



Contents

M10 Perc Monocrystalline Solar Panels

M10 High Efficiency Solar Panels

Rectangle Solar Panels

110-170Wp Flexible Solar Panels

CW SolarCell

CW Alüminyum



Factory Area
75.000m²



ABOUT US

CW Energy USA is a pioneering brand shaping the future of the renewable energy sector in America with its innovative approach and expertise in solar energy.

As part of a globally active solar energy company, CW Energy USA leverages advanced photovoltaic (PV) technology and extensive experience to contribute to sustainable energy solutions in one of the world's largest renewable energy markets.

Founded on the strong legacy of its parent company, established in 2010, CW ENERJİ MÜH. TİC. VE SAN. A.Ş. boasts an impressive annual production capacity of 1.8 GW. We provide reliable, innovative, and efficient solar energy solutions tailored for both residential and commercial applications.

Our mission is to create a more sustainable and livable world by delivering clean energy solutions and fostering an environmentally conscious future.

With strategically located warehouses in New Jersey, Georgia, Texas, and our newly added warehouse in California and Florida, we ensure fast delivery and exceptional customer support.

CW Energy USA offers cutting-edge solar solutions, including High Efficiency, PERC Mono, and flexible solar panels, designed to meet the evolving needs of the renewable energy sector.

Committed to environmental sustainability and continuous technological advancement, CW Energy USA strives to be a trusted partner for all stakeholders in the industry.

With a strong emphasis on transparency, quality, and excellence, we are dedicated to harnessing the power of the sun to build a sustainable and brighter future for generations to come.





Knowledge Hub

We make knowledge more accessible with our education portal.



Expert Support

Our pre-sales and after-sales support teams are by your side at every step, providing the best solutions.



Global Reach

We export to more than 60 countries.



Project Design

We offer free project design support, with our professional project design team.



Reliable Stock & Fast Delivery

With our ready stock, we respond to your demands quickly.



You Stay in Control!



Sustainability and Environmental Responsibility

Through our investments in renewable energy sources, we reduce our carbon footprint and strive to leave a cleaner world for future generations.



Quality Control from the Very First Step

Starting with raw material production, our quality control ensures unmatched excellence in every detail.



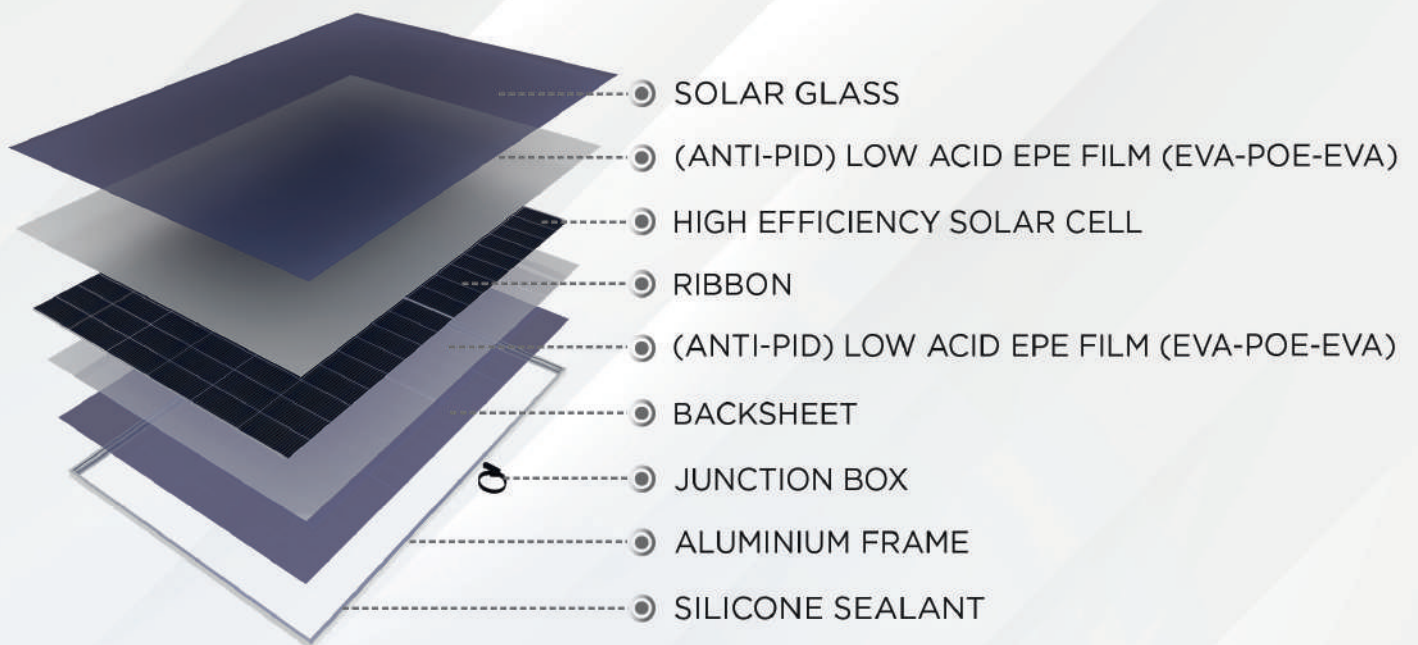
Technology

Equipped with state-of-the-art technology, our production facilities utilize the most advanced manufacturing techniques to ensure industrial excellence.

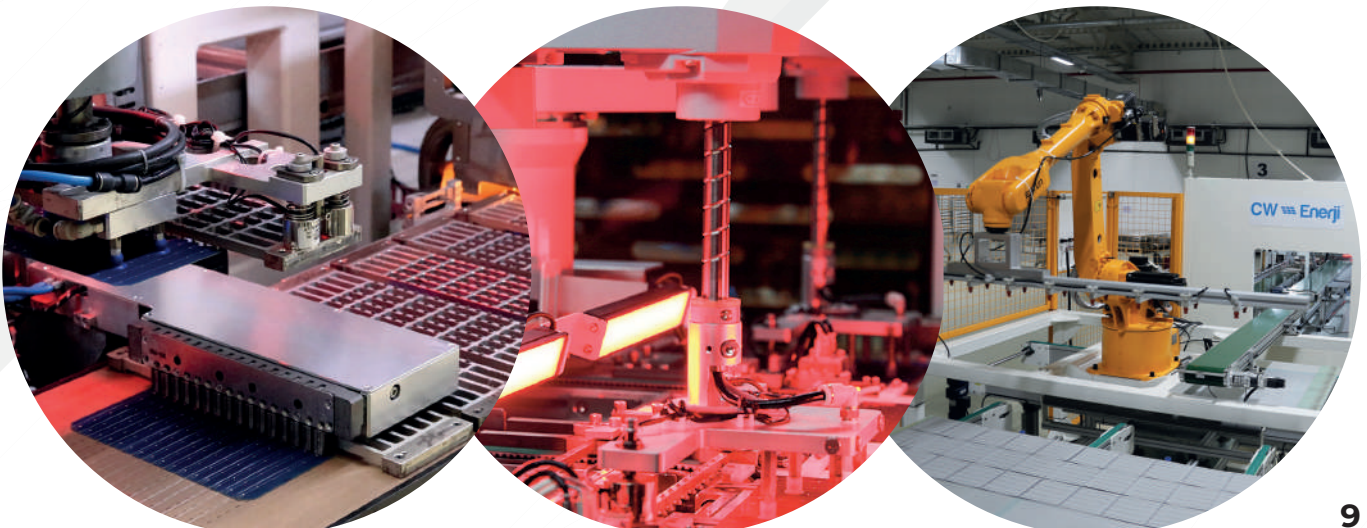
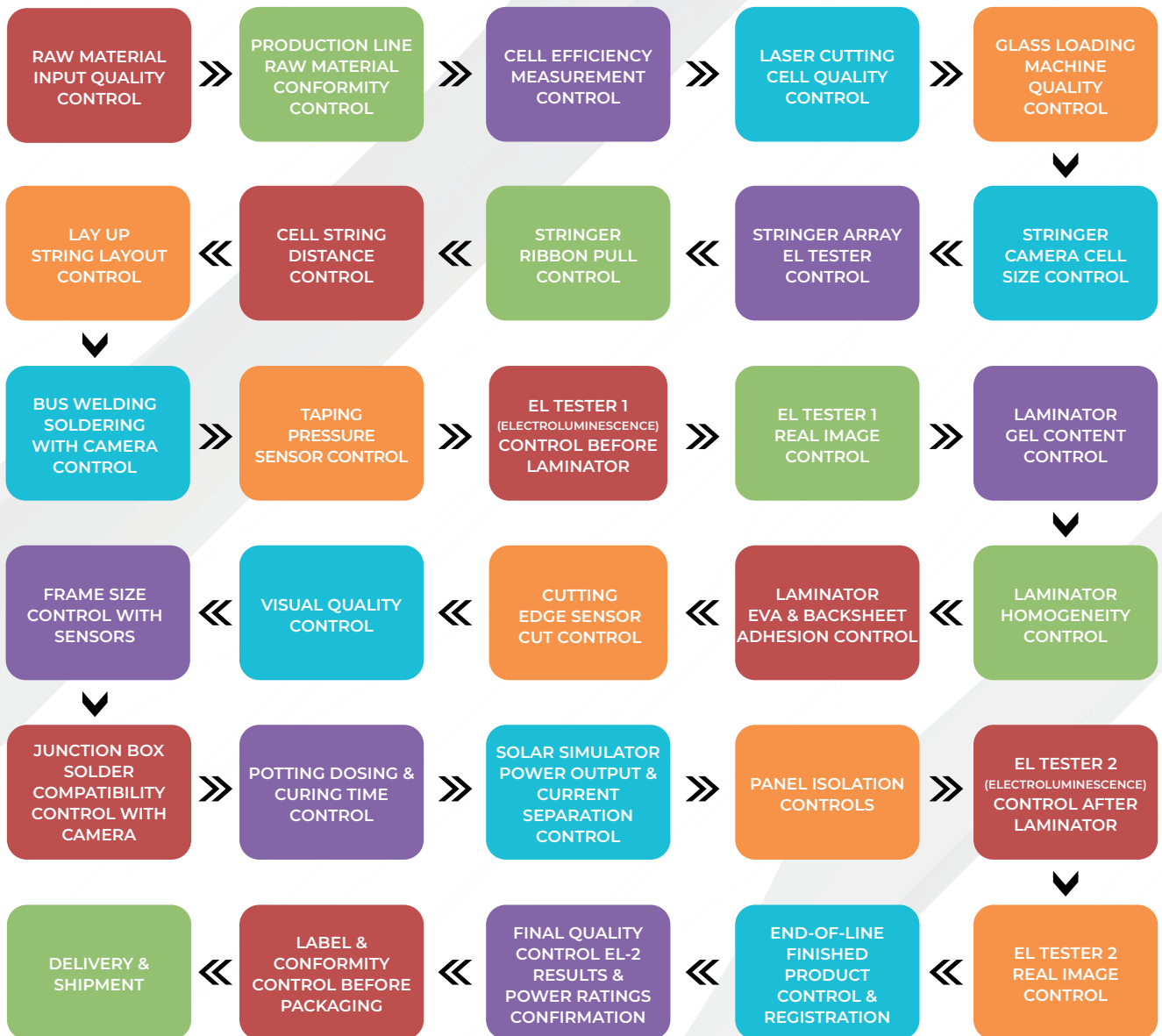


Customer-Centric Approach

We always prioritize the needs of our customers and aim to provide them with the best service.



SOLAR PANEL QUALITY CONTROL POINTS



Mission & Vision

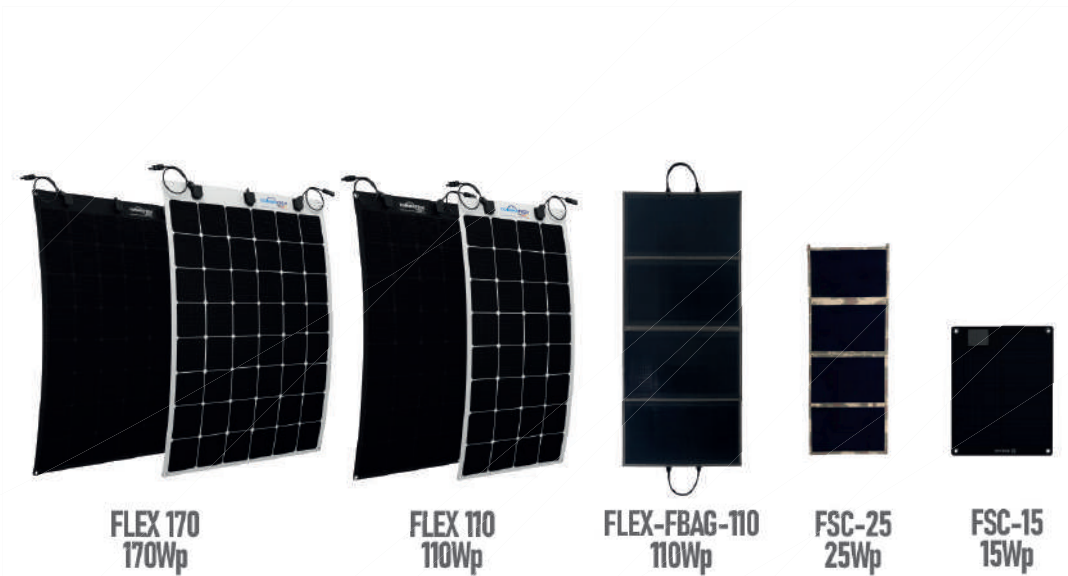
As CW Energy continues to invest in solar energy—nature's greatest gift—we contribute to a greener world through the CW Energy Memorial Forest. Our vision is to expand the use of infinite solar energy and other clean energy sources to support both Türkiye's and the global economy while fostering an ecological, sustainable, and greener planet. By embracing new technologies, we are committed to shaping a better future for humanity. To achieve this, CW Energy is dedicated to leaving a more livable environment for future generations. Our core mission is to sustain our presence as an honest, reliable, principled, and forward-thinking organization for years to come.

While CW Enerji continues to invest in the energy of the sun which is nature's greatest blessing, we contribute to a greener world by with the CW Enerji Memorial Forest.



We Continue to Produce the Best.

182mm M10 Cell 182mm	210mm G12 Cell 210mm	182.2mm M10R Cell 183.75mm	182mm High Efficiency Rectangle Cell 210mm
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Quality & Certification

CW Enerji is a solar panel manufacturing company that offers new technologies by acting sensitively in order to make the lives of people and other beings more sustainable, whose priority in all products and services is customer orientation and high quality, and which is taking firm steps towards becoming the world leader in the sector. Solar panels manufactured in the factory with ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO/IEC 27001:2017, ISO 50001:2018, ISO 10002:2018, UL, IEC certificates and standards which tested by independent test organizations to ensure certification compliance and regulatory standards. The solar panels manufactured by CW Enerji with these values are secured by the world's leading reinsurance companies with a "30-year linear performance warranty".



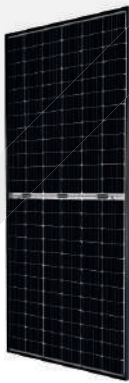
TÜRKİYE'S
TOP 500 INDUSTRIAL
ENTERPRISES
2024



IEC 61215, IEC 61730, IEC 62804 (PID-Free)
IEC 61716 (Ammonia Corrosion), IEC 61701 (Salt Mist Corrosion)
IEC 60068-28-68 (Dust and Sand Test)
TS EN 13501-5 (Flammability Test)
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018



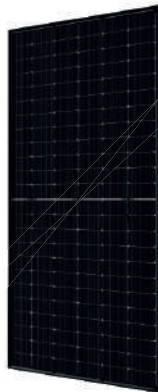
108PMB10
415-405Wp



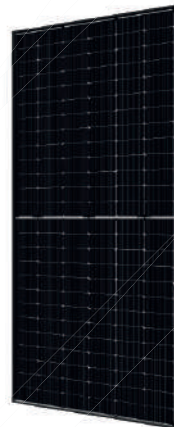
144PMB10
550-530Wp



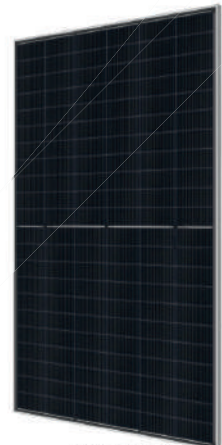
108TNB10
450-435Wp



144TNB10
595-570Wp



156TNB10
635-615Wp



132TNB12R
655-620Wp

Half Cut BIFACIAL PERC MONOCRYSTALLINE • 108PMB10




High Conversion Efficiency

High panel efficiency to guarantee high power output



Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



Excellent Durability

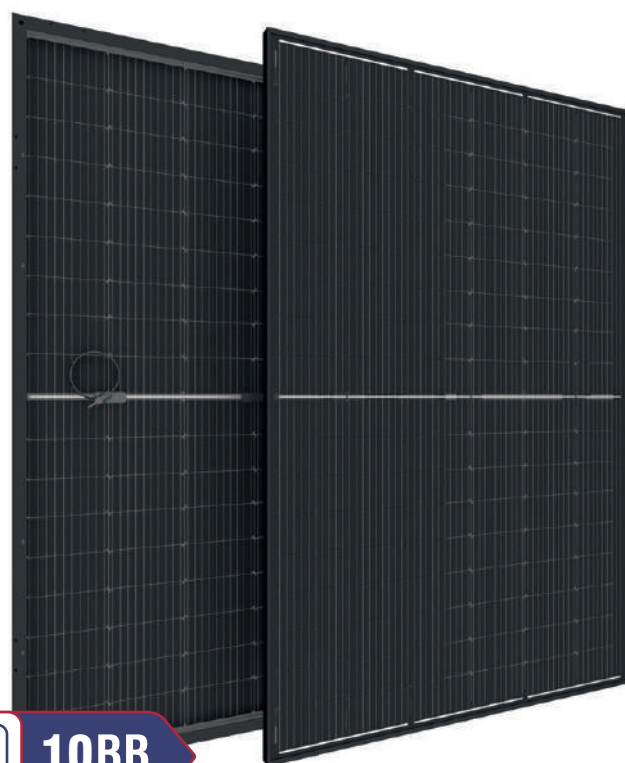
Wind load up to 5400 Pa, Snow load up to 5400 Pa



0~+5W Positive Power Tolerance

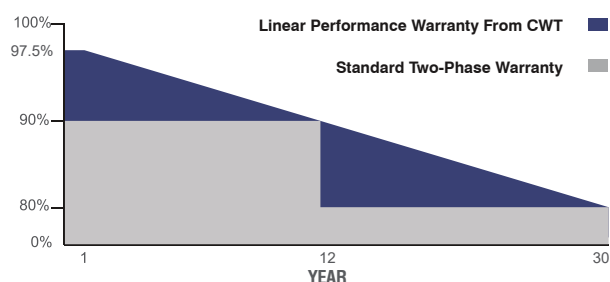


Easy Installation



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10BB



 30 Years Performance Warranty  12 Years Product Warranty

CWT410-108PMB10 410 Wp
CWT405-108PMB10 405 Wp
CWT400-108PMB10 400 Wp
CWT395-108PMB10 395 Wp
CWT390-108PMB10 390 Wp
CWT385-108PMB10 385 Wp
CWT380-108PMB10 380 Wp



SOMPO



ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

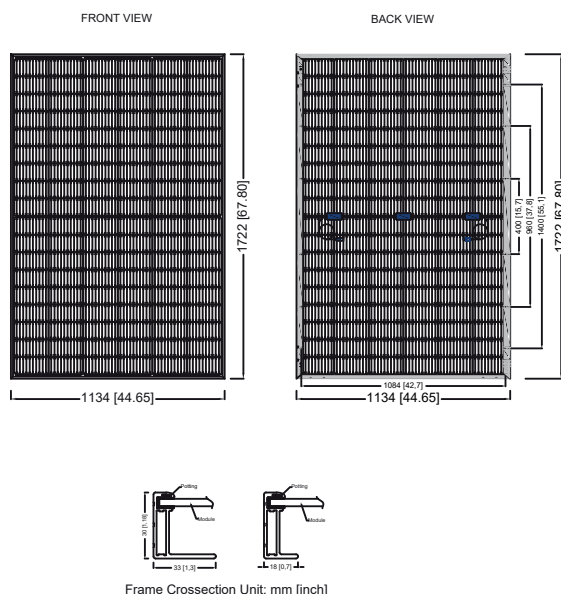
ELECTRICAL CHARACTERISTICS

Model Type	CWT380 108PMB10	CWT385 108PMB10	CWT390 108PMB10	CWT395 108PMB10	CWT400 108PMB10	CWT405 108PMB10	CWT410 108PMB10
Peak Power (P _{max})	380 Wp	385 Wp	390 Wp	395 Wp	400 Wp	405 Wp	410 Wp
Module Efficiency (%)	19.46	19.72	19.97	20.23	20.48	20.74	21.00
Maximum Power Voltage (V _{mp})	30.30	30.50	30.70	30.90	31.10	31.30	31.50
Maximum Power Current (I _{mp})	12.55	12.63	12.71	12.79	12.87	12.94	13.02
Open Circuit Voltage (V _{oc})	36.30	36.50	36.70	36.90	37.10	37.30	37.50
Short Circuit Current (I _{sc})	13.40	13.47	13.55	13.62	13.70	13.77	13.85
Power Tolerance	0~+5W						
Maximum System Voltage	1500V DC						
Operating Temperature	-40 ~ +85°C						
Protection Class	Class II						
Maximum Series Fuse Rating	25A						

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182x91 / 7.16x3.58
Cells per Module(pcs)	108 (18x6)
Weight(kg/lbs)	21.0 / 46.30
Panel Dimensions(mm/inch)	1722x1134x30 / 67.80x44.65x1.18
Max. Wind/Snow Load(Pa)/(lb/ft ²)	(5400 / 5400) / (212 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Frame Color	Silver / Black
Rear Side Material	Transparent Backsheet

PHYSICAL CHARACTERISTICS



REAR SIDE POWER GAIN

(400W Front Power Referenced)

Rear Side Power Gain	10%	20%	30%
Peak Power (P _{max})	440.0	480.0	520.0

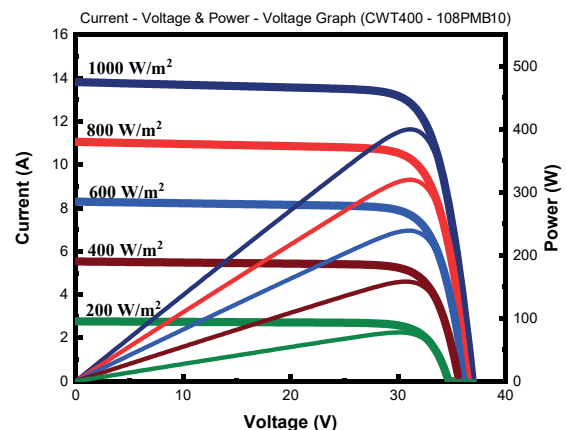
TEMPERATURE CHARACTERISTICS

Temp. Coeff. of (I _{sc})	0.040%/°C
Temp. Coeff. of (V _{oc})	-0.270%/°C
Temp. Coeff. of (P _{max})	-0.350%/°C

PACKING CONFIGURATION

Container	40' HQ
Pieces per Pallet	35
Pieces Per Container	910
Pallet Per Container	26

ELECTRICAL CHARACTERISTICS

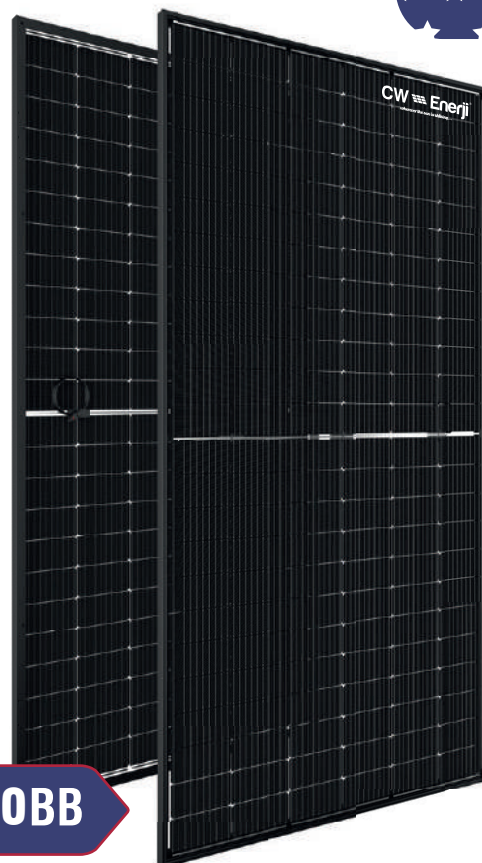


* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

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Half Cut BIFACIAL PERC MONOCRYSTALLINE • 144PMB10



High Conversion Efficiency

High panel efficiency to guarantee high power output



Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



Excellent Durability

Wind load up to 5400 Pa, Snow load up to 5400 Pa



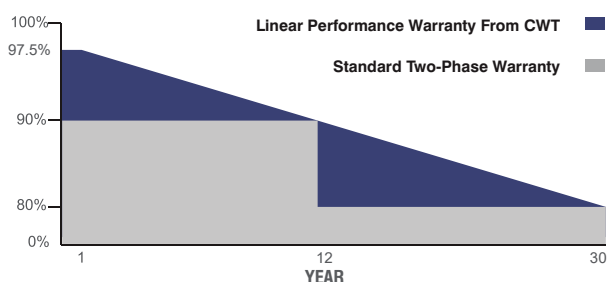
0~+5W Positive Power Tolerance



Easy Installation

BIFACIAL

10BB



30 Years Performance Warranty



12 Years Product Warranty

CWT560-144PMB10 560 Wp

CWT555-144PMB10 555 Wp

CWT550-144PMB10 550 Wp

CWT545-144PMB10 545 Wp

CWT540-144PMB10 540 Wp

CWT535-144PMB10 535 Wp

CWT530-144PMB10 530 Wp



SOMPO



ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

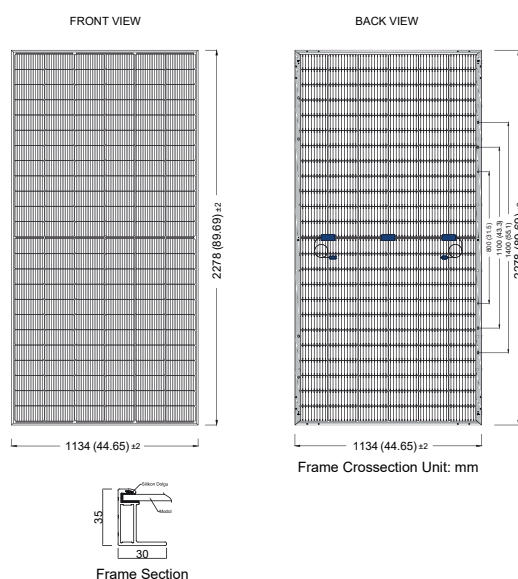
ELECTRICAL CHARACTERISTICS

Model Type	CWT530 144PMB10	CWT535 144PMB10	CWT540 144PMB10	CWT545 144PMB10	CWT550 144PMB10	CWT555 144PMB10	CWT560 144PMB10
Peak Power (P_{max})	530Wp	535Wp	540Wp	545Wp	550Wp	555Wp	560Wp
Module Efficiency (%)	20.52	20.71	20.90	21.10	21.29	21.48	21.68
Maximum Power Voltage (V_{mp})	41.60	41.80	42.00	42.20	42.40	42.60	42.80
Maximum Power Current (I_{mp})	12.75	12.80	12.86	12.92	12.98	13.03	13.09
Open Circuit Voltage (V_{oc})	49.40	49.60	49.80	50.00	50.20	50.40	50.60
Short Circuit Current (I_{sc})	13.58	13.63	13.70	13.76	13.82	13.89	13.95
Power Tolerance	0~+5W						
Maximum System Voltage	1500V DC						
Operating Temperature	-40 ~ +85°C						
Protection Class	Class II						
Maximum Series Fuse Rating	25A						

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182x91 / 7.16x3.58
Cells per Module(pcs)	144 (6x24)
Weight(kg/lbs)	28 / 61.73
Panel Dimensions(mm/inch)	2278x1134x35 / 89.69x44.65x1.38
Max. Wind/Snow Load(Pa)/(lb/ft ²)	(5400 / 5400) / (112.5 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Frame Color	Silver / Black
Rear Side Material	Transparent Backsheet

PHYSICAL CHARACTERISTICS



REAR SIDE POWER GAIN

(550W Front Power Referenced)

Rear Side Power Gain	10%	20%	30%
Peak Power (P_{max})	605.0	660.0	715.0

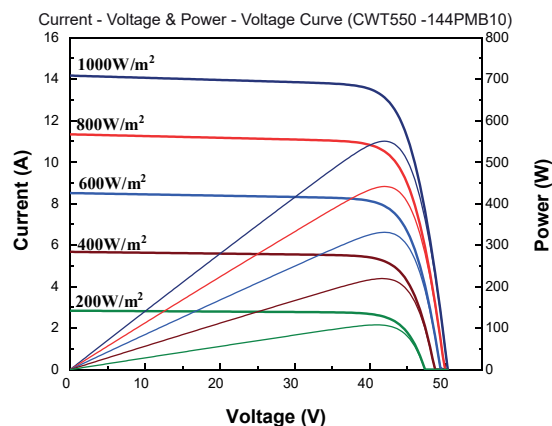
TEMPERATURE CHARACTERISTICS

Temp. Coeff. of (I_{sc})	0.040%/°C
Temp. Coeff. of (V_{oc})	-0.270%/°C
Temp. Coeff. of (P_{max})	-0.350%/°C

PACKING CONFIGURATION

Container	40' HQ
Pieces per Pallet	31
Pieces Per Container	620
Pallet Per Container	20

ELECTRICAL CHARACTERISTICS



* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

* For roof, facades and installations on similar surfaces, solar panels should be mounted over a fire-resistant covering suitable for this application, with adequate ventilation between the back of the solar panels and the mounting surface. Improper installations are hazardous and may spark a fire. Solar panels must not be mounted on structures and roofs which are made of not fire-resistant materials such as plastic layer, transparent plastic, PVC or similar materials without any fire-protection layer. Usage and installation not in accordance with the guidelines as outlined in the installation manual will terminate the warranty. Please refer to the installation manual and the warranty documents for further details.

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BIFACIAL HIGH-EFFICIENCY SOLAR PANELS • 108TNB10

Half Cut



High Conversion Efficiency

High panel efficiency to guarantee high power output



Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



Excellent Durability

Wind load up to 2400 Pa, Snow load up to 5400 Pa



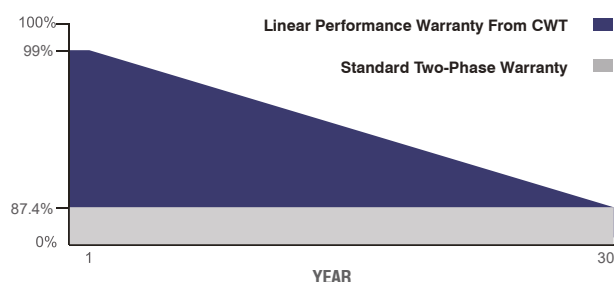
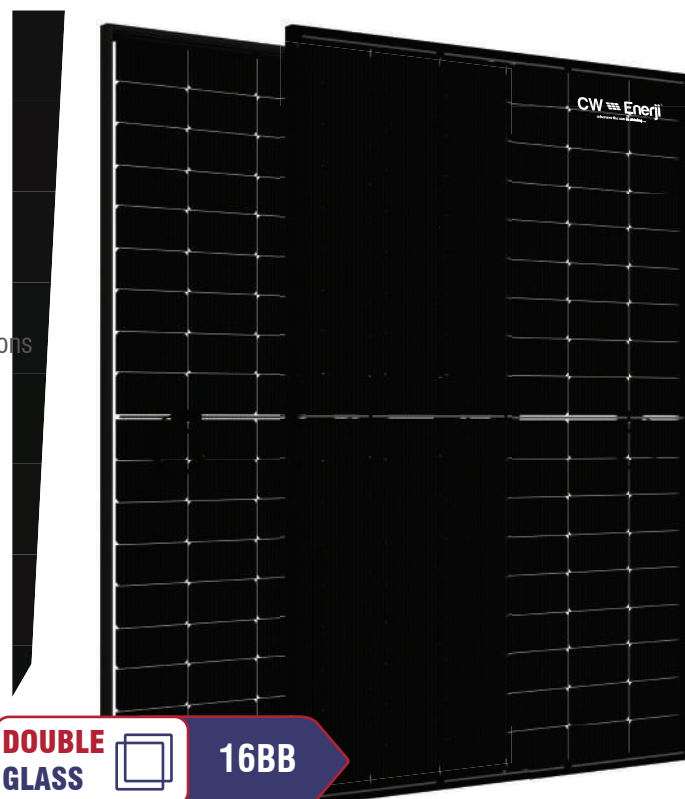
0~+5W Positive Power Tolerance



Easy Installation



Twice EVA Laminated Double Glass



CWT460-108TNB10 460 Wp

CWT455-108TNB10 455 Wp

CWT450-108TNB10 450 Wp

 30 Years Performance Warranty  30 Years Product Warranty



SOMPO



IEC 61215, IEC 61730-1, IEC 61730-2
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

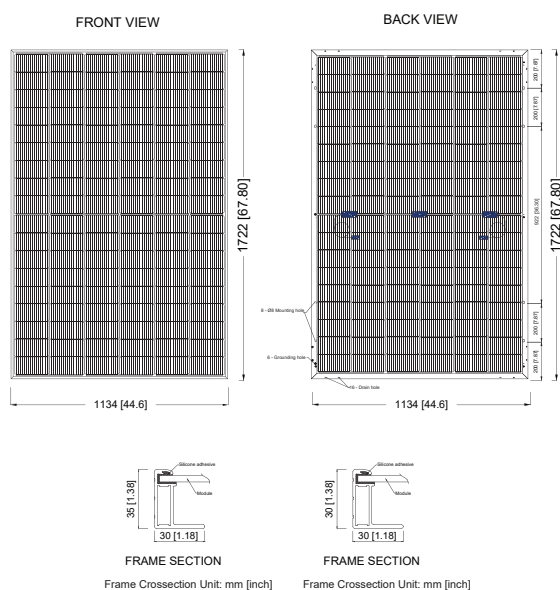
ELECTRICAL CHARACTERISTICS

Model Type	CWT450 108TNB10	CWT455 108TNB10	CWT460 108TNB10
Peak Power (P_{max})	450 Wp	455 Wp	460 Wp
Module Efficiency (%)	23.04	23.30	23.56
Maximum Power Voltage (V_{mp})	33.14	33.34	33.54
Maximum Power Current (I_{mp})	13.58	13.65	13.72
Open Circuit Voltage (V_{oc})	39.31	39.51	39.71
Short Circuit Current (I_{sc})	14.38	14.45	14.53
Power Tolerance	0~+5W		
Maximum System Voltage	1500V DC		
Operating Temperature	-40 ~ +85°C		
Protection Class	Class II		
Maximum Series Fuse Rating	25A		

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182 x 91 / 7.16x 3.58
Cells per Module(pcs)	108 (6x18)
Weight(kg/lbs)	(30 mm) 24.0 / 52.91 (35 mm) 25.0 / 55.11
Panel Dimensions(mm/inch)	1722x1134x30 / 67.80x44.64x1.18 1722x1134x35 / 67.80x44.64x1.37
Max. Wind/Snow Load(Pa)/(lb/ft ²)	(2400 / 5400) / (50 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Glass Thickness(mm/inch)	2.0x2.0 / 0.08x0.08
Frame Color	Silver / Black

PHYSICAL CHARACTERISTICS



REAR SIDE POWER GAIN

(450W Front Power Referenced)

Rear Side Power Gain	5%	10%	15%	20%	25%
Peak Power (P_{max})	472.50	495.00	517.50	540.00	562.50
Short Circuit Current (I_{sc})	15.10	15.82	16.54	17.26	17.98
Open Circuit Voltage (V_{oc})	41.07	43.02	44.98	46.93	48.89
Maximum Power Current (I_{mp})	14.26	14.94	15.62	16.30	16.98
Maximum Power Voltage (V_{mp})	34.80	36.45	38.11	39.77	41.43

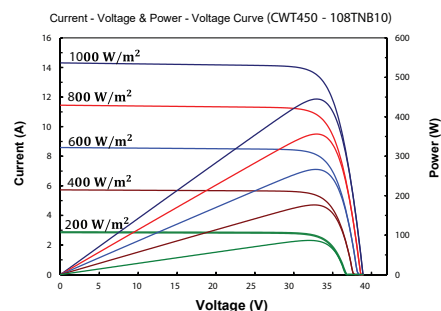
TEMPERATURE CHARACTERISTICS

Temp. Coeff. of (I_{sc})	0.040%/°C
Temp. Coeff. of (V_{oc})	-0.260%/°C
Temp. Coeff. of (P_{max})	-0.30%/°C

PACKING CONFIGURATION

Container	40' GP
Pieces per Pallet	35
Pieces Per Container	910
Pallet Per Container	26

ELECTRICAL CHARACTERISTICS



* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

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Half Cut BIFACIAL HIGH-EFFICIENCY SOLAR PANELS • 144TNB10



High Conversion Efficiency

High panel efficiency to guarantee high power output



Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



Excellent Durability

Wind load up to 2400 Pa, Snow load up to 5400 Pa



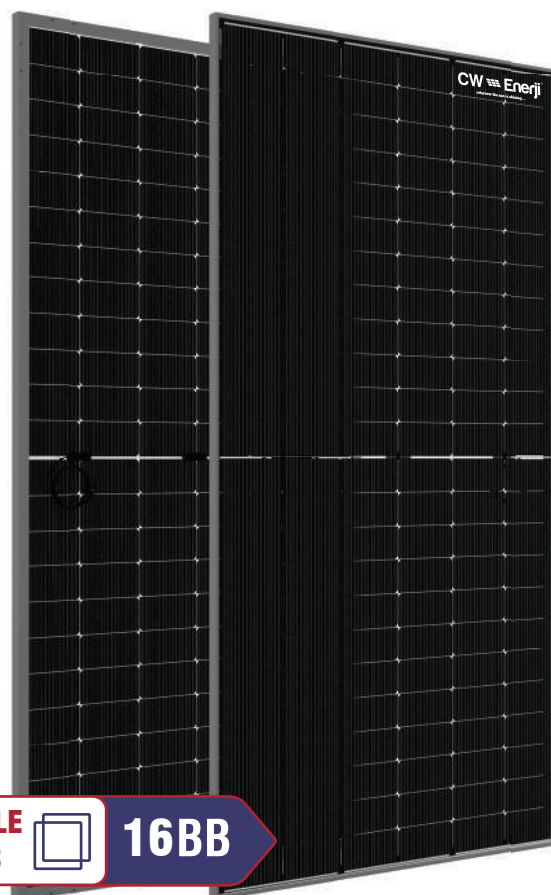
0~+5W Positive Power Tolerance



Easy Installation

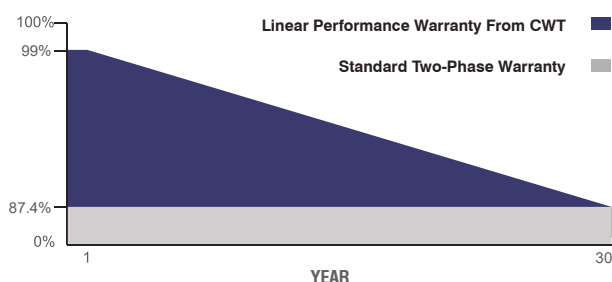


Twice EVA Laminated Double Glass



**DOUBLE
GLASS**

16BB



 30 Years Performance Warranty  30 Years Product Warranty

CWT585-144TNB10 585 Wp

CWT590-144TNB10 590 Wp

CWT595-144TNB10 595 Wp

CWT600-144TNB10 600 Wp

CWT605-144TNB10 605 Wp



SOMPO



ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

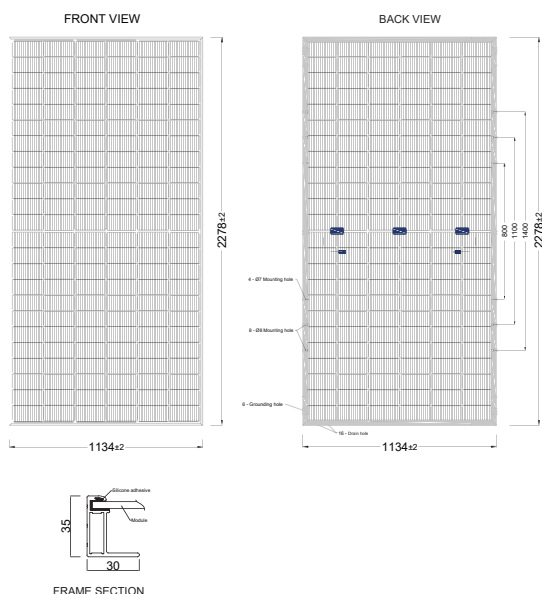
ELECTRICAL CHARACTERISTICS

Model Type	CWT585 144TNB10	CWT590 144TNB10	CWT595 144TNB10	CWT600 144TNB10	CWT605 144TNB10
Peak Power (P _{max})	585 Wp	590 Wp	595 Wp	600 Wp	605 Wp
Module Efficiency (%)	22.65	22.84	23.03	23.22	23.41
Maximum Power Voltage (V _{mp})	43.15	43.35	43.55	43.75	43.95
Maximum Power Current (I _{mp})	13.56	13.62	13.67	13.72	13.77
Open Circuit Voltage (V _{oc})	51.18	51.38	51.58	51.78	51.98
Short Circuit Current (I _{sc})	14.38	14.45	14.53	14.60	14.68
Power Tolerance	0~+5W				
Maximum System Voltage	1500V DC				
Operating Temperature	-40 ~ +85°C				
Protection Class	Class II				
Maximum Series Fuse Rating	25A				

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182,2 x 91,8
Cells per Module(pcs)	144 (6x24)
Weight(kg/lbs)	(30 mm) 28.0 / 61.72 (35 mm) 29.0 / 63.93
Panel Dimensions(mm/inch)	2278x1134x30 / 89.68x44.64x1.17 2278x1134x35 / 89.68x44.64x1.37
Max. Wind/Snow Load(Pa)/(lb/ft ²)	(2400 / 5400) / (50 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	300-1600
Glass Thickness(mm/inch)	(2.0 / 2.0) / (0.08 / 0.08)
Frame Color	Silver / Black

PHYSICAL CHARACTERISTICS



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REAR SIDE POWER GAIN

(600W Front Power Referenced)

Rear Side Power Gain	10%	20%	30%
Peak Power (P _{max})	660.00	720.00	780.00

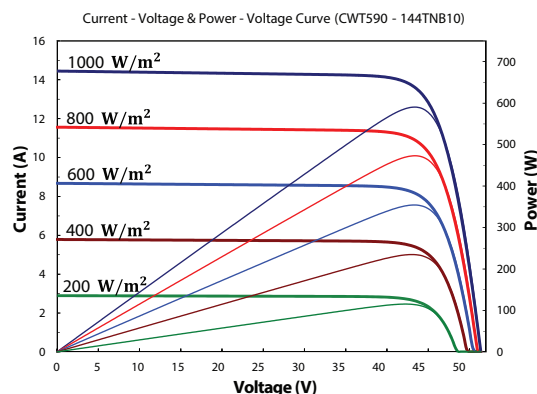
TEMPERATURE CHARACTERISTICS

Temp. Coeff. of (I _{sc})	0.040%/°C
Temp. Coeff. of (V _{oc})	-0.260%/°C
Temp. Coeff. of (P _{max})	-0.30%/°C

PACKING CONFIGURATION

Container	40' GP
Pieces per Pallet	31
Pieces Per Container	620
Pallet Per Container	20

ELECTRICAL CHARACTERISTICS



Half Cut BIFACIAL HIGH-EFFICIENCY SOLAR PANELS • 156TNB10



High Conversion Efficiency

High panel efficiency to guarantee high power output



Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



Excellent Durability

Wind load up to 2400 Pa, Snow load up to 5400 Pa



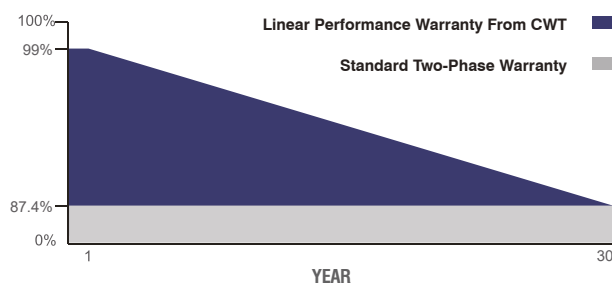
0~+5W Positive Power Tolerance



Easy Installation



Twice EVA Laminated Double Glass



CWT650-156TNB10 650 Wp CWT630-156TNB10 630 Wp
CWT645-156TNB10 645 Wp CWT625-156TNB10 625 Wp
CWT640-156TNB10 640 Wp CWT620-156TNB10 620 Wp
CWT635-156TNB10 635 Wp CWT615-156TNB10 615 Wp



30 Years Performance Warranty



30 Years Product Warranty



SOMPO



ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

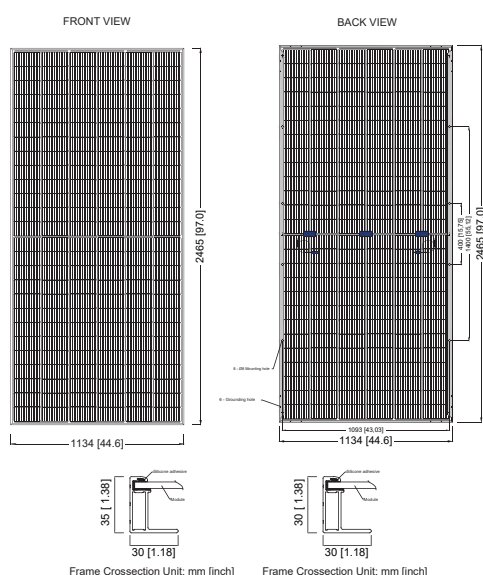
ELECTRICAL CHARACTERISTICS

Model Type	CWT615 156TNB10	CWT620 156TNB10	CWT625 156TNB10	CWT630 156TNB10	CWT635 156TNB10	CWT640 156TNB10	CWT645 156TNB10	CWT650 156TNB10
Peak Power (P _{max})	615 Wp	620 Wp	625 Wp	630 Wp	635 Wp	640 Wp	645 Wp	650 Wp
Module Efficiency (%)	22.00	22.18	22.36	22.54	22.72	22.90	23.07	23.25
Maximum Power Voltage (V _{mp})	45.73	45.93	46.13	46.33	46.53	46.73	46.93	47.13
Maximum Power Current (I _{mp})	13.45	13.50	13.55	13.60	13.65	13.70	13.75	13.80
Open Circuit Voltage (V _{oc})	55.14	55.34	55.54	55.74	55.94	56.14	56.34	56.54
Short Circuit Current (I _{sc})	14.16	14.22	14.28	14.34	14.40	14.46	14.52	14.58
Power Tolerance	0~+5W							
Maximum System Voltage	1500V DC							
Operating Temperature	-40 ~ +85°C							
Protection Class	Class II							
Maximum Series Fuse Rating	25A							

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182 x 91 / 7.16x 3.58
Cells per Module(pcs)	156 (6x26)
Weight(kg/lbs)	(30 mm) 34.10/ 75.23 (35 mm) 35.10 / 77.38
Panel Dimensions(mm/inch)	2465x1134x30 / 97.04x44.64x1.17 2465x1134x35 / 97.04x44.64x1.37
Max. Wind/Snow Load(Pa)/(lb/ft ²)	(2400 / 5400) / (50 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Glass Thickness(mm/inch)	(2.0 / 2.0) / (0.08 / 0.08)
Frame Color	Silver / Black

PHYSICAL CHARACTERISTICS



REAR SIDE POWER GAIN

(620W Front Power Referenced)

Rear Side Power Gain	10%	20%	30%
Peak Power (P _{max})	682.00	744.00	806.00

TEMPERATURE CHARACTERISTICS

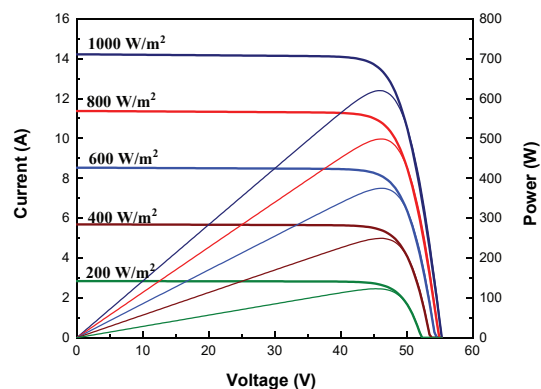
Temp. Coeff. of (I _{sc})	0.046%/°C
Temp. Coeff. of (V _{oc})	-0.250%/°C
Temp. Coeff. of (P _{max})	-0.290%/°C

PACKING CONFIGURATION

Container	40' HQ
Pieces per Pallet	31
Pieces Per Container	496
Pallet Per Container	16

ELECTRICAL CHARACTERISTICS

Current - Voltage & Power - Voltage Curve (CWT620-156TNB10)



* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

* For roof, facades and installations on similar surfaces, solar panels should be mounted over a fire-resistant covering suitable for this application, with adequate ventilation between the back of the solar panels and the mounting surface. Improper installations are hazardous and may spark a fire. Solar panels must not be mounted on structures and roofs which are made of not fire-resistant materials such as plastic layer, transparent plastic, PVC or similar materials without any fire-protection layer. Usage and installation not in accordance with the guidelines as outlined in the installation manual will terminate the warranty. Please refer to the installation manual and the warranty documents for further details.

* CW Enerji reserves the right to change the specification of products without prior notice.

Half Cut BIFACIAL HIGH-EFFICIENCY SOLAR PANELS • 132TNB12R



High Conversion Efficiency

High panel efficiency to guarantee high power output



Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



Excellent Durability

Wind load up to 2400 Pa, Snow load up to 5400 Pa



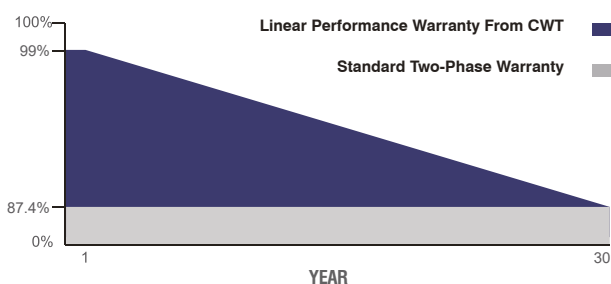
0~+5W Positive Power Tolerance



Easy Installation



Twice EVA Laminated Double Glass

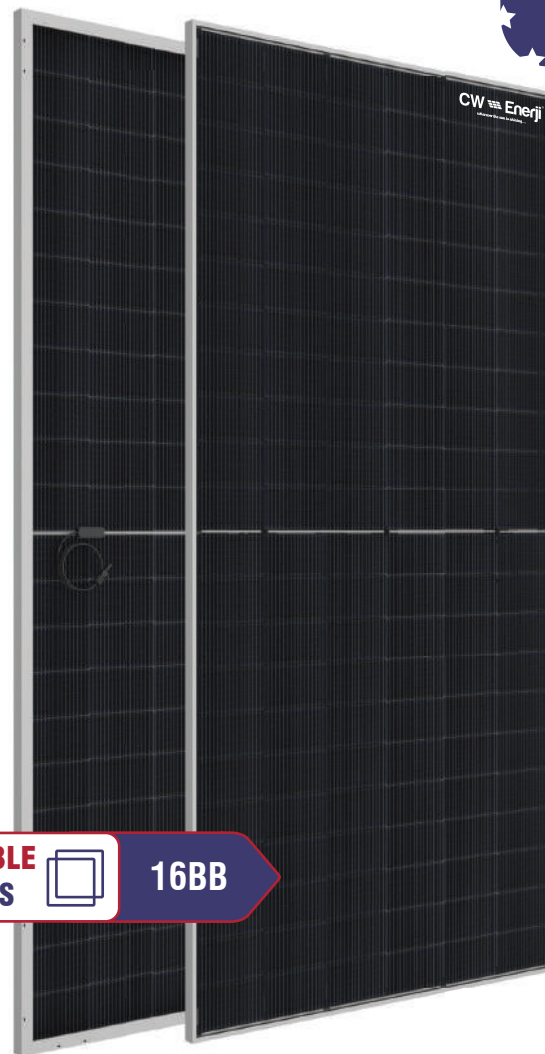


30 Years Performance Warranty



30 Years Product Warranty

DOUBLE GLASS  **16BB**



CWT655-132TNB12R 655 Wp
CWT650-132TNB12R 650 Wp
CWT645-132TNB12R 645 Wp
CWT640-132TNB12R 640 Wp

CWT635-132TNB12R 635 Wp
CWT630-132TNB12R 630Wp
CWT625-132TNB12R 625Wp
CWT620-132TNB12R 620Wp



SOMPO



IEC 61215, IEC 61730-1, IEC 61730-2
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

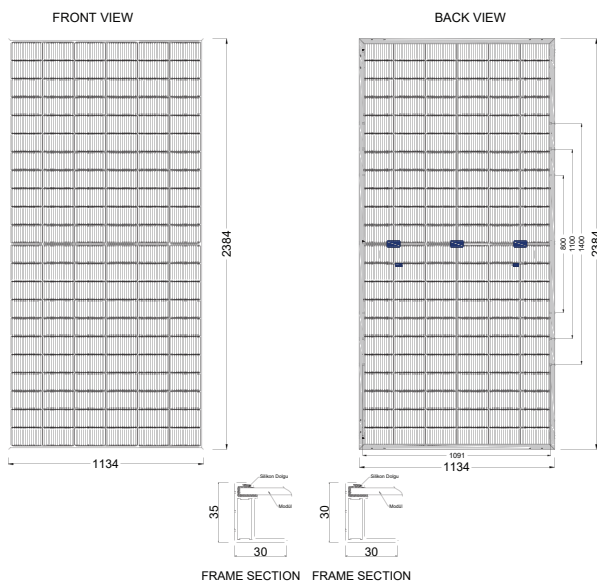
ELECTRICAL CHARACTERISTICS

Model Type	CWT620 132TNB12R	CWT625 132TNB12R	CWT630 132TNB12R	CWT635 132TNB12R	CWT640 132TNB12R	CWT645 132TNB12R	CWT650 132TNB12R	CWT655 132TNB12R
Peak Power (P _{max})	620 Wp	625 Wp	630 Wp	635 Wp	640 Wp	645 Wp	650 Wp	655 Wp
Module Efficiency (%)	22.93	23.12	23.30	23.49	23.67	23.86	24.04	24.23
Maximum Power Voltage (V _{mp})	41.02	41.22	41.42	41.62	41.82	42.02	42.22	42.42
Maximum Power Current (I _{mp})	15.12	15.17	15.22	15.26	15.31	15.35	15.40	15.45
Open Circuit Voltage (V _{oc})	48.99	49.19	49.39	49.59	49.79	49.99	50.19	50.39
Short Circuit Current (I _{sc})	16.02	16.08	16.14	16.20	16.26	16.32	16.38	16.44
Power Tolerance	0~+5W							
Maximum System Voltage	1500V DC							
Operating Temperature	-40 ~ +85°C							
Protection Class	Class II							
Maximum Series Fuse Rating	25A							

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182x105 / 7.17x4.14
Cells per Module(pcs)	132 (6x22)
Weight(kg/lbs)	(30 mm) 29.0 / 63.93 (35 mm) 30.0 / 66.13
Panel Dimensions(mm/inch)	2384x1134x30 / 93.85 x 44.65x1.20 2384x1134x35 / 93.85 x 44.65 x 1.40
Max. Wind/Snow Load(Pa)/(lb/ft ²)	(2400 / 5400) / (50 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Glass Thickness(mm/inch)	(2.0 / 2.0) / (0.08 / 0.08)
Frame Color	Silver / Black

PHYSICAL CHARACTERISTICS



REAR SIDE POWER GAIN

(630W Front Power Referenced)

Rear Side Power Gain	10%	20%	30%
Peak Power (P _{max})	693.00	732.00	819.00

TEMPERATURE CHARACTERISTICS

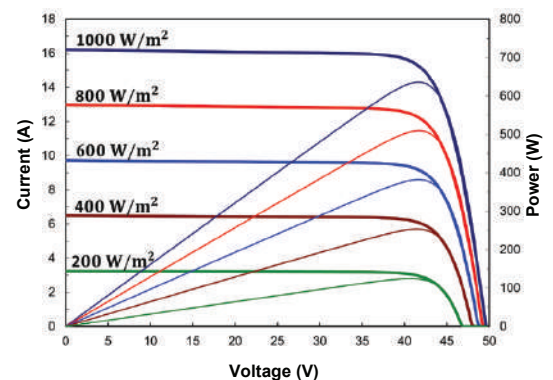
Temp. Coeff. of (I _{sc})	0.040%/°C
Temp. Coeff. of (V _{oc})	-0.260%/°C
Temp. Coeff. of (P _{max})	-0.30%/°C

PACKING CONFIGURATION

Container	40' GP	40' GP
Frame Thickness (mm)	35	30
Pieces per Pallet	31	36
Pieces Per Container	558	648
Pallet Per Container	18	18

ELECTRICAL CHARACTERISTICS

Current - Voltage & Power - Voltage Curve (CWT630 - 132TNB12R)



* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

* For roof, facades and installations on similar surfaces, solar panels should be mounted over a fire-resistant covering suitable for this application, with adequate ventilation between the back of the solar panels and the mounting surface. Improper installations are hazardous and may spark a fire. Solar panels must not be mounted on structures and roofs which are made of not fire-resistant materials such as plastic layer, transparent plastic, PVC or similar materials without any fire-protection layer. Usage and installation not in accordance with the guidelines as outlined in the installation manual will terminate the warranty. Please refer to the installation manual and the warranty documents for further details.

* CW Enerji reserves the right to change the specification of products without prior notice.

FLEXIBLE SOLAR PANELS

- ◆ CWT-FLEX-170 170Wp
- ◆ CWT-FLEX-110 110Wp
- ◆ CWT-FLEX-170-FB 170Wp
- ◆ CWT-FLEX-110-FB 110Wp

Cw Enerji New Generation Flexible Panel, which has high light transmittance ETFE polymer, durable fiberglass and high efficiency IBC solar cell in its structure, is produced in international quality standards with 7-layer advanced lamination technology. The combination of ETFE and fiberglass sheet makes the panel much more durable. It flexes up to a maximum of 30 degrees and is lightweight, making it a perfect fit for any surface. Available in 110Wp and 170Wp power options, Cw Enerji Flexible Panel Series has the advantage of being used in many application areas such as boats, caravans, roofs and many similar applications. Available in white and black color options, the series has the option of production in different power and size options according to your needs.



Prism Surface

Maximum light absorption through prism surface



Excellent Light Transmit with ETFE

Higher light transmittance, corrosion resistance, operating temperature range



IBC Cell Technology

Flexible, durable and high efficient cell with back contact connection



Flexible Design

Flexibility up to 30 degrees max



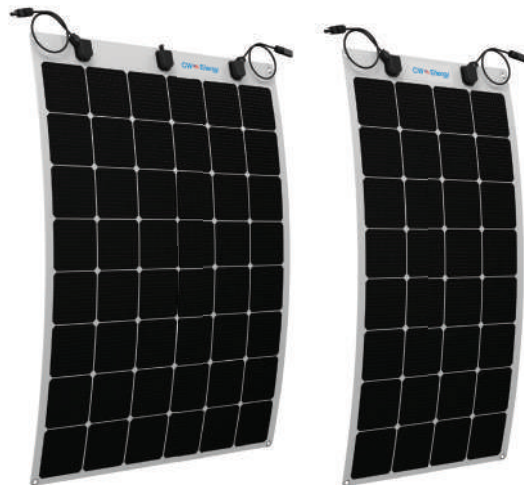
Ultra Lightweight

3mm thick ultrathin and durable design



IP68 Protection Class

Provides water resistance with IP68 Junction Box



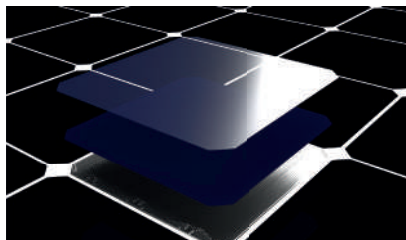
IP68
Junction Box



Prism
Surface Design



Stainless
Eyelet



IBC Solar cells, which are preferred in flexible panels, are a cell type built on a copper base. When bent or left in a humid environment, Cw Enerji Flexible Panels are more resistant to power losses due to breakage and corrosion than conventional solar panels. Cw Enerji Flexible Panels are one of the most important energy solutions for users with the Bypass diodes and efficient cell architecture in low radiation and shade conditions.



SO 9001:2015, ISO 14001:2015, ISO 45001:2018

FLEXIBLE SOLAR PANELS

ELECTRICAL CHARACTERISTICS

Model Type	CWT-FLEX-110 110Wp	CWT-FLEX-170 170Wp
Peak Power(P_{max})[Wp]	110	170
Module Efficiency(%)	17.5	18.5
Power Tolerance [W]	0~+5	
Maximum Power Voltage (V_{mp})[V]	18.84	28.82
Maximum Power Current (I_{mp})[A]	5.90	5.90
Open Circuit Voltage (V_{oc})[V]	22.80	34.60
Short Circuit Current(I_{sc})[A]	6.33	6.33
Temp. Coeff. of (P_{max})	-0.29%/°C	
Temp. Coeff. of (V_{oc})	-55.68mV/°C	-83.70mV/°C
Temp. Coeff. of (I_{sc})	2.9mA/°C	
Dimensions(mm/inch)	1134x555x3	1134x811x3
Weight(kg/lbs)	2.3	3.2
Maximum System Voltage[VDC]	600	
Maximum Series Fuse Rating[A]	15	
Protection Class	IP68	
Number of ByPass Diodes	2	3



* The specifications are obtained under the standard test conditions: 1000W/m2 solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

* Cw Enerji reserves the right to change the specification of products without prior notice.



2

**YEARS
PRODUCT
WARRANTY**

◆ CWT-FLEX-FBAG-110 110Wp

Easy to install, to carry and to use, the CW Enerji foldable solar panel is a powerful companion ready to take you on your next adventure. Designed to withstand harsh operating conditions, the high-performance solar panel offers a practical and reliable solution for emergencies. CW Enerji foldable solar panel, which has high light transmittance ETFE polymer, durable fiberglass sheet and high efficiency IBC solar cell in its structure, is produced in international quality standards with 7-layer high lamination technology. With CW Enerji foldable solar panels, you can charge your phone or tablet directly with USB power output, while at the same time you can get up to 110W instant power output with solar connectors. It is also possible to increase capacity by connecting multiple products together. Models can be customized for your different needs.



Prism Surface

Maximum light absorption through prism surface



Excellent Light Transmit with ETFE

Higher light transmittance, corrosion resistance, operating temperature range



IBC Cell Technology

Flexible, durable and high efficient cell with back contact connection



Ultra Lightweight

Ultra thin and durable design



Easy to use

Easy to use, practical design



Increasable Capacity

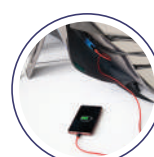
Increasable power by connecting two or more products together



**Solar
Connector**



**Prism
Surface**



**USB Fast Charging
Output**

The holders allows you to adjust the panel to the optimum angle for maximum performance. You can make adjustments as the position of the sun changes.



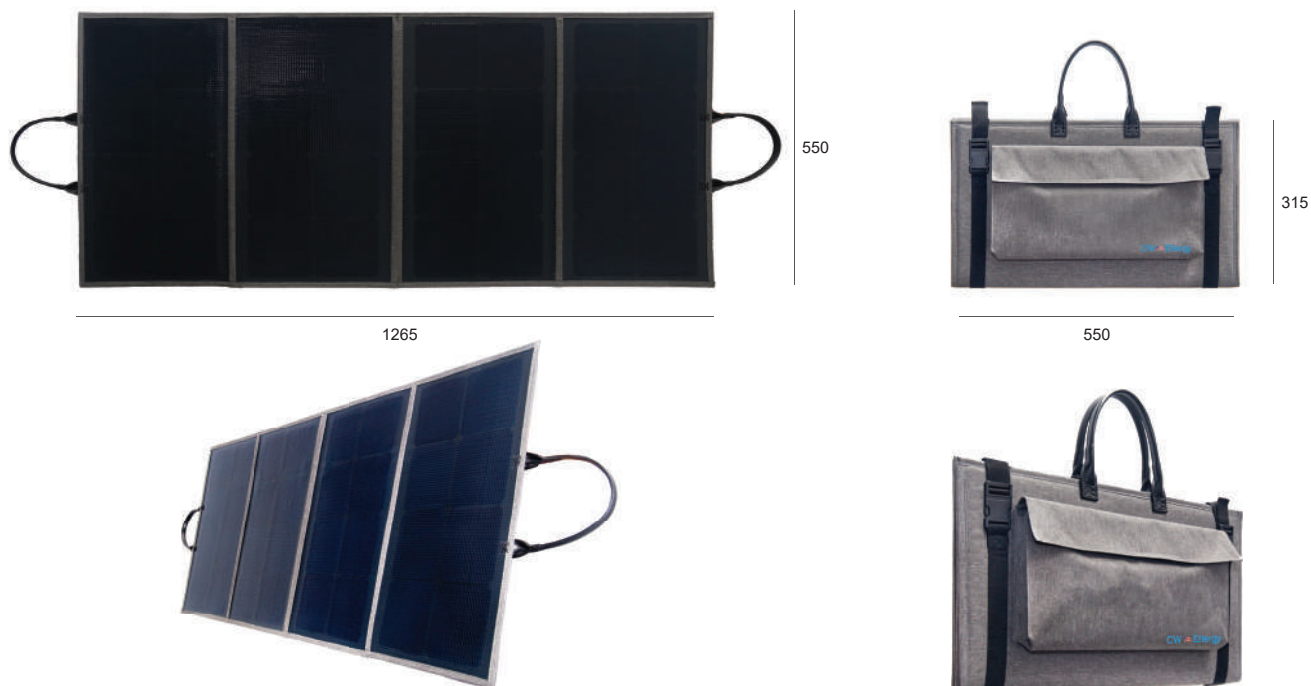
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

FOLDABLE SOLAR PANELS

ELECTRICAL CHARACTERISTICS

Model Type	CWT-FLEX-FBAG-110 110Wp
Peak Power (Pmax)	110 Wp
Power Tolerance	0~+5W
Maximum Power Voltage (Vmp)	18.84
Maximum Power Current (Imp)	5.84
Open Circuit Voltage (Voc)	22.80
Short Circuit Current (Isc)	6.15
Temp. Coeff. of Pmax	-0.29%/°C
Temp. Coeff. of Voc	-55.68mV/°C
Temp. Coeff. of Isc	2.9mA/°C
Dimensions (Opened/Closed)(mm)	1265x550x6 / 550x315x24
Weight	4
Maximum System Voltage	1000V DC
Maximum Series Fuse Rating	15A
Protection Class	IP68
Junction Box Cable Length (mm)	600
Connector	MC4
USB Output	QC 3.0 Quick Charge 5V-9V-12V
Exterior of the Product	Fabric

Unit: mm



* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

*CW Enerji reserves the right to change the specification of products without prior notice

CW ENERGY 25Wp FOLDABLE SOLAR CHARGING PANEL



Cw Energy Foldable Solar Charging Panel provide power to portable chargers such as powerbanks, smart phones, tablets or other USB devices directly from the sun, offering a wide range of applications.



Prism Surface

Maximum light absorption through prism surface



Excellent Light Transmit with ETFE

Higher light transmittance, corrosion resistance, operating temperature range



IBC Cell Technology

Flexible, durable and high efficient cell with back contact connection



Ultra Lightweight

Compact design with easy to carry size and weight



Fast Charging Technology

Fast charging up to 3 amps with QC 3.0 technology



Charging Multiple
Devices



Zippered Pocket



IPX4
Protection



Hanger and
carabiner



By connecting your phone's charging cable to the USB port on the pocket of the CW Energy Foldable Charging Panel, you can charge your phone easily and quickly from clean and renewable solar energy.

FOLDABLE SOLAR CHARGING PANEL

Model Type	CWT-FSC-25
Peak Power (P_{max}) [Wp]	25
Maximum Power Voltage (V_{mp}) [V]	9.90
Maximum Power Current (I_{mp}) [A]	2.55
Open Circuit Voltage (V_{oc}) [V]	11.41
Short Circuit Current (I_{sc}) [A]	2.70
Temp. Coeff. of P_{max}	-0.29%/°C
Temp. Coeff. of V_{oc}	-27.84mV/°C
Temp. Coeff. of I_{sc}	2.9mA/°C
Dimensions (Opened/Closed) [mm]	698x268x4 / 175x268x40
Weight [kg]	0.8
Output Ports	USB-A / TYPE-C
USB Output Voltage	QC 3.0 Quick Charge 5V-9V-12V
Maximum Charging Current [A]	3
Exterior of the Product	Fabric

PHYSICAL CHARACTERISTICS

Unit: mm

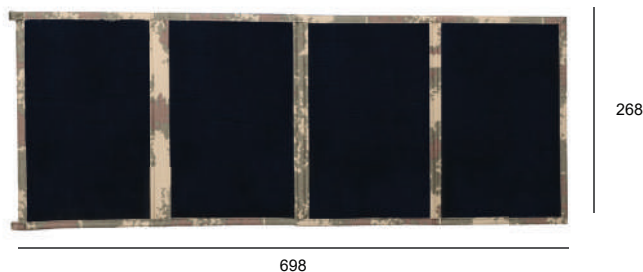
FRONT VIEW



SIDE VIEW



OPEN VIEW



ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

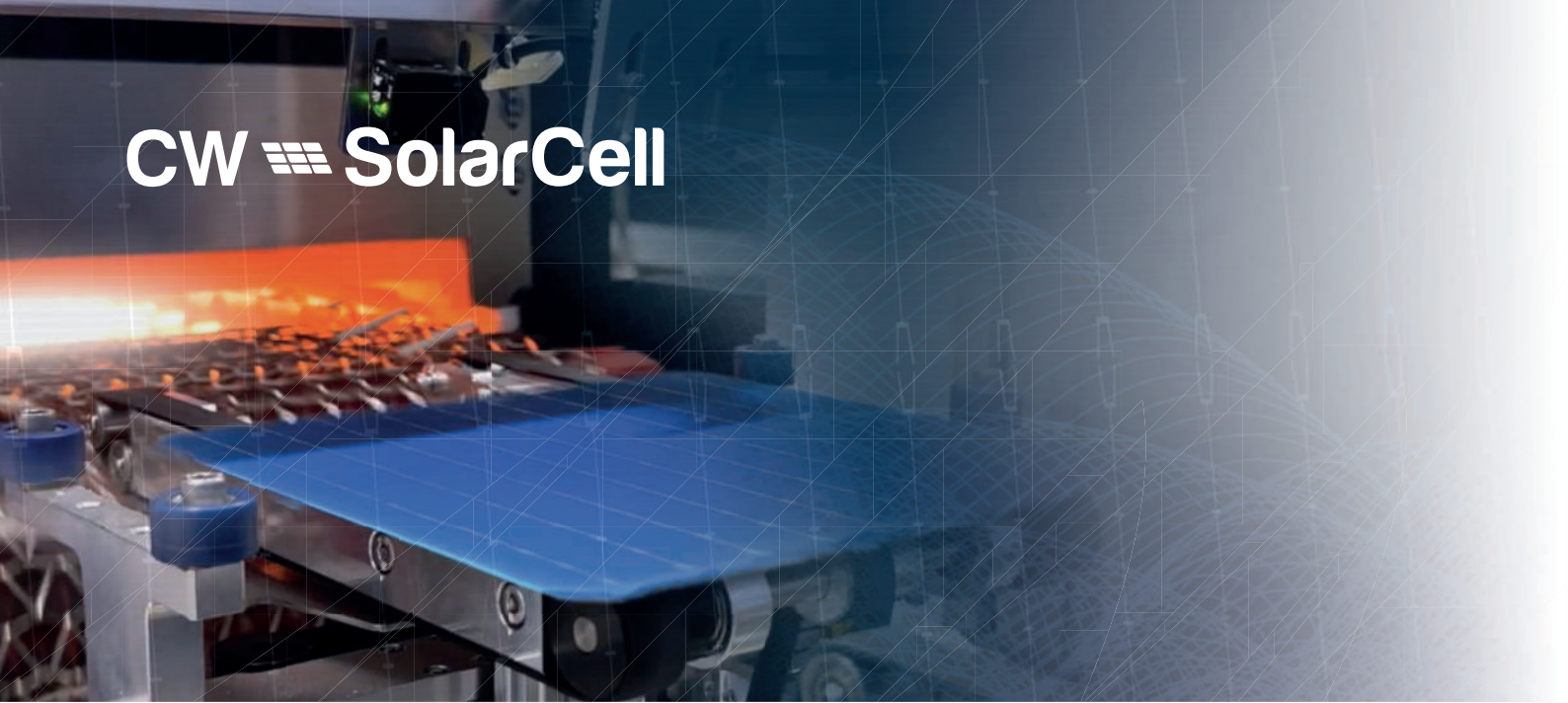


* The specifications are obtained under the standard test conditions: 1000W/m² solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 6%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".
* CW Energy reserves the right to change the specification of products without prior notice

CW  Energy^{U.S.A}®







COMPANY PROFILE

About Us

Founded in 2024 as a subsidiary of **CW Enerji Engineering, Trade and Industry Inc.**, CW SolarCell is committed to delivering products and services at **global standards** through high-quality production lines and advanced machinery — without compromising on quality.

With a strong focus on **technology and R&D**, CW SolarCell continuously upgrades its manufacturing systems to ensure rapid development and innovation. The company consistently adapts to **evolving cell technologies**, sizes, and efficiencies with a disciplined approach.

By closely following **market trends** and investing in up-to-date technologies, CWSC offers high-performance, cutting-edge solutions to meet the diverse needs of modern users and the dynamic solar industry.

MANUFACTURING CAPABILITIES

Cell Production Process

CW Enerji is taking confident steps towards vertical integration, minimizing raw material dependency by not only producing solar panels but also manufacturing key components. In this direction, CWSC has initiated cell and ingot production, enhancing both manufacturing flexibility and operational capability.

OUR PRODUCTS

High Efficiency M10R 16BB Solar Cell

Specification	Details
Dimensions	182.2 mm × 183.75 mm (± 0.5 mm)
Thickness	130 ± 13 µm
Front Side (-)	Blue (dark blue) anti-reflective coating (SiNx)
Rear Side (+)	Blue (dark blue) anti-reflective coating (SiNx)



Incoming Quality Control

Customized inspection and approval protocols for suppliers.
Physical & chemical testing via batch sampling.
Elimination of substandard raw materials at entry point.

In-Process Quality Control

Real-time monitoring at critical production points.
Integration of Automated Optical Inspection (AOI) & I-V testing.
Immediate halt mechanism for out-of-spec process anomalies.

Final Quality Control

EL and Flash Tests to verify product performance.
Visual inspection, barcode tracking & full traceability.
Final product approval based on customer specifications.

Outgoing Quality Control

100% tested product verification through digital tracking.
Closed-loop monitoring system for secure shipment.
Random sampling for quality assurance before delivery.



The cell features **SiNx (Silicon Nitride)** coatings on both sides, effectively minimizing reflection and improving light absorption.

The cell features **SiNx (Silicon Nitride)** coatings on both sides, effectively minimizing reflection and improving light absorption.

Engineered with **16 busbars (16BB)**, this high-efficiency cell is optimized for next-generation High Efficiency solar module production.

Engineered with **16 busbars (16BB)**, this high-efficiency cell is optimized for next-generation High Efficiency solar module production.



COMPANY PROFILE

About Us

At CW Aluminum, we produce frames, mounting apparatus, and infrastructure materials tailored to renewable energy technologies. Thanks to our advanced technology and engineering-developed mounting systems, we provide reliable and long-lasting solutions to the industry. We prioritize quality and efficiency at the highest level by developing functional and innovative products customized to meet customer needs.

In EPC projects, we integrate our solar panels and construction solutions to enhance customer satisfaction while ensuring more efficient and sustainable outcomes in the sales processes. By increasing our domestic production capacity, we contribute to both economic growth and the development of a sustainable energy infrastructure, thus adding value to the future.

Tilted Roof Mounting Systems

Aluminum Rail Profiles



Holders / Clamps



Renewable Energy Technologies

Flat Roof Mounting Systems

Profiles / Holders / Clamps



Aluminum Mounting Accessories



PRODUCT LIABILITY POLICY CERTIFICATE

This certificate is a brief summary of Sompo Sigorta A.Ş. Excess Product Liability policy for Solar Energy Panels produced by **Cw Enerji Mühendislik Ticaret Ve Sanayi Anonim Şirketi**.

Policy Number : 200200033748770 & 200200033748769

Policy Inception Date : 21/07/2025

Policy End Date: 21/07/2026

Insured Address : TÜRKİYE, Antalya 7190, Döşemealtı, Aosb 1. Kısım MAH. Atatürk Bulvarı Cw Enerji AŞ NO:20

Insured : Cw Enerji Mühendislik Ticaret Ve Sanayi Anonim Şirketi

Coverage : Product Liability

Retroactive Date : 21/07/2017

Field Of Activity : Solar Energy Panel Manufacturing

Coverage Details:**Product Liability:**

Within the scope of this coverage, subject to the terms and coverage limits of this policy, caused by the defect of the insured's products defined above (insured product) and resulting from an event occurring within the geographical scope specified above, the insurer is responsible for;

* bodily injuries

* material damages

within the scope of the above-mentioned activity of the insured, against the insured by third parties.

will indemnify the insured against any claims for damages that may be asserted.

This coverage is valid in accordance with the attached Product Liability Insurance General Conditions and applicable provisions.

Sompo Sigorta A.Ş. Provided pursuant to Product Liability Insurance Special Conditions.

Territorial Scope : Worldwide (Excluding Cuba, Iran, Syria, North Korea, North Sudan, Venezuela, Myanmar, Crimea and the Donbas Region (including Luhansk, Donetsk, Kherson and Zaporizhzhia), Russia and Belarus)

Policy Limits:

Product Liability USD 50.000.000 (Defense Costs are included in the Coverage Limit)

THIS CERTIFICATE IS ISSUED FOR INFORMATIONAL PURPOSES ONLY AND DOES NOT GIVE ANY ADDITIONAL RIGHTS TO THE CERTIFICATE OWNER. THIS CERTIFICATE DOES NOT ALTER, POSITIVELY OR NEGATIVELY, OR EXTEND THE TERMS PROVIDED BY THE ORIGINAL POLICY.

INSURED

Cw Enerji Mühendislik Ticaret Ve Sanayi Anonim Şirketi

INSURER

Sompo Sigorta A.Ş.

OZGUR
LEVENT
OVUNC

Digitally signed
by OZGUR
LEVENT OVUNC
Date: 2025.08.21
15:47:51 +03'00'

MUSTAFA
FA
ARSLAN

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by MUSTAFA
ARSLAN
Date: 2025.08.22
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