The PVGraf<sup>®</sup> Technology, is a breakthrough in the architecture and production of photovoltaic modules. The PVGraf<sup>®</sup> Technology eliminates the limitations of the current standard module architecture and the photovoltaic cell based on the so-called "bus bar architecture."

# **PVGRAF 300 W +** SW PREMIUM / High efficiency solar module

#### SPECIFICATIONS

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- More power per 1 sq. ft.
- Less impact on shading
- No microcrack effect

### DIMENSIONS

Length	64.96 inch
Width	39.05 inch
Height	1.37 inch
Frame	anodized aluminium
Weight	46.3 lbs

### THERMAL PARAMETERS

TK U <sub>oc</sub>	-0.353 %/K
	0.056 %/K
Max. working temperature	-40° F to +185° F

# **CERTIFICATES AND WARRANTY**

Certificate	IEC 61215
Product warranty	30 years
Performance warranty	30 years
PID and LID	100% free
Performance guarantee	10 years at 90% nominal power
	30 years at 80% nominal power

# **KEY BENEFITS**

*	<b>live-long</b> <sup>™</sup> TECHNOLOGY	<ul> <li>&gt; Increased durability</li> <li>&gt; 30 years at 80% of nominal power</li> <li>&gt; Maximum power reduction ≤0.3% per year</li> </ul>
	<b>stay•powerful</b> <sup>™</sup> TECHNOLOGY	<ul> <li>&gt; Significantly shorter return on investment</li> <li>&gt; Increased energy production compared to standard BusBar technology</li> <li>&gt; Enhanced diffused solar irradation</li> </ul>
×	work-smart <sup>™</sup> TECHNOLOGY	<ul> <li>&gt; Eliminated negative impact of microcracks on power module</li> <li>&gt; Less impact on shading</li> </ul>

> Lower operating costs



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PATENT US # 0358498 | EU # 421831 EC 61730 IEC 61215 UL 1703 IEC 62716 IEC 60068-2-68 IEC 61701

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#### **PVGRAF**



STANDARD MODULES



# **DIFFERENCES IN TECHNOLOGY**



# SW PREMIUM / High efficiency solar module PVGRAF 300 W

FIRST GENERATION

## **UNIQUE FEATURES OF GRAPHENE**

- > Almost transparent (Absorbs 2.3% of light)
- Very strong (100-200 times more than steel) >
- Flexible (It can extend by 20%) >

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- Very good heat conductive around 5000 W / mK >
- Very low electrical resistance >
- Very high electron mobility (200,000cm2/Vs) >
- Huge flow speed electron (1/300) c >

#### **ELECTRICAL DATA**

MPP Voltage Vmpp	[V]	31.25-34.1+
MPP Current Impp	[A]	9.62-9.83+
Open Circuit Voltage Voc	[V]	37.57-41.0+
Short Circuit Current Isc	[A]	10.26-10.49+







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#### Daylight (Hours) PVGraf SWCT BusBar



### **NEW TECHNOLOGY**

Photovoltaic Graphene Matrix Technology or "PVGraf" shatters the mold of traditional BUS BAR PV technology and will soon become the go-to technology for Solar Power Installations.

PV Graf utilizes a hybrid cell technology – combining thin film tech with crystalline silicon tech - to produce 35% higher efficiency modules that last longer, are less prone to micro-damage, and even when damaged, still work with almost zero loss of productivity.

# **MECHANICAL DATA**

Solar Cells	Mono PERC/HJT 156x156mm (6 inches)
Cell orientation	60 cells (6x10)
Module dimensions	64.96 in. x 39.05 in. x 1.37* in.
Weight	46.3 lb
Glass (Double)	Double protection; front 0.13 in.; back 0.07 in.
Backplane	White
Frame	Anodized aluminum alloy
J-Box (Double)	Double protection; IP65/IP57 Rated
Cables	PV wire, 35.4 in., 0.006 in2
Connector	Original MC4 or Compatible MC4
Cell electrode connecti	ons 12-18 wires
Encapsulate	EVA or TPO





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1. Frame 2. Frame 3. Corner Frame 4. Solar Cell 5. Front Glass 6. Graphene Coating 7. Seal 8. Back Sheet 9. Junction Box 10. Back Glass 11. Encapsulant 12. Encapsulant