

# SE-302 SOLAR ENGINE

**FOR LED PAPI**



## FEATURES

- Applicable For Different Airfield Lighting Equipment
- 20% More Energy Efficient Solar Panel
- All Consisting Parts Are User-Replaceable
- Adjustable Solar Engine Size
- Battery Monitoring via ALCMS

## APPLICATION

S4GA Solar Engine is designed to power LED PAPI.

### 1 POWER BANK

CAPACITY:

- 2640 W (standard)
- 5280 W (extended)

Stores solar energy and powers airport infrastructure connected to Power Banks

### 2 SOLAR PANEL

CAPACITY: 640 W

Q CELL Solar panel collects solar energy 20% more effective than other solar panels



### BATTERY MONITORING

Available monitoring of battery capacity with Airfield Lighting Control & Monitoring System (optional)

### PAPI AUTONOMY

Extended Power Bank provides 15 hrs of LED PAPI autonomy

### SOLAR AUTONOMY

Request Solar Feasibility Study for your project

**FEASIBILITY STUDY**  
 AHE TENUKUPARA AIRPORT  
 FRENCH POLYNESIA

## EXAMPLES OF S4GA SOLAR ENGINES



# SOLAR PANEL



## Q.ANTUM DUO TECHNOLOGY



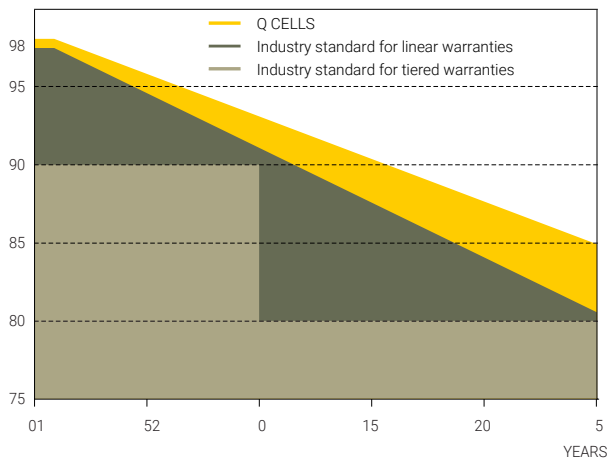
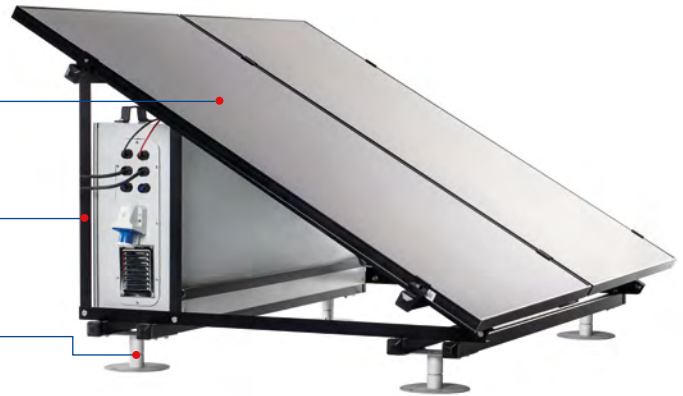
**2 X Q.PEAK SOLAR PANELS**  
**TOTAL POWER OUTPUT: 640 W**



**ALLUMINIUM FRAME**



**SUPPORTIVE FRANGIBLE LEGS**



### Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.9%.



### ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology1, Hot-Spot Protect and Traceable Quality Tra.Q™.



### EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



### STATE OF THE ART MODULE TECHNOLOGY

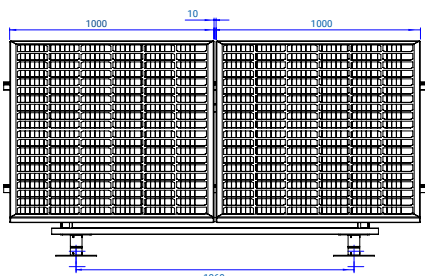
Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

## TECHNICAL SPECIFICATIONS

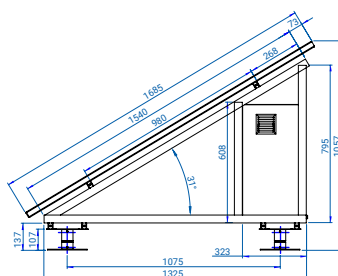
General	
	• 2 x Q.PEAK DUO-G5 solar panels
	• Front Cover: 3.2 mm thermally pre-stressed glass with antireflection technology
	• Back Cover: composite film
	• Frame: Black anodized aluminium
	• Cell: 6 x 20 monocrystalline Q.ANTUM solar half cells
	• Connector: Multi-Contact, MC4, IP65 and IP68
	• Dimensions: 1685 x 1000 x 32 mm
	• Weight: 18,7 kg

Electrical	
	• Total Engine Size : 640 W (2 x 320 W)
	• Nominal Power: 315-330 Wp
	• Maximum system voltage: 1000 V
Environmental Conditions	
	• Operating temperature: -40 to 85°C
	• Wind/Snow Load: 4000/5400 Pa
Certification	
	• VDE Quality Tested, IEC 61215 (Ed. 2); IEC 61730 (Ed. 1), Application class A
	• DIN EN 50380

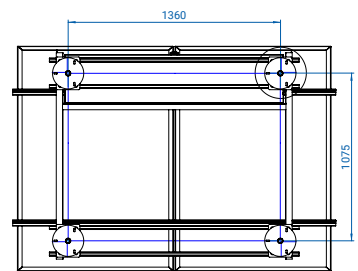
### TECHNICAL DRAWING



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

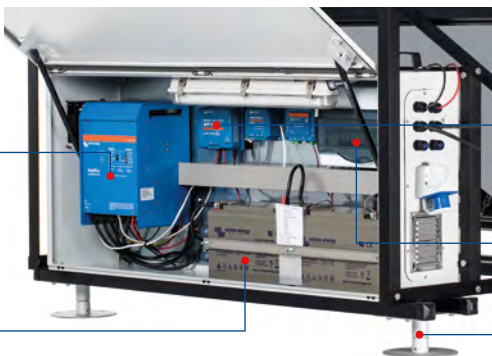
# POWER BANK



**MULTIPLUS 24/300/70  
INVERTER CHARGER**



**VICTRON ENERGY BATTERY  
DEEP CYCLE**



**BLUESOLAR MPPT 100/30  
CHARGE CONTROLLER**



**CONTROL AND SAFETY MODULE  
(DIRECT CURRENT  
ALTERNATE CURRENT)**

**FRANGIBLE MOUNTING**

## INVERTER / CHARGER

General	
	<ul style="list-style-type: none"> <li>MultiPlus 24/300/70 Inverter Charger</li> <li>Power Control: yes</li> <li>Transfer Switch (A): 16</li> <li>Parallel and 3-phase operation: yes</li> <li>Dimensions [HxWxL]: 375 x 214 x 110 mm</li> <li>Weight: 10 kg</li> </ul>
Inverter	
	<ul style="list-style-type: none"> <li>Input voltage range (V DC): 9,5 – 17 V, 19 – 33 V, 38 – 66 V</li> <li>Output voltage: 230 VAC ± 2%</li> <li>Frequency: 50 Hz ± 0,1%</li> </ul>
Charger	
	<ul style="list-style-type: none"> <li>Input voltage range: 187-265 VAC</li> <li>Input frequency: 45 – 65 Hz</li> </ul>
Environmental Conditions	
	<ul style="list-style-type: none"> <li>Temperature Range: -40 to 85°C</li> <li>Ingress Protection: IP21</li> <li>Humidity: 95%</li> </ul>
Compliance	
	<ul style="list-style-type: none"> <li>Safety: EN 60335-1, EN 60335-2-29</li> <li>Emission, Immunity: EN 55014-1, EN 55014-2, EN 61000-3-3</li> <li>Automotive Directive: 2004/104/EC</li> </ul>

## BATTERY

General	
	<ul style="list-style-type: none"> <li>Victron Energy Battery Deep Cycle</li> <li>Lifespan: 750 cycles</li> <li>Designed for 5 years</li> <li>Air-transportable</li> <li>User-replaceable</li> <li>Dimensions [LxWxH]: 330 x 171 x 220 mm</li> <li>Weight: 33 kg</li> </ul>
Electrical	
	<ul style="list-style-type: none"> <li>Nominal Voltage: 12V</li> <li>Nominal Capacity: 220 Ah</li> <li>Capacity, standard version: 2640 W (12V x 220Ah)</li> <li>Capacity, extended version: 5280 W (2x 12V x 220Ah)</li> </ul>
Environmental Conditions	
	<ul style="list-style-type: none"> <li>Temperature range: -40 to 85°C</li> </ul>

## SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
1 x Power Bank	900 mm x 2000 mm x 1400 mm	220 kg (standard version) / 300 kg (extended version)
2 x Solar Panels, 1 x Mounting Set for SE-302 Solar Engine	900 mm x 900 mm x 2000 mm	200 kg

## CHARGE CONTROLLER

General	
	<ul style="list-style-type: none"> <li>BlueSolar Charge Controller MPPT 100/30</li> <li>Dimensions [LxWxH]: 130 x 186 x 70 mm</li> <li>Weight: 1,25 kg</li> </ul>
Electrical	
	<ul style="list-style-type: none"> <li>Battery Voltage: 12/24V Auto Select</li> <li>Rated charge current: 30 A</li> <li>Nominal PV power, 12V 1a,b): 440 W</li> <li>Nominal PV power, 24V 1a,b): 880 W</li> <li>Max. PV short circuit current: 35 A</li> <li>Maximum PV open circuit voltage: 100 V</li> <li>Maximum efficiency: 98%</li> <li>Protection: battery reverse polarity (fuse, not user accessible) PV reverse polarity / Output short circuit / Over Temperature</li> </ul>
Environmental Conditions	
	<ul style="list-style-type: none"> <li>Temperature range: -30 to +60°C</li> <li>Humidity: 95%, non-condensing</li> </ul>
Compliance	
	<ul style="list-style-type: none"> <li>Safety: EN/IEC 62109-1 / UL 1741 / CSA C22.2</li> </ul>

## ENCLOSURE

	<ul style="list-style-type: none"> <li>NEMA protection class: NEMA 4</li> <li>IK Code: IK08</li> <li>Material: galvanized steel</li> <li>Dimensions (LxWxH): 600 x 1400 x 300 mm</li> <li>Ingress Protection: IP-65</li> </ul>
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## TECHNICAL DRAWING

