CITIZEN SOLAR
solarising the nation

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GREEN ENERGY

KEY FEATURES

- 5BB Solar Cell design to improve the module efficiency and give a better aesthetic appearance.
- Excellent module efficiency up to 17.00% achieved through advanced manufacturing capabilities and technology.
- ARC Coated and high transmission glass features that directs more light on module resulting higher energy output.
- Robost aluminum frame, ensure the modules to withstand wind load up to 2400 Pa. & heavy snow load up to 5400 Pa.
- Positive power tolerance of up to +3% extra output.
- High PID resistant, advance technology & qualified material leads to high resistant to PID.
- Ip68 junction box for long-term weather endurance.
- Low degradation and excellent performance under low light condition and with standing to harsh environment.

OHSAS 18001:2007 | MSME | GEDA | ISO 9001:2015 | NSIC ISO 9001 : 2008 | MNRE | ISO 14001 CERTIFIED

CSPL 72 CELL MODULE TYPE : CSPL 315-330 Watt

Electrical Parameters at Standard Test Conditions STC

Type	CSPL24P315	CSPL24P320	CSPL24P325	CSPL24P330
Power Output Pmax (W)	315W	320W	325W	330W
Voltage at Pmax V mpp (V)	36.95	37.26	37.58	37.84
Current at Pmax I mpp (A)	8.54	8.62	8.67	8.73
Open-circuit Voltage VOC (V)	45.46	45.63	45.93	46.16
Short-circuit Current ISC (A)	9.09	9.14	9.21	9.25

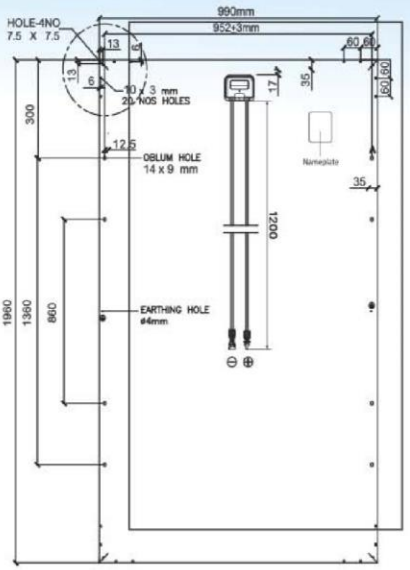
STC : 1000 W/m irradiance, 25°C cell temperature, AM 1.5g

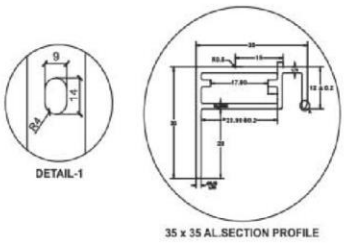
Electrical Parameters at NOCT

Type	CSPL24P315	CSPL24P320	CSPL24P325	CSPL24P330
Power Output Pmax (W)	232.93	238.10	241.53	245.14
Voltage at Pmax V mpp (V)	34.75	35.01	35.27	35.54
Current at Pmax I mpp (A)	6.80	6.85	6.90	6.93
Open-circuit Voltage VOC (V)	42.71	42.90	43.13	43.34
Short-circuit Current ISC (A)	7.22	7.26	7.30	7.31

NOCT : 800 W/m irradiance, ambient temperature 20°C, wind speed 1 m/sec

Engineering Drawing (mm)





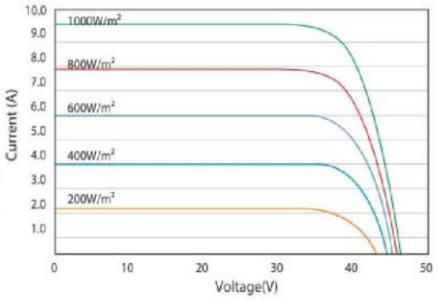
Thermel Characteristics

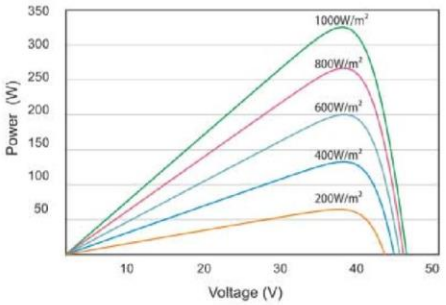
Nominal Operating Cell Temperature	NOCT	°C	45°C ± 2°C
Temperature Coefficient of Pmax	γ	%/°C	-0.361
Temperature Coefficient of VOC	β	%/°C	-0.304
Temperature Coefficient of ISC	α	%/°C	0.045

Operating Condition

Max. System Voltage	1000vdc
Max. Series Fuse Rating	15A
Limiting Reverse Current	25A
Operating Temperature Range	-40 °C to+85 °C
Max. Static Load, Front	5400pa
Max. Static Load, Back (e.g., wind)	2400pa
Max. Hailstone Impact (diameter / velocity)	25mm/3.3m/s

Electrical Performance





Mechanical Data

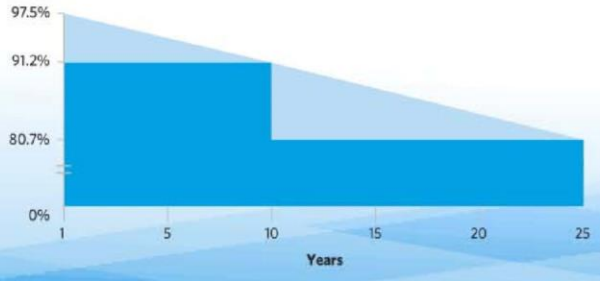
Dimensions (L / W / H)	1960mm / 990mm / 35mm
Weight	21.5kg
Front Cover (material / thickness)	Ar Coated High Transmission Low Iron Tempered Glass/3.2mm
Cell (qty. / material / dim./no. of busbars)	72/ multicrytalline / 156.75mm x 156.75mm / 5BB / 4BB
Encapsulate (material)	Enthylene Vinyl acetate (EVA)
Backsheet	UV Protected
Frame (material / color)	Anodized aluminum alloy /silver
Junction Box (protection degree)	IP68/67, 3 bypass diodes
Cable (length / cross-sectional area)	1200mm / 4mm
Plug Connector (type / protection degree)	MC4

Packaging Specification

Number of Modules Per Pallet	30
Number of Pallets per 40' Container	22
Packaging Box Dimensions (L / W / H)	2005mm / 1115mm / 1150mm
Box Weight	700kg

Linear Performance Warranty

- 90% of the specified minimum output of the module for a 10 years period
- 80% of the specified minimum output of the module for a 25 years period
- 10-year product warranty
- 25-year linear performance warranty



CSPL 60 CELL MODULE TYPE: CSPL 260-275 Watt

Electrical Parameters at Standard Test Conditions STC

Type	CSPL18P260	CSPL18P265	CSPL18P270	CSPL18P275
Power Output Pmax (W)	260W	265W	270W	275W
Voltage at Pmax V mpp (V)	30.63	31.04	31.24	31.53
Current at Pmax I mpp (I)	8.51	8.54	8.67	8.73
Open-circuit Voltage VOC (V)	37.75	37.98	38.19	38.46
Short-circuit Current ISC (I)	9.07	9.13	9.19	9.25

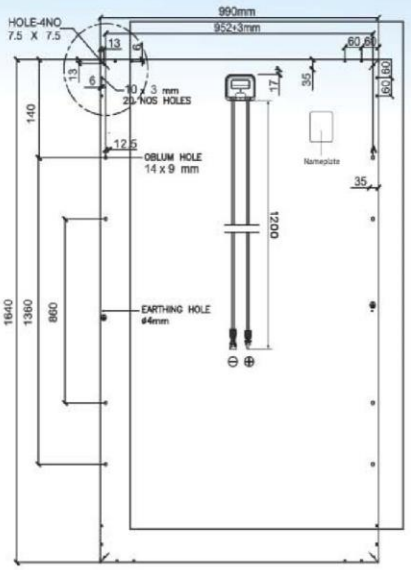
STC : 1000 W/m irradiance, 25°C cell temperature, AM 1.5g

Electrical Parameters at NOCT

Type	CSPL18P260	CSPL18P265	CSPL18P270	CSPL18P275
Power Output Pmax (W)	194.032	197.14	201.10	204.53
Voltage at Pmax V mpp (V)	28.79	29.12	29.34	29.61
Current at Pmax I mpp (I)	6.78	6.83	6.88	6.92
Open-circuit Voltage VOC (V)	35.44	35.62	35.78	36.13
Short-circuit Current ISC (I)	7.19	7.25	7.28	7.33

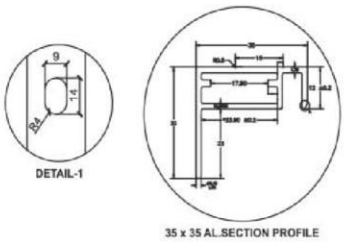
NOCT : 800 W/m irradiance, ambient temperature 20°C, wind speed 1 m/sec

Engineering Drawing (mm)



Thermel Characteristics

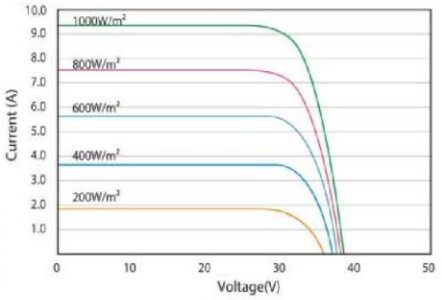
Nominal Operating Cell Temperature	NOCT	°C	45°C ± 2°C
Temperature Coefficient of Pmax	γ	%/°C	-0.361
Temperature Coefficient of VOC	β	%/°C	-0.304
Temperature Coefficient of ISC	α	%/°C	0.045

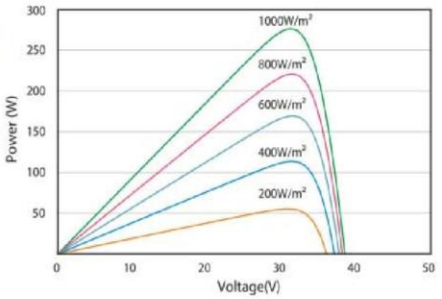


Operating Condition

Max. System Voltage	1000vdc
Max. Series Fuse Rating	15A
Limiting Reverse Current	25A
Operating Temperature Range	-40 °C to+85 °C
Max. Static Load, Front	5400pa
Max. Static Load, Back (e.g., wind)	2400pa
Max. Hailstone Impact (diameter / velocity)	25mm/3.3m/s

Electrical Performance





Mechanical Data

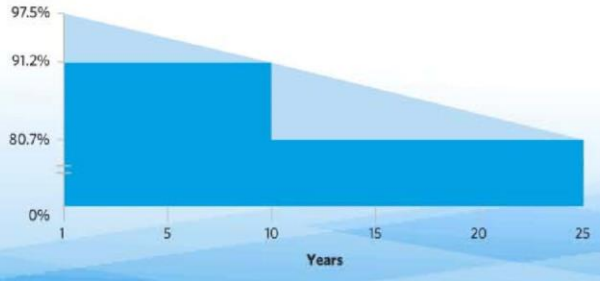
Dimensions (L / W / H)	1640 mm/ 990 mm / 35 mm
Weight	18.3kg
Front Cover (material / thickness)	Ar Coated High Transmission Low Iron Tempered Glass/3.2mm
Cell (qty. / material / dim./no. of busbars)	60/ multicrytalline / 156.75mm x 156.75mm / 5BB/ 4BB
Encapsulate (material)	Enthylene Vinyl acetate (EVA)
Backsheet	UV Protected
Frame (material / color)	Anodized aluminum alloy /silver
Junction Box (protection degree)	IP68/67, 3 bypass diodes
Cable (length / cross-sectional area)	1200mm / 4mm
Plug Connector (type / protection degree)	MC4

Packaging Specification

Number of Modules Per Pallet	30
Number of Pallets per 40' Container	28
Packaging Box Dimensions (L / W / H)	1685mm / 1115mm / 1150mm
Box Weight	600kg

Linear Performance Warranty

- 90% of the specified minimum output of the module for a 10 years period
- 80% of the specified minimum output of the module for a 25 years period
- 10-year product warranty
- 25-year linear performance warranty



CSPL 36 CELL MODULE TYPE : CSPL 10-150 Watt

TECHNICAL DATA

Module Type	CSPL10	CSPL20	CSPL40	CSPL50	CSPL60	CSPL75	CSPL100	CSPL150
Peak Power Watts (Pmax)	10W	20W	40W	50W	60W	75W	100W	150W
Maximum Power Voltage (Vmp)	17.85	17.15	17.84	17.89	18.04	17.99	17.99	17.85
Maximum Power Current (Imp)	0.62	1.18	2.25	2.8	3.33	4.17	5.57	8.41
Open-circuit Voltage (Voc)	21.65	21.44	21.95	21.77	21.66	22.12	21.84	22.58
Short-circuit Current (Isc) (A)	0.69	1.27	2.44	3.04	3.67	4.49	6.11	8.7
Module Efficiency STC (%)	9.24	12.25	13.07	13.55	14.21	14.74	13.67	15.19
Operating Temperature (°C)	-40°C-+85°C							
Maximum system Voltage	1000V DC (IEC)							
Maximum Series Fuse Rating	15A							

Temperature Characteristics (TC) and Permission Operating Conditions

Specification	Data
Tc of Open Circuit Voltage (B)	-0.35± 0.01% /°C
Tc of Short Circuit Current (a)	0.50 ± 0.02% /°C
Tc Power (Y)	-0.04 ± 0.02% /°C
Maximum System Voltage	1000 V (TUV)
NOCT	45°C ± 2°C
Temperature Range	-40°C to 85°C

Mechinal Data

Specification	Data							
Cell Arrangement	36Cells (9x4)							
Dimensions : Length (mm)	286	486	476	576	666	806	1091	1481
Dimensions : Width (mm)	351	351	661	661	661	661	661	661
Dimensions : Height (mm)	18	18	34	34	34	34	34	34
Weight (Kg)	1.5	2.0	3.9	4.6	5.2	6.2	8.10	11.3Kg
Front Cover	3.2mm Glass							
Encapsulate (material)	Enthylene Vinyl acetate (EVA)							
Frame Material	Anodized Aluminum Alloy							
Junction Box	IP 65 OR IP 67							
Product Warranty	5 Years							

Subject to errors and technical modifications within the scope of product improvement.

QUALITY ASSURANCE

- High quality control standards.
- High quality Component from International Supplier.
- Enhanced reliability through use of distinctive encapsulate and back sheet.
- PID free modules (85°C / 85RH for 288hrs).
- Optimized edge clearance for high quality rugged design.
- 2x100 % Electro luminescence checking to ensure defect free modules.
- 100%In-line hi-pot testing (H.V+GB+IR).
- High FF for improved energy conversion efficiency.
- Torsion and corrosion resistant with anodized aluminum frame.
- Unique design of back-sheet for high resistance to moisture ingress.

Applications

- On Grid Solar System
- Solar Water Pump
- Off Grid Solar System
- Solar Water Heater
- Solar Street Lights
- Solar EPC

COMPREHENSIVE PRODUCTS & SYSTEM CERTIFICATES

- IS 14286/61730-1/61730-2/62804
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environmental Management System
- OHSAS 18001: 2007 Occupation Health and Safety Management System

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CAUTION : READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.
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