modules Per Pallet	30 Modules	
No. of Palletes in 20 ft. Container	10 Palletes	300 Modules
No. of Palletes in 40ft. HQ Container	24 Palletes	720 Modules

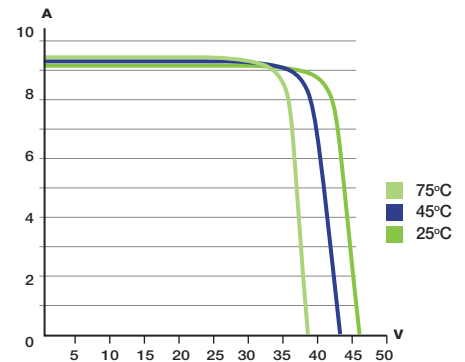
MODULE BACK VIEW



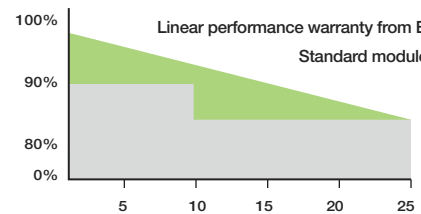
IV CHARACTERISTICS @ LOW IRRADIANCE



IV CHARACTERISTICS @ TEMPERATURES



LINEAR PERFORMANCE WARRANTY



72 Cells
Poly-Crystalline



300W - 330W
Power Output



17.0%
Efficiency



0~+5W
Power



PROUDLY MADE IN UAE



Echo Solar Panels Manufacturing L.L.C.

P.O.Box: 454429, Dubai, UAE,
Dubai Investment Park - 1,
Community 598 - 1212, Street - 55, #5.

Tel : +971 4 880 0733 | Fax : +971 4 883 0042
info@echosolarae.com | www.echosolaruae.com

