

## SOLAR ENERGY SYSTEM UTC-30



Photovoltaic Module



PV Inverter



DC Switch Disconnecter



Fuse



DC SPD



Mid Clamp



End Clamp



Structure & Rail



DC Cable



AC Cable

- 94 modules of 320 Watt peak power rating. Professional premium solar modules with superior performance. Applying industry-leading product quality and reliability for residential and commercial rooftops. Over 17% efficiency with 25 years output warranty. Tested and approved certifications with IEC 62804.
- One grid-tied power processing unit. High performance inverting system, PVI 30kW outdoor string inverter, highly unique in its ability to control the performance of the PV panels. Over 98.7% efficiency with 10 years output warranty. Tested and approved certifications with IP65.
- One complete set of solar mounting structures that are highly corrosion resistant with 162 mid-clamp, 116 end-side clamp, 94 sets of 3 meter rails.
- DC PV cables from the photovoltaic modules to inverting system 40 meters length.
- AC wiring from the inverters: 5 meters length.
- One set of combiner box inclusive of 2 sets 32A fuse, 2 sets 32A DC protection switch disconnecter, 2 units of DC surge protection device.

\*Subjected to manufacturer's changes in design and specification.

**30kWp**

Solar Power Capacity

**98.7%**

Performance Efficiency

**10Years**

Product Warranty

**25 Years**

Photovoltaic Modules Output Warranty



Industry leading conversion efficiency



Positive tolerance and high-performance



Certificated to withstand wind load (2400Pa) and weight load (7200Pa)



Passed salt mist corrosion testing and ammonia corrosion testing



Excellent performance under weak sunlight conditions



Good temperature coefficient performance enables better output in the tropical region

UTICA® is a leading Singapore based renewable energy company of small to large-scale power systems, delivering unmatched quality to commercial and residential customers.

As a BizSAFE Star, ISO certified, BCA registered professional solar energy systems provider, we bring together cutting-edge innovation and dedicated customer service.

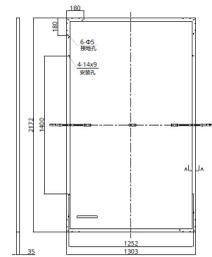
Our mission is to be a part of the environmental solution while maintaining the highest quality standards of customer service and satisfaction.

UTICA® offers customers more than just one more choice in electricity source. We offer our customers the opportunity to make a difference for the environment by supporting cleaner, renewable sources of energy instead of limited and polluting fossil fuels.



## Photovoltaic Modules

Module type	600Wp
Nominal Power Voltage - $V_{MPP}$ (V)	34.9V
Nominal Power Current - $I_{MPP}$ (A)	17.2A
Open Circuit Voltage - $V_{OC}$ (V)	41.5V
Short Circuit Current - $I_{SC}$ (A)	18.47A
Panel Efficiency (%)	21.2
Dimensions	2172 x 1303 x 35mm
Area	2.83 m <sup>2</sup>
Weight	30.9 kg



Nominal module operating temperature (NMOT: air mass AM 1.5, irradiance 800 W/m<sup>2</sup>, temperature 20°C, windspeed 1m/s).  
Photovoltaic module power tip rated range 320 Watt - 400 Watt (subjected to production availability)

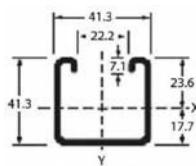


## Intelligent Power Processing Unit

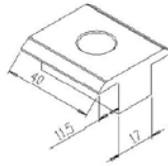
Inverter type	30kW	Number of independent MPPT	1
Absolute maximum DC input voltage ( $V_{max,abs}$ )	1000	Number of DC input pairs for each MPPT	1
Start-up DC input voltage ( $V_{start}$ )	610	AC grid connection type	Three-phase 3W+PE or 4W+PE
Rated DC input voltage ( $V_{dcr}$ )	580V...950v	Maximum efficiency	98.2%
Rated DC input power ( $P_{dcr}$ )	33700W	Environmental protection rating	IP65
Maximum DC input current ( $I_{dcr,max}$ ) / for each MPPT (IMPPTmax)	58A	Sound pressure level, typical	50 dBA @ 1 m
Maximum DC input power for each MPPT (PMPPTmax)	33700W	Dimension (H x W x D)	1061 mm x 702 mm x 292mm
DC input voltage range with parallel configuration of MPPT at $P_{dcr}$	580...850V	Weight	70.0kg
Remote data logger with perimeter monitoring	RS485	Power processing device	Wireless Module (2.4GHz)

## Structures and Accessories

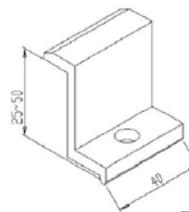
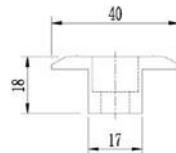
Solar mounting frames are highly corrosion resistant structure system that is made up of zinc, aluminum and magnesium. Tested and approved certifications with TUV SUD.



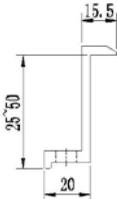
Rail



Mid Clamp



End Clamp



## Outdoor PV Cables

AC Cable		DC Cable	
Cross section (mm <sup>2</sup> )	1 x 4	Cross section (mm <sup>2</sup> )	1 x 4
Diameter (mm <sup>2</sup> )	5.3	Conductor construction (n x mm)	52 x 0.30
Open Air (A)	55	Conductor (mm)	2.55
Inst. on surface (A)	52	Outer (mm)	5.05
Inst adjoining to surface (A)	44	Resistance	5.09
Voltage drop (V/A km)	14.3	Fire load (kWh/m)	0.086
Weight (Kg/km)	57	Weight (kg/km)	56

## Combiner Box



Solar protective fuse, 1000VDC 32A. UTICA® fuse-link is made up of fuse-element with variable cross-section in high strength ceramics.



UTICA® DC switch disconnecter for enclosed and open switch-isolator for voltages up to 1000VDC 32A. Switch enclosure features degree of protection IP66.



UTICA® surge protective device will minimize the potential impact of lightning events provide protection against electrical surges and spikes by lightning.

## Packaging

Item	Dimensions(LxWxH) mm
Photovoltaic Modules	1800 x 1050 x 100 x 52
Power Processing unit	1100 x 800 x 350
Structure & Accessories	3000 x 500 x 500
Others	1000 x 500 x 500

## System Design

Temperature range	-40°C to +85°C
Hail	maximum diameter of 25mm with impact speed of 23m/s(51.2mph)
Maximum surface load capacity	7200pa