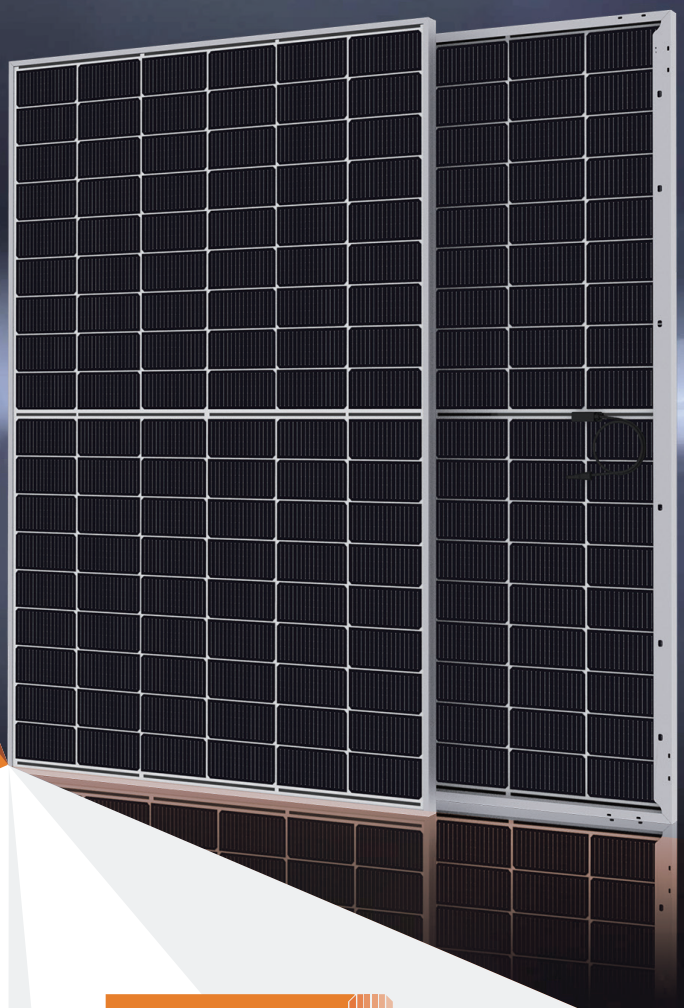
TALESUN

BIPRO

TM7G54M 108-cell

420 - 440W

Bifacial Dual Glass
16BB Half-cut N-type

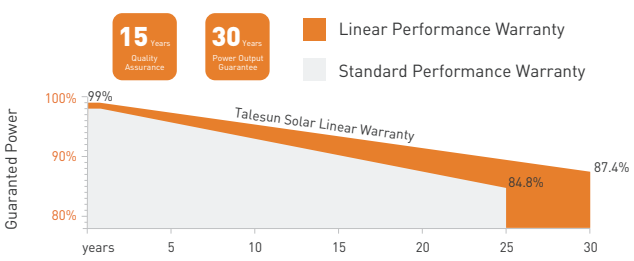


SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance
Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

Industry Leading High Yield

Bifacial TOPCon cell technology,
Dual-sided power generation gain from back side depending on albedo, significantly reduce LCOE

Excellent Anti-PID Performance

PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area

IP68 Junction Box

High waterproof level

www.talesun.com
marketing.hq@talesun.com

* GL-EN-Version 2024.04.10

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	420	319	425	323	430	326	435	330	440	334
Operating Voltage (Vmpp/V)	32.42	30.70	32.55	30.90	32.68	31.10	32.81	31.30	32.94	31.50
Operating Current (Impp/A)	12.96	10.39	13.06	10.44	13.16	10.49	13.26	10.54	13.36	10.59
Open-Circuit Voltage (Voc/V)	38.70	36.70	38.85	36.80	39.00	37.00	39.15	37.10	39.30	37.20
Short-Circuit Current (Isc/A)	13.57	10.95	13.62	10.98	13.67	11.02	13.72	11.06	13.77	11.10
Module Efficiency (%)	21.50		21.80		22.00		22.30		22.50	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 430W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	452	473	495	516	538
Vmpp/V	32.68	32.68	32.68	32.68	32.68
Impp/A	13.82	14.48	15.13	15.79	16.45
Voc/V	39.00	39.00	39.00	39.00	39.00
Isc/A	14.35	15.04	15.72	16.40	17.09

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	108pcs in series (6*18)
Module Dimensions	1722*1134*30mm (67.80*44.65*1.18inches)
Weight	24.5kg (54.01lbs)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

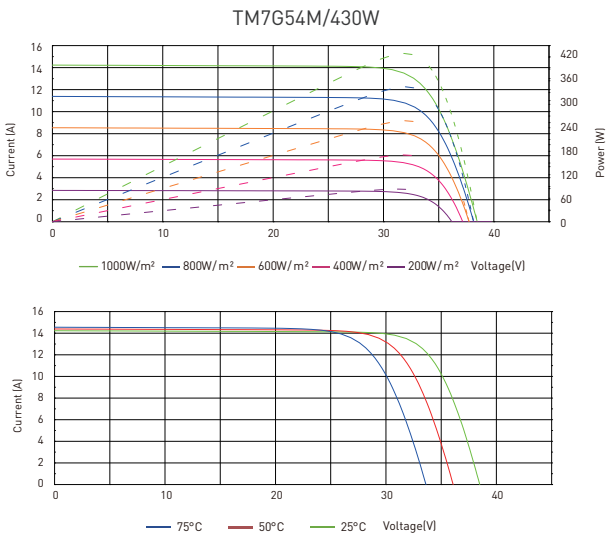
TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

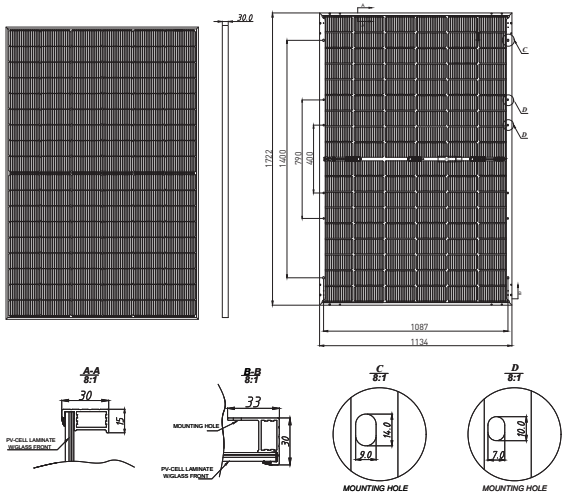
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	936	720

Electrical Performance



TECHNICAL DRAWINGS



TALESUN

BIPRO

TM7G54M 108-cell

415 - 435W

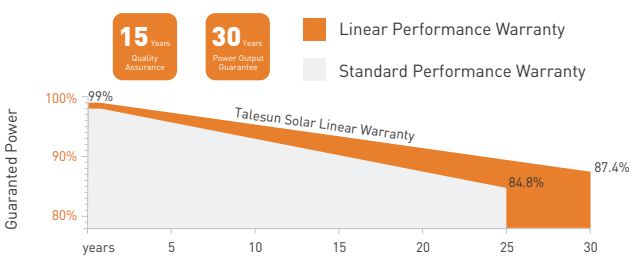
16BB Half-cut N-type
Full Black

SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

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IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.04.10

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	415	316	420	319	425	323	430	326	435	330
Operating Voltage (Vmpp/V)	32.29	30.50	32.42	30.70	32.55	30.90	32.68	31.10	32.81	31.30
Operating Current (Impp/A)	12.86	10.34	12.96	10.39	13.06	10.44	13.16	10.49	13.26	10.54
Open-Circuit Voltage (Voc/V)	38.55	36.60	38.70	36.70	38.85	36.80	39.00	37.00	39.15	37.10
Short-Circuit Current (Isc/A)	13.52	10.91	13.57	10.95	13.62	10.98	13.67	11.02	13.72	11.06
Module Efficiency (%)	21.30		21.50		21.80		22.00		22.30	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 425W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	446	468	489	510	531
Vmpp/V	31.70	31.70	31.70	31.70	31.70
Impp/A	14.08	14.75	15.42	16.09	16.76
Voc/V	38.30	38.30	38.30	38.30	38.30
Isc/A	14.94	15.65	16.36	17.07	17.79

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	108pcs in series (6*18)
Module Dimensions	1722*1134*30mm (67.80*44.65*1.18inches)
Weight	24.5kg (54.01lbs)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

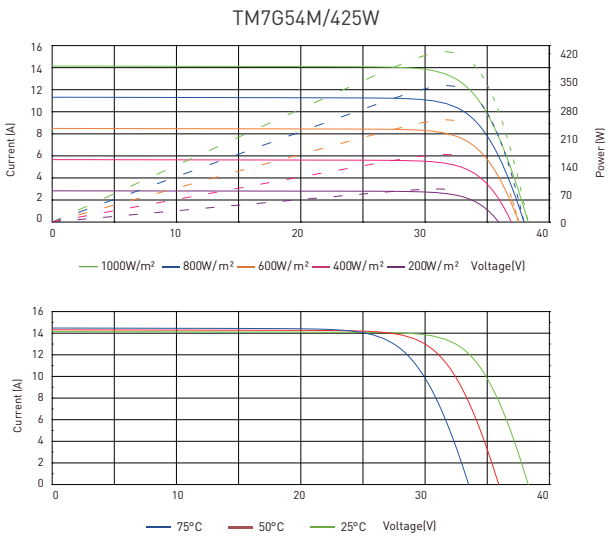
TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

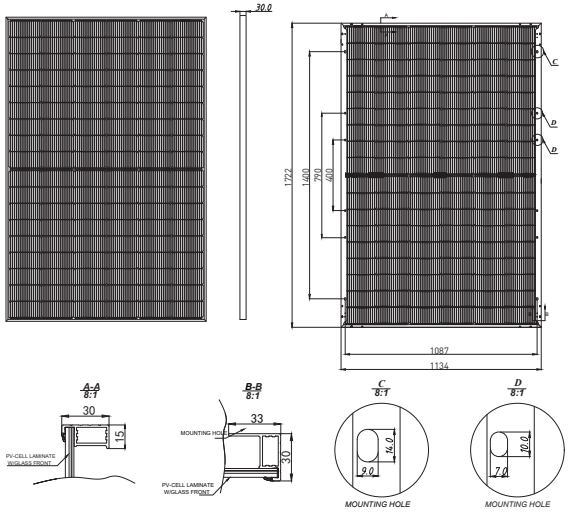
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	936	720

Electrical Performance



TECHNICAL DRAWINGS



TALESUN

AVIN

TALESUN

BIPRO

TM7G54M 108-cell

415 - 435W

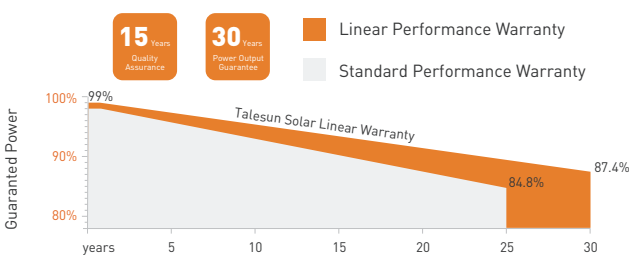
16BB Half-cut N-type
Full Black

SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY



AVIN

KEY FEATURES

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Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

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PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
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IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.04.10

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	415	316	420	319	425	323	430	326	435	330
Operating Voltage (Vmpp/V)	32.29	30.50	32.42	30.70	32.55	30.90	32.68	31.10	32.81	31.30
Operating Current (Impp/A)	12.86	10.34	12.96	10.39	13.06	10.44	13.16	10.49	13.26	10.54
Open-Circuit Voltage (Voc/V)	38.55	36.60	38.70	36.70	38.85	36.80	39.00	37.00	39.15	37.10
Short-Circuit Current (Isc/A)	13.52	10.91	13.57	10.95	13.62	10.98	13.67	11.02	13.72	11.06
Module Efficiency (%)	21.30		21.50		21.80		22.00		22.30	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 425W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	446	468	489	510	531
Vmpp/V	31.70	31.70	31.70	31.70	31.70
Impp/A	14.08	14.75	15.42	16.09	16.76
Voc/V	38.30	38.30	38.30	38.30	38.30
Isc/A	14.94	15.65	16.36	17.07	17.79

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	108pcs in series (6*18)
Module Dimensions	1722*1134*30mm (67.80*44.65*1.18inches)
Weight	24.5kg (54.01lbs)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
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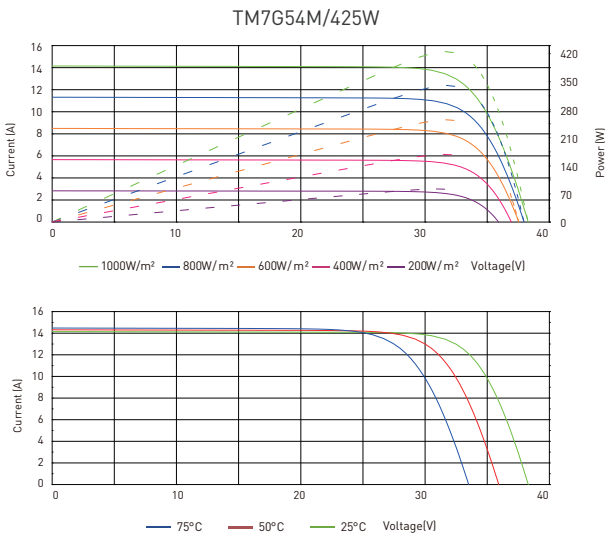
Nominal Module Operating Temperature(NMOT)	43±2°C

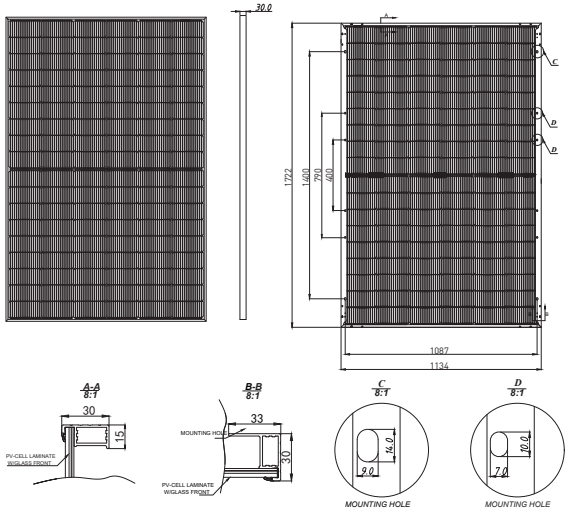
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	936	720

Electrical Performance



TECHNICAL DRAWINGS



TALESUN

AVIN

TALESUN

BIPRO

TM8G60M 120-cell

620 - 640W

Bifacial Dual Glass
18BB Half-cut N-type

SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

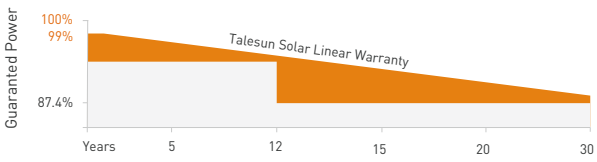
c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY

12 Years Quality Assurance

30 Years Power Output Guarantee

Linear Performance Warranty



AVIN

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Wider Application

No water-permeability and high wear-resistance,
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IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.03.22

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	620	473	625	478	630	482	635	486	640	490
Operating Voltage (Vmpp/V)	36.20	33.90	36.40	34.30	36.60	34.50	36.80	34.70	37.00	35.00
Operating Current (Impp/A)	17.13	13.94	17.19	13.95	17.22	13.96	17.26	13.98	17.30	14.00
Open-Circuit Voltage (Voc/V)	43.20	40.90	43.50	41.20	43.90	41.60	44.20	41.90	44.50	42.10
Short-Circuit Current (Isc/A)	18.18	14.65	18.21	14.68	18.24	14.70	18.27	14.73	18.30	14.75
Module Efficiency (%)	21.90		22.10		22.30		22.40		22.60	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 630W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	662	693	725	756	788
Vmpp/V	36.60	36.60	36.60	36.60	36.60
Impp/A	18.08	18.94	19.80	20.66	21.53
Voc/V	43.90	43.90	43.90	43.90	43.90
Isc/A	19.15	20.06	20.98	21.89	22.80

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (18Busbar)
No. of Cells	120pcs in series (6*20)
Module Dimensions	2172*1303*33mm (85.51*51.30*1.30inches)
Weight	34.9kg (76.94lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350(+),280(-)mm in Length or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	35A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

TEMPERATURE CHARACTERISTICS

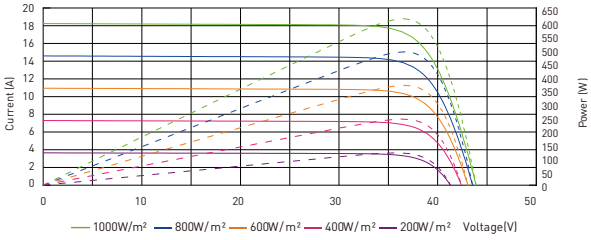
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

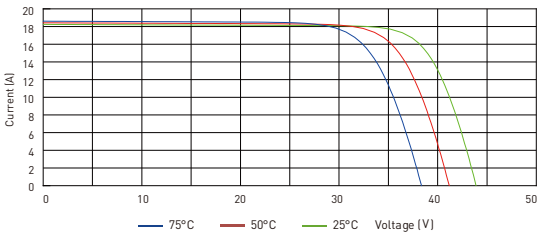
PACKING CONFIGURATION

Pieces Per Pallet	33	33(USA)
Pieces Per Container(40'HQ)	594	528

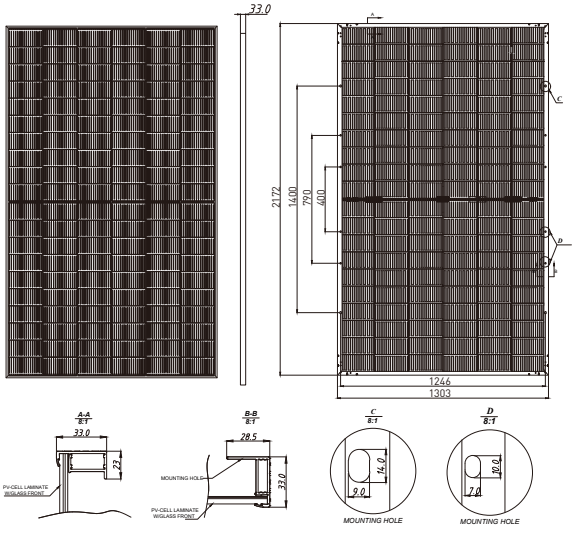
Electrical Performance

TM8G60M/630W





TECHNICAL DRAWINGS



TALESUN

BIPRO

TM8G66M 132-cell

690 - 710W

Bifacial Dual Glass
18BB Half-cut N-type

SYSTEM & PRODUCT CERTIFICATES

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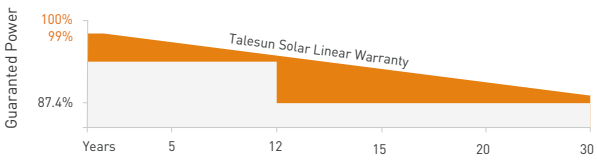
30 Years Power Output Guarantee
Linear Performance Warranty



AVIN

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IP68 Junction Box

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* GL-EN-Version 2024.03.22

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	690	526	695	531	700	534	705	540	710	543
Operating Voltage (Vmpp/V)	40.00	37.70	40.30	37.90	40.50	38.00	40.70	38.30	40.90	38.50
Operating Current (Impp/A)	17.23	13.95	17.25	14.00	17.29	14.04	17.33	14.08	17.36	14.12
Open-Circuit Voltage (Voc/V)	47.90	45.40	48.30	45.90	48.60	46.10	48.80	46.30	49.00	46.50
Short-Circuit Current (Isc/A)	18.25	14.71	18.28	14.72	18.32	14.76	18.36	14.80	18.40	14.83
Module Efficiency (%)	22.20		22.40		22.50		22.70		22.90	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 700W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	735	770	805	840	875
Vmpp/V	40.50	40.50	40.50	40.50	40.50
Impp/A	18.15	19.02	19.88	20.75	21.61
Voc/V	48.60	48.60	48.60	48.60	48.60
Isc/A	19.24	20.15	21.07	21.98	22.90

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (18Busbar)
No. of Cells	132pcs in series (6*22)
Module Dimensions	2384*1303*33mm (93.86*51.30*1.30inches)
Weight	38.5kg (84.88lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350(+),280(-)mm in Length or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	35A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

TEMPERATURE CHARACTERISTICS

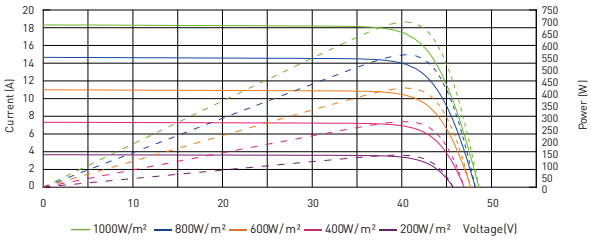
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

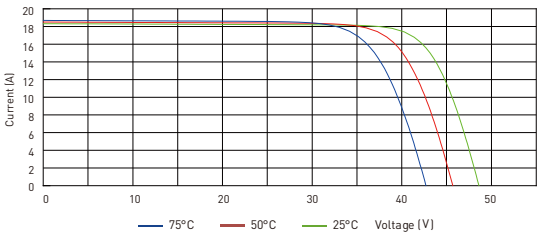
PACKING CONFIGURATION

Pieces Per Pallet	33	33(USA)
Pieces Per Container(40'HQ)	594	495

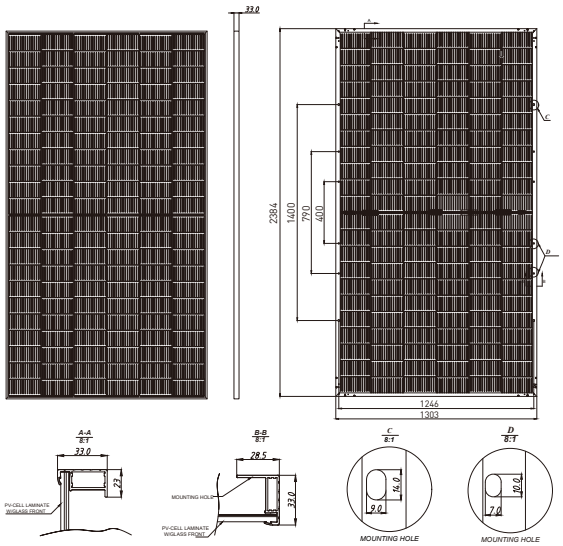
Electrical Performance

TM8G66M/700W





TECHNICAL DRAWINGS



TALESUN

BIPRO

TM7G72M 144-cell

570 - 590W

Bifacial Dual Glass
16BB Half-cut N-type

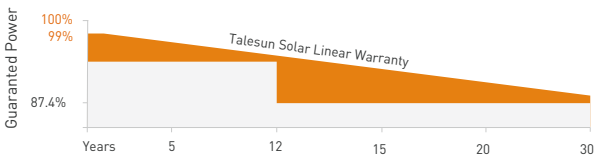
SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY

12 Years Quality Assurance
30 Years Power Output Guarantee
Linear Performance Warranty



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance
Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

Industry Leading High Yield

Bifacial TOPCon cell technology,
Dual-sided power generation gain from back side depending on albedo, significantly reduce LCOE

Excellent Anti-PID Performance

PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area

IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.03.22

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	570	432	575	436	580	440	585	444	590	448
Operating Voltage (Vmpp/V)	43.62	41.20	43.83	41.40	44.02	41.60	44.22	41.80	44.43	42.00
Operating Current (Impp/A)	13.07	10.49	13.12	10.53	13.18	10.58	13.23	10.62	13.28	10.67
Open-Circuit Voltage (Voc/V)	51.53	48.90	51.74	49.20	51.95	49.50	52.17	49.80	52.38	50.00
Short-Circuit Current (Isc/A)	13.74	11.08	13.79	11.12	13.84	11.15	13.89	11.19	13.94	11.21
Module Efficiency (%)	22.10		22.30		22.50		22.60		22.80	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 580W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	609	638	667	696	725
Vmpp/V	42.66	42.66	42.66	42.66	42.66
Impp/A	14.28	14.96	15.64	16.32	16.99
Voc/V	51.47	51.47	51.47	51.47	51.47
Isc/A	14.96	15.68	16.39	17.10	17.81

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	144pcs in series (6*24)
Module Dimensions	2278*1134*30mm (89.69*44.65*1.18inches)
Weight	31.8kg (70.11lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm²(IEC),12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

TEMPERATURE CHARACTERISTICS

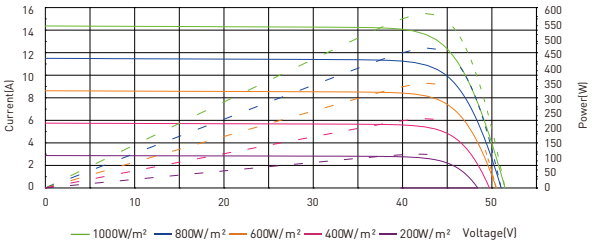
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

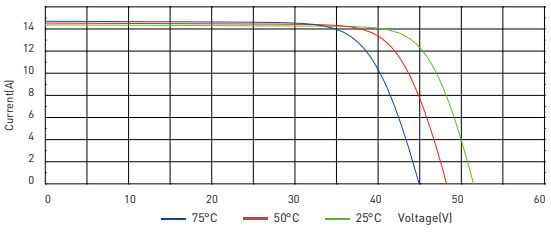
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	720	576

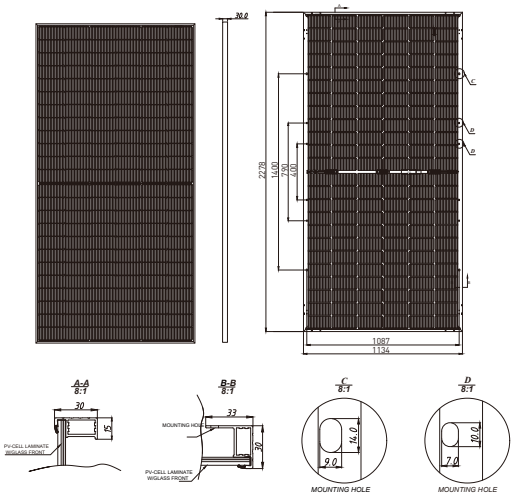
Electrical Performance

TM7G72M/580W





TECHNICAL DRAWINGS



TALESUN

BIPRO

TM7G78M 156-cell

615 - 635W

Bifacial Dual Glass
16BB Half-cut N-type

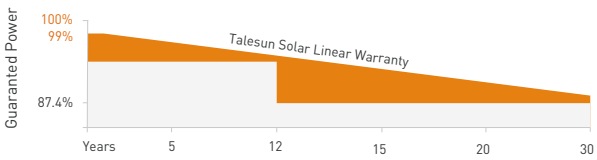
SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY

12 Years Quality Assurance
30 Years Power Output Guarantee
Linear Performance Warranty



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance
Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

Industry Leading High Yield

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Dual-sided power generation gain from back side depending on albedo, significantly reduce LCOE

Excellent Anti-PID Performance

PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area

IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.03.22

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	615	465	620	469	625	473	630	476	635	480
Operating Voltage (Vmpp/V)	47.24	44.30	47.42	44.50	47.61	44.70	47.80	44.80	47.97	45.00
Operating Current (Impp/A)	13.02	10.50	13.08	10.54	13.13	10.58	13.18	10.62	13.24	10.66
Open-Circuit Voltage (Voc/V)	55.79	52.70	55.99	52.90	56.18	53.10	56.37	53.30	56.55	53.50
Short-Circuit Current (Isc/A)	13.69	11.04	13.74	11.08	13.79	11.12	13.84	11.16	13.89	11.20
Module Efficiency (%)	22.00		22.20		22.40		22.50		22.72	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 620W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	651	682	713	744	775
Vmpp/V	47.42	47.42	47.42	47.42	47.42
Impp/A	13.73	14.39	15.04	15.70	16.35
Voc/V	55.99	55.99	55.99	55.99	55.99
Isc/A	14.43	15.11	15.80	16.49	17.18

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	156pcs in series (6*26)
Module Dimensions	2465*1134*35mm (97.05*44.65*1.38inches)
Weight	35kg (77.2lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

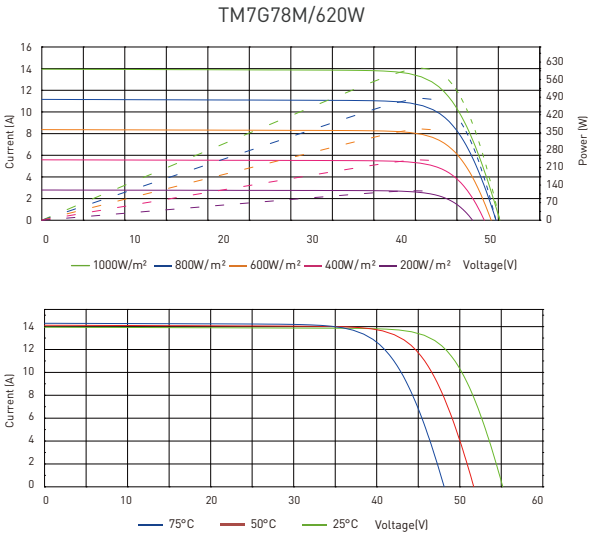
TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

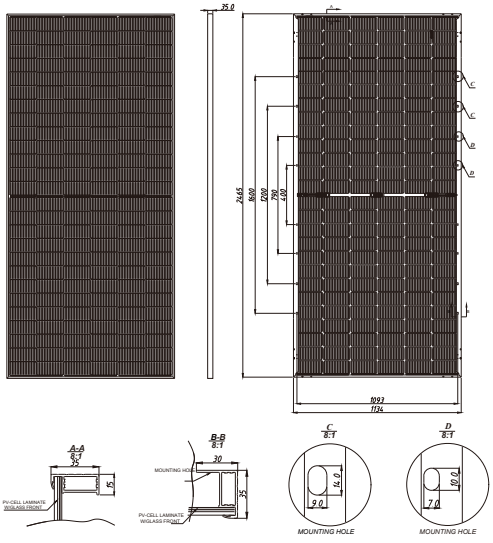
PACKING CONFIGURATION

Pieces Per Pallet	31	31(USA)
Pieces Per Container(40'HQ)	496	496

Electrical Performance



TECHNICAL DRAWINGS



TALESUN

AVIN

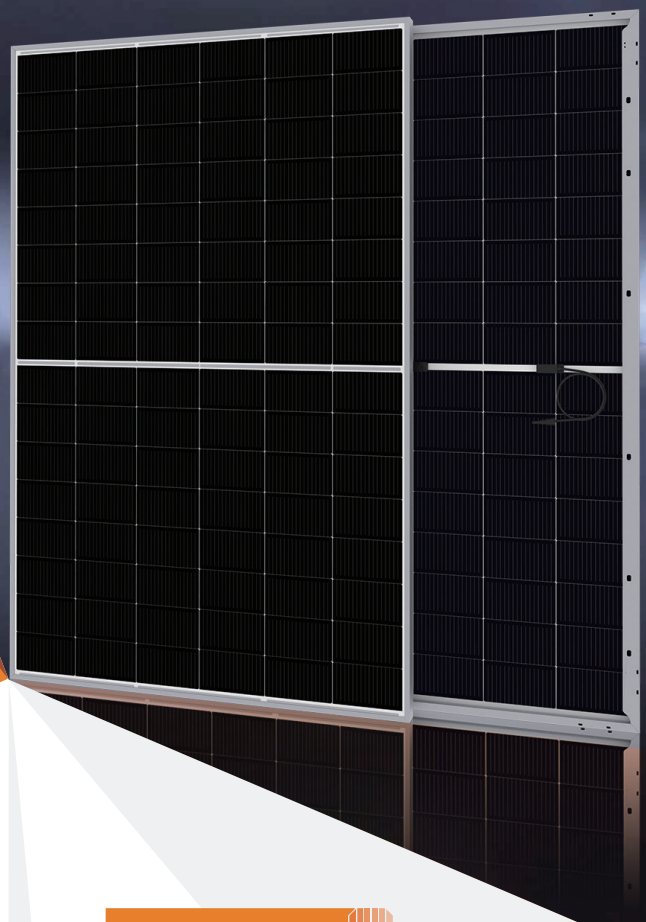
TALESUN

BIPRO

TM3G48M 96-cell

435 - 455W

Bifacial Dual Glass
16BB Half-cut N-type



SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

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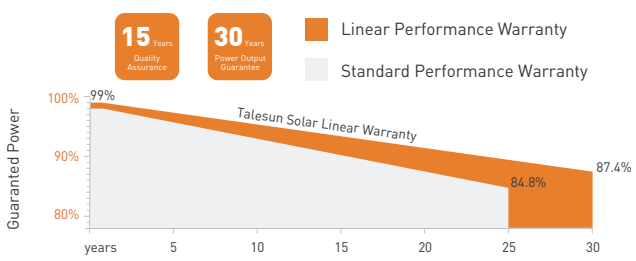
PERFORMANCE WARRANTY



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance
Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

Industry Leading High Yield

Bifacial TOPCon cell technology,
Dual-sided power generation gain from back side depending on albedo, significantly reduce LCOE

Excellent Anti-PID Performance

PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area

IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.04.10

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	435	330	440	334	445	338	450	342	455	346
Operating Voltage (Vmpp/V)	29.22	27.50	29.52	27.70	29.79	28.00	30.09	28.20	30.34	28.40
Operating Current (Impp/A)	14.89	12.00	14.91	12.05	14.94	12.09	14.96	12.12	15.00	12.17
Open-Circuit Voltage (Voc/V)	34.98	33.20	35.20	33.40	35.42	33.60	35.64	33.80	35.85	34.00
Short-Circuit Current (Isc/A)	15.76	12.71	15.80	12.74	15.83	12.76	15.86	12.79	15.90	12.82
Module Efficiency (%)	21.80		22.00		22.30		22.50		22.80	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 445W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	467	490	512	534	556
Vmpp/V	29.79	29.79	29.79	29.79	29.79
Impp/A	15.69	16.43	17.18	17.93	18.68
Voc/V	35.42	35.42	35.42	35.42	35.42
Isc/A	16.62	17.41	18.20	19.00	19.79

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	96pcs in series (6*16)
Module Dimensions	1762*1134*30mm (69.37*44.65*1.18inches)
Weight	24.7kg (54.45lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	35A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

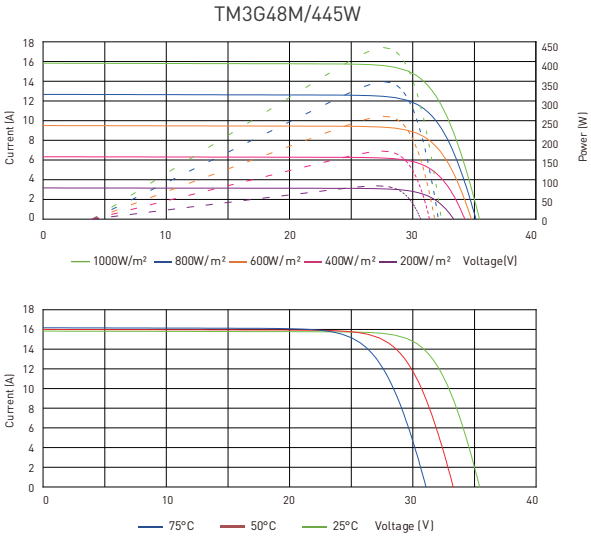
TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

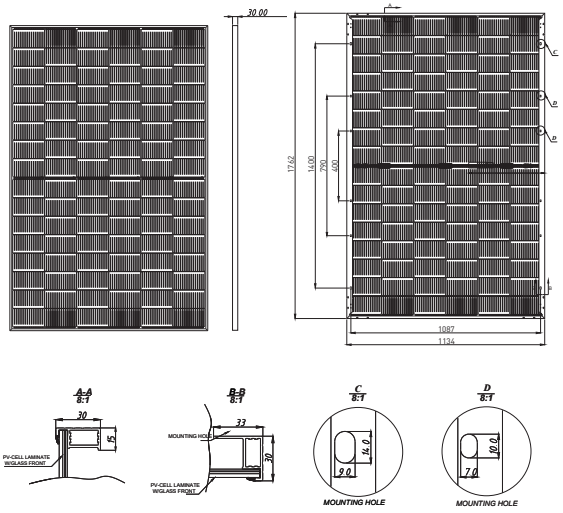
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	936	720

Electrical Performance



TECHNICAL DRAWINGS



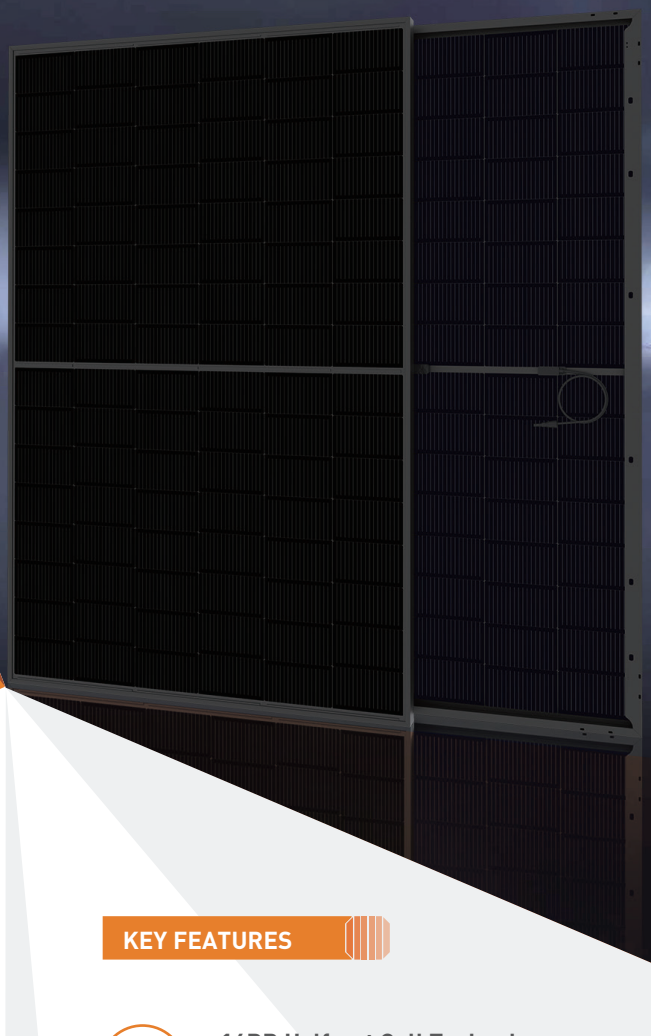
TALESUN

BIPRO

TM3G48M 96-cell

430 - 450W

16BB Half-cut N-type
Full Black

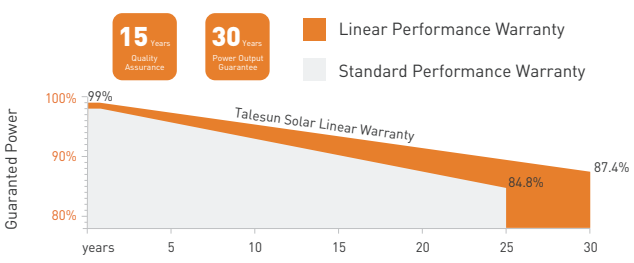


SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance
Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

Industry Leading High Yield

Bifacial TOPCon cell technology,
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PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
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IP68 Junction Box

High waterproof level

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* GL-EN-Version 2024.04.10

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	430	327	435	330	440	334	445	338	450	342
Operating Voltage (Vmpp/V)	28.92	27.30	29.22	27.50	29.52	27.70	29.79	28.00	30.09	28.20
Operating Current (Impp/A)	14.87	11.97	14.89	12.00	14.91	12.05	14.94	12.09	14.96	12.12
Open-Circuit Voltage (Voc/V)	34.76	33.00	34.98	33.20	35.20	33.40	35.42	33.60	35.64	33.80
Short-Circuit Current (Isc/A)	15.72	12.67	15.76	12.71	15.80	12.74	15.83	12.76	15.86	12.79
Module Efficiency (%)	21.50		21.80		22.00		22.30		22.50	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 445W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	467	490	512	534	556
Vmpp/V	29.79	29.79	29.79	29.79	29.79
Impp/A	15.69	16.43	17.18	17.93	18.68
Voc/V	35.42	35.42	35.42	35.42	35.42
Isc/A	16.62	17.41	18.20	19.00	19.79

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	96pcs in series (6*16)
Module Dimensions	1762*1134*30mm (69.37*44.65*1.18inches)
Weight	24.7kg (54.45lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	35A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

TEMPERATURE CHARACTERISTICS

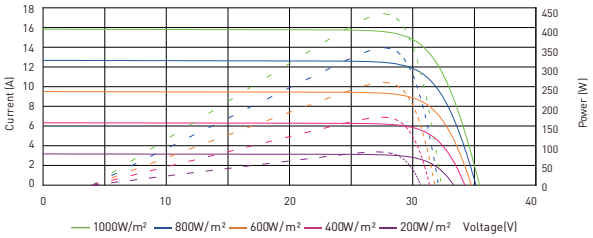
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

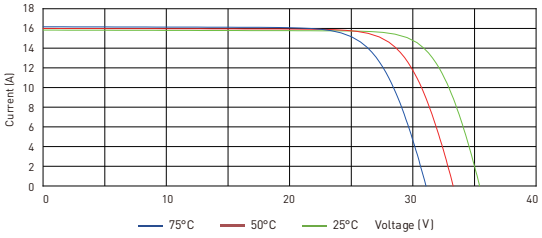
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	936	720

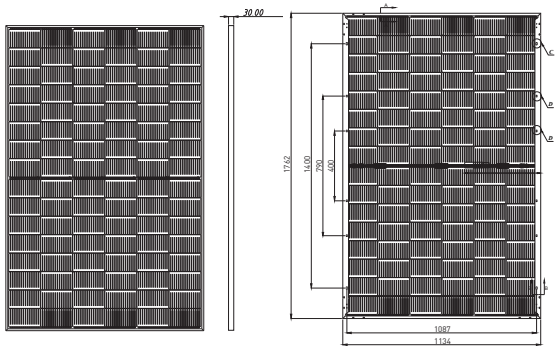
Electrical Performance

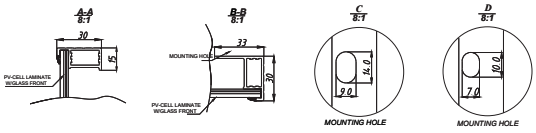
TM3G48M/445W





TECHNICAL DRAWINGS





TALESUN

BIPRO

TM3G66M 132-cell

600 - 620W

Bifacial Dual Glass
16BB Half-cut N-type

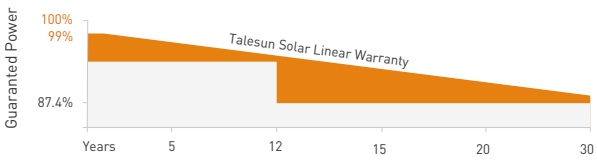
SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

c UL us LISTED CE DEKRA

PERFORMANCE WARRANTY

12 Years Quality Assurance
30 Years Power Output Guarantee
Linear Performance Warranty



AVIN

KEY FEATURES

16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance
Attenuation ⩽1% (1st year) / ⩽0.4% (Linear)

Industry Leading High Yield

Bifacial TOPCon cell technology,
Dual-sided power generation gain from back side depending on albedo, significantly reduce LCOE

Excellent Anti-PID Performance

PID Anti

192 hours Anti-PID test

Wider Application

No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area

IP68 Junction Box

High waterproof level

www.talesun.com
marketing.hq@talesun.com

* GL-EN-Version 2024.03.22

ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	600	459	605	462	610	466	615	470	620	473
Operating Voltage (Vmpp/V)	40.30	37.90	40.50	38.10	40.80	38.30	41.00	38.50	41.20	38.70
Operating Current (Impp/A)	14.91	12.11	14.94	12.13	14.96	12.16	15.00	12.21	15.05	12.23
Open-Circuit Voltage (Voc/V)	48.40	46.00	48.70	46.20	49.00	46.50	49.30	46.80	49.60	47.10
Short-Circuit Current (Isc/A)	15.80	12.73	15.83	12.75	15.86	12.78	15.90	12.81	15.94	12.84
Module Efficiency (%)	22.20		22.40		22.60		22.80		23.00	

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

REAR SIDE POWER GAIN(REFERENCE TO 610W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	641	671	702	732	763
Vmpp/V	40.80	40.80	40.80	40.80	40.80
Impp/A	15.71	16.46	17.20	17.95	18.70
Voc/V	49.00	49.00	49.00	49.00	49.00
Isc/A	16.65	17.45	18.24	19.03	19.83

MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	132pcs in series (6*22)
Module Dimensions	2382*1134*30mm (93.78*44.65*1.18inches)
Weight	33.7kg (74.29lbs.)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EVO2

APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	35A
Safety Protection Class	Class Ⅱ
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

TEMPERATURE CHARACTERISTICS

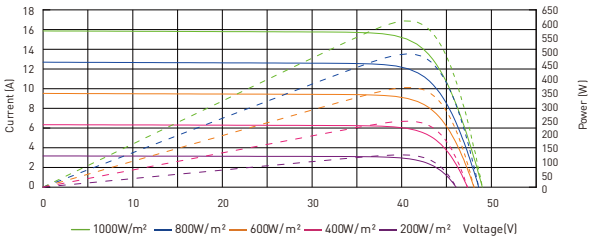
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

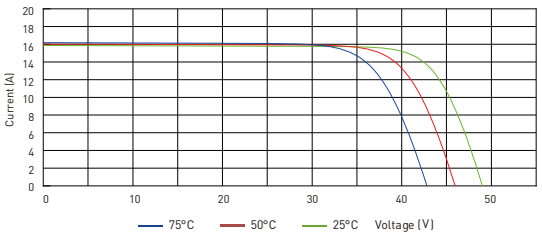
PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	720	540

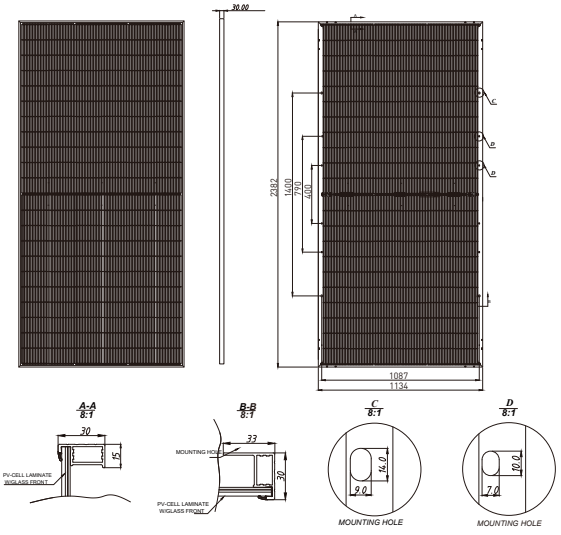
Electrical Performance

TM3G66M/610W





TECHNICAL DRAWINGS



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