

## SOLAR MODULES

### FEATURES

- Anti Reflective (AR) Coating Glass
- Positive Power Tolerance Up to 5W
- PID (Potential Induced Degradation) Free
- LID (Light Induced Degradation) Free
- Fully Automatic Robotic Plant
- IP68 Junction Box Protection
- Excellent Module Efficiency

#### PRODUCT CERTIFICATES



**25**  
years

*Power Output Warranty*

**Poly Panel**

**Flexible Panel**

**Mono- PERC Panel**

**Mono Half-Cut Panel**

**Bifacial Panel**

**TopCon Panel**



**1800 313 2001**



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# Mono Crystalline

## Technical Data 45W - 365W

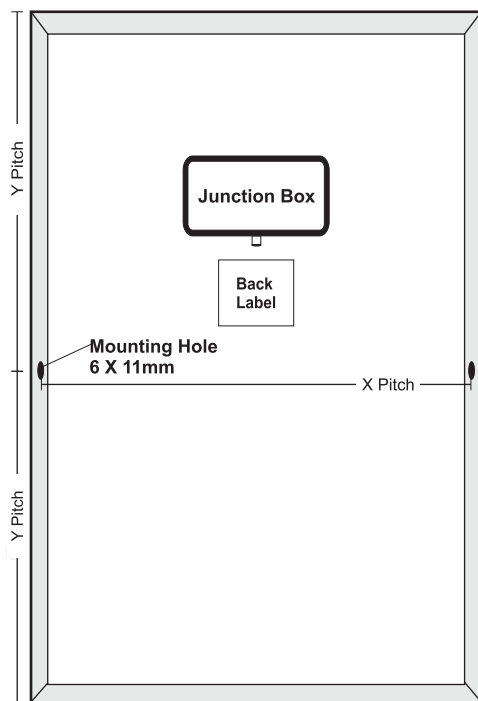
**PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)** (irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.)

Nominal Maximum Power (Pmax)	45W/12V	55W/12V	75W/12V	110W/12V	170W/12V	210W/12V	275W/12V	365W/24V
Optimum Operating Voltage (Vmp)	21.09	21.24	21.43	21.12	21.05	23.01	21.24	34.20
Optimum Operating Current (Imp)	2.14	2.59	3.50	5.21	7.84	8.65	12.95	10.77
Open Circuit Voltage (Voc)	24.59	24.72	24.60	24.60	24.52	27.03	24.72	41.1
Short Circuit Current (Isc)	2.26	2.71	3.69	5.49	8.25	9.07	13.37	11.28
Module Eff(%)	15.37	17.97	18.64	20.55	19.88	20.26	20.88	21.01

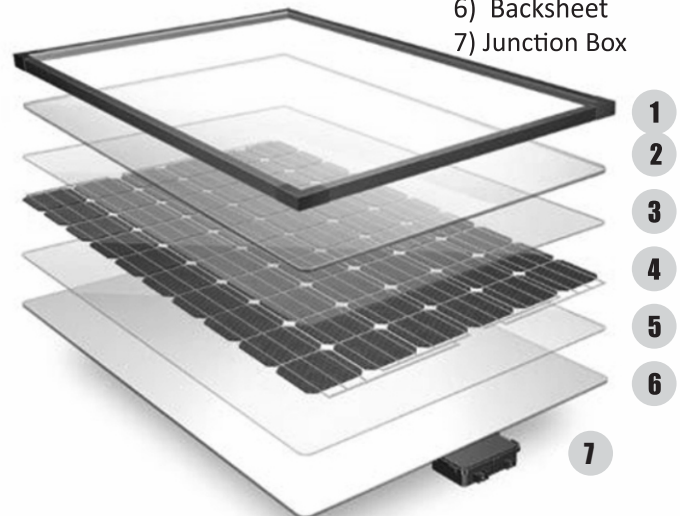
### Mechanical Specifications

Dimensions (Length in mm)	430	400	605	700	1085	1490	1722	1956
Dimensions (Width in mm)	665	765	665	765	765	665	765	992
Dimensions (Height in mm)	30	30	30	40	40	40	40	40
Max. Fuse Rating (A)	10	10	10	10	15	20	25	25
No Of Cell	36	36	36	36	36	39	72	72
Cell Configuration (Matrix)	9*4	9*4	9*4	9*4	9*4	13*3	18*4	18*4

### BACK VIEW



- 1) Aluminum Frame
- 2) Solar Tempered Glass
- 3) Encapsulant
- 4) Solar Cell String
- 5) Encapsulant
- 6) Backsheet
- 7) Junction Box



\*All dimensions are in mm with +/-1% tolerance.

### MAXIMUM OPERATING CONDITIONS

Operating Temperature:	-40°C to +85°C
Maximum System Voltage:	1000 / 1500V
Maximum Series Fuse Rating:	10 - 25 A

### TEMPERATURE COEFFICIENTS

Current Temperature Coefficients $\alpha(I_{sc})$ :	0.021%/°C
Voltage Temperature Coefficients $\beta(V_{oc})$ :	-0.291%/°C
Power Temperature Coefficients $\gamma(P_{max})$ :	-0.397%/°C

**\*Caution:** Please read safety and installation before using the product. **Warranty:** Linear power warranty for 25 years up to 2.5% for 1st year degradation and 0.67% from year 2 to 25. Please read GKM Energy warranty documents thoroughly. **Disclaimer:** Specification included in the datasheet are subject to change without prior notice owing to conditions innovation on the product development and R&D activities. GKM Energy reserve the right to make any adjustment to the information described here, datasheet contained in this specification do not form a representative of a single module data. @T&C Apply.



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# Half Cut Mono Crystalline

## Technical Data 540W - 555W

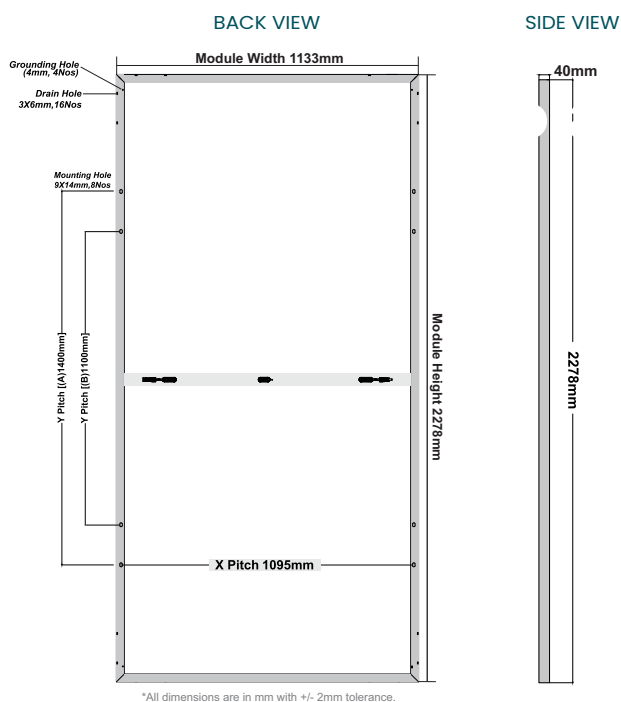


PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.)

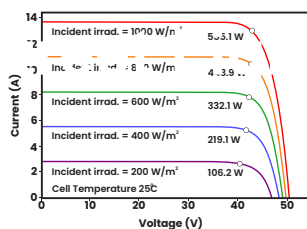
Nominal Maximum Power (Pmax)	540W/24V	545W/24V	550W/24V	555W/24V
Optimum Operating Voltage (Vmp)	41.86	42.01	42.14	42.28
Optimum Operating Current (Imp)	12.91	12.98	13.06	13.13
Open Circuit Voltage (Voc)	49.7	49.91	50.06	50.20
Short Circuit Current (Isc)	13.53	13.59	13.65	13.71
Module Eff(%)	20.94	21.13	21.32	21.51

### Mechanical Specifications

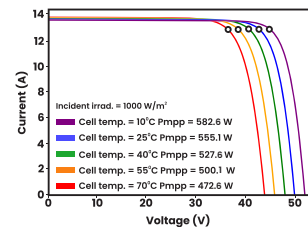
Dimensions (Length in mm)	2278
Dimensions (Width in mm)	1133
Dimensions (Height in mm)	40
Weight(kg)	28.6
No Of Cell	144 HalfCut



IV Curve Variation with Irradiance

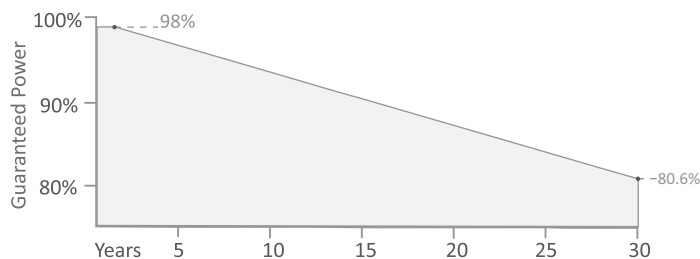


IV Curve Variation with Temperature



IV Curves for Front-Side Illumination of 555Wp Panel

### LINEAR PERFORMANCE WARRANTY



### MAXIMUM OPERATING CONDITIONS

Operating Temperature:	-40°C to +85°C
Maximum System Voltage:	1500V
Maximum Series Fuse Rating:	25A

### TEMPERATURE COEFFICIENTS

Current Temperature Coefficients $\alpha(I_{sc})$ :	0.021%/°C
Voltage Temperature Coefficients $\beta(V_{oc})$ :	-0.291%/°C
Power Temperature Coefficients $\gamma(P_{max})$ :	-0.397%/°C

\***Caution:** Please read safety and installation before using the product. **Warranty:** Linear power warranty for 25 years up to 2.5% for 1st year degradation and 0.67% from year 2 to 25. Please read GKM Energy warranty documents thoroughly. **Disclaimer:** Specification included in the datasheet are subject to change without prior notice owing to conditions innovation on the product development and R&D activities. GKM Energy reserve the right to make any adjustment to the information described here, datasheet contained in this specification do not form a representative of a single module data. @T&C Apply.



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# Bifacial Mono Modules

## Technical Data 540W - 555W



### PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (irradiance 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.)

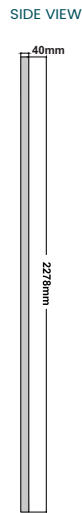
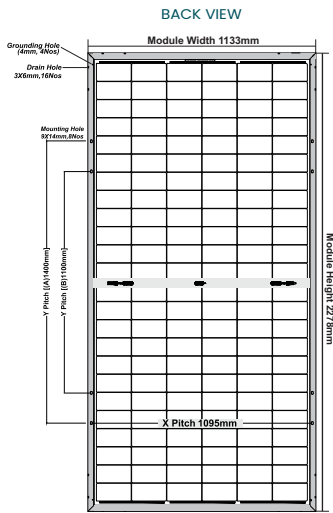
Nominal Maximum Power (Pmax)	540W/24V	545W/24V	550W/24V	555W/24V
Optimum Operating Voltage (Vmp)	41.86	42.01	42.14	42.28
Optimum Operating Current (Imp)	12.91	12.98	13.06	13.13
Open Circuit Voltage (Voc)	49.78	49.91	50.06	50.20
Short Circuit Current (Isc)	13.53	13.59	13.65	13.71
Module Eff(%)	20.94	21.13	21.32	21.52

### Bifacial OutPut - BackSide Power Gain at STC (\*Bifaciality Factor 75% ± 10%)

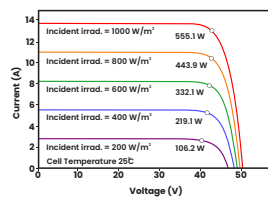
5%	Nominal Maximum Power (Pmax)	567W	573W	578W	583W
	Module SC Current/Efficiency	14.21A / 21.99%	14.27A / 22.18%	14.33 A / 22.39%	14.39A / 22.59%
10%	Nominal Maximum Power (Pmax)	594W	600W	605W	611W
	Module SC Current/Efficiency	14.88 A / 23.03%	14.95 A / 23.24%	15.02 A / 23.46%	15.08 A / 23.67%
25%	Nominal Maximum Power (Pmax)	676 W	682 W	688 W	694 W
	Module SC Current/Efficiency	16.91 A / 26.17%	16.99 A / 26.41%	17.06 A / 26.65%	17.14 A / 26.89%

### Mechanical Specifications

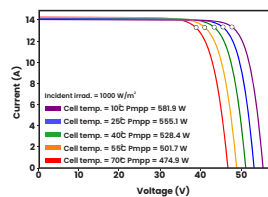
Dimensions (Length in mm)	2278
Dimensions (Width in mm)	1133
Dimensions (Height in mm)	40
Weight(kg)	28.6
No Of Cell	144 HalfCut Mono PERC Bifacial Solar Cell



IV Curve Variation with Irradiance

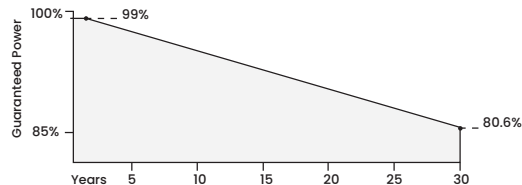


IV Curve Variation with Temperature



IV Curves for Front-Side Illumination of 555 Wp Panel

### LINEAR PERFORMANCE WARRANTY



### MAXIMUM OPERATING CONDITIONS

Operating Temperature:	-40°C to +85°C
Maximum System Voltage:	1500V
Maximum Series Fuse Rating:	25 - 30 A

### TEMPERATURE COEFFICIENTS

Current Temperature Coefficients $\alpha(I_{sc})$ :	0.021%/°C
Voltage Temperature Coefficients $\beta(V_{oc})$ :	-0.291%/°C
Power Temperature Coefficients $\gamma(P_{max})$ :	-0.397%/°C



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# N-Type TOPCon Solar Module

## Technical Data 570W - 590W

PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.)

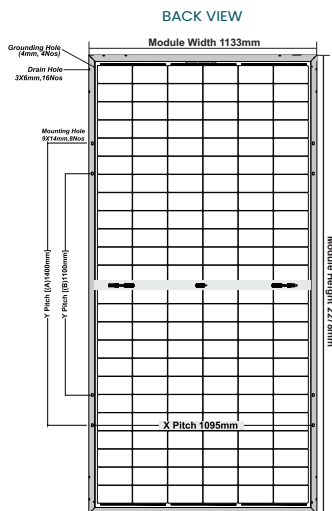
	570W/24V	575W/24V	580W/24V	585W/24V	590W/24V
Nominal Maximum Power (Pmax)					
Optimum Operating Voltage (Vmp)	44.37	44.56	44.75	44.94	45.12
Optimum Operating Current (Imp)	12.85	12.91	12.97	13.02	13.08
Open Circuit Voltage (Voc)	52.39	52.60	52.80	53.01	53.21
Short Circuit Current (Isc)	13.54	13.59	13.65	13.71	13.76
Module Eff(%)	22.08	22.28	22.47	22.67	22.86

### Bifacial OutPut - BackSide Power Gain at STC (\*Bifaciality Factor 75% +-10%)

		599W	604W	609W	614W	620W
5%	Nominal Maximum Power (Pmax)					
	Module SC Current/Efficiency	14.21A / 23.21%	14.27A / 23.40%	14.33 A / 23.60%	14.39A / 23.71%	14.45A / 24.00%
10%	Nominal Maximum Power (Pmax)	627W	633W	638W	644W	649W
	Module SC Current/Efficiency	14.89 A / 24.29%	14.95 A / 24.53%	15.02 A / 24.72%	15.08 A / 24.95%	15.14 A / 25.14%
25%	Nominal Maximum Power (Pmax)	713 W	719 W	725 W	731 W	738 W
	Module SC Current/Efficiency	16.92A / 27.63%	16.99 A / 27.86%	17.06 A / 28.09%	17.13 A / 28.32%	17.20 A / 28.57%

### Mechanical Specifications

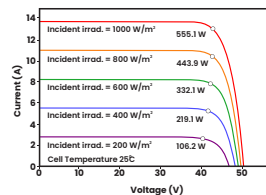
Dimensions (Length in mm)	2278
Dimensions (Width in mm)	1133
Dimensions (Height in mm)	40
Weight(kg)	33
No Of Cell	144 HalfCut N Type TOPCON Bifacial Solar Cell



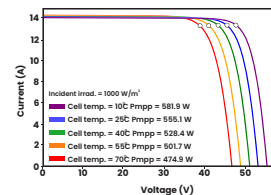
SIDE VIEW



IV Curve Variation with Irradiance

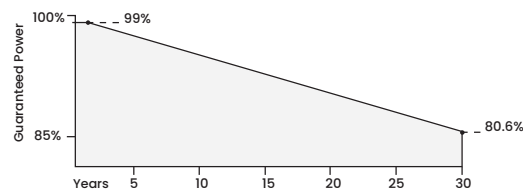


IV Curve Variation with Temperature



IV Curves for Front-Side Illumination of 555 Wp Panel

### LINEAR PERFORMANCE WARRANTY



\*All dimensions are in mm with +/- 2mm tolerance.

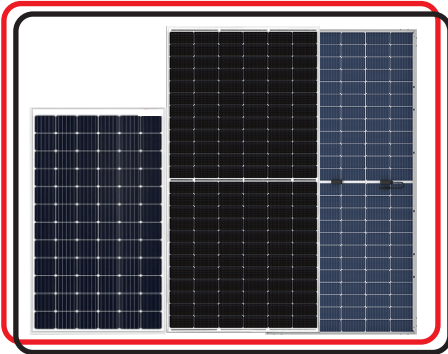
### MAXIMUM OPERATING CONDITIONS

Operating Temperature:	-40°C to +85°C
Maximum System Voltage:	1500V
Maximum Series Fuse Rating:	25 - 30 A

### TEMPERATURE COEFFICIENTS

Current Temperature Coefficients $\alpha(I_{sc})$ :	0.021%/°C
Voltage Temperature Coefficients $\beta(V_{oc})$ :	-0.291%/°C
Power Temperature Coefficients $\gamma(P_{max})$ :	-0.397%/°C

# Solar Products



**Solar Modules**

Available Range 45W - 590W



**GKM Thundercell  
Tall Tubular Batteries**

Available Range 110Ah - 270Ah



**GKM GreenFlow  
Lithium Batteries**

Available Range 0.5 kW - 100 kW  
3.2V - 688V



**GKM PurePower  
(Solar Home PCU)**

Available Range 1 - 5 kVA



**GKM SunSpark  
(Single Phase Solar PCU)**

Available Range 1 - 15 kVA



**LithiVolt Pro  
Wall Mount Inverter Battery**

Available Range 1 - 25 kVA



**Solar Management Unit  
Solar Conversion Kit**

Available Range 12V/24V - 60Amp



**Solar Charger  
Controller (PWM/MPPT)**

Available Range 12V/5A-120V/40A



**VFD**

Available Range 1HP - 30HP