

# Solar Energy System

## UTM-H3



Photovoltaic Module



Hybrid Inverter



DC Switch Disconnecter



Fuse



DC SPD



Mid-Clamp



End-Clamp



Structure & Rail



DC Cable



AC Cable

- 10 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.
- Hybrid power processing unit. High performance inverting system, PVI 3kW outdoor string inverter, highly unique in its ability to control the performance of the PV panels. Over 97.7% efficiency with 10 years output warranty.
- One complete set of solar mounting structures that are highly corrosion resistant with 16 mid-clamp, 8 end-side clamp, 10 sets of 3 meter rails
- DC PV cables from the photovoltaic modules to inverting system 10 meters length.
- AC wiring from the inverters: 5 meters length
- One set of combiner box inclusive of 1 set 10A fuse, 1 set 10A DC protection switch disconnecter, 1 unit of DC surge protection device
- 2.4kwh lithium battery.

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

**3kWp**

Solar Power Capacity

**82%**

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.

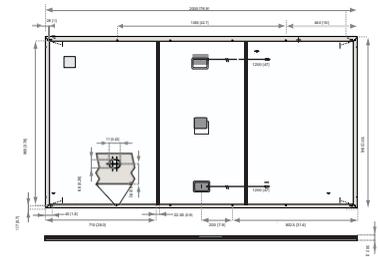
As a BizSAFE Star, ISO certified, BCA registered professional solar energy systems provider, we bring together cutting-edge innovation and dedicated customer service.

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	320Wp
Nominal Power Voltage - $V_{MPP}$ (V)	33.9
Nominal Power Current - $I_{MPP}$ (A)	9.45
Open Circuit Voltage - $V_{OC}$ (V)	40.0
Short Circuit Current - $I_{SC}$ (A)	10.17
Panel Efficiency (%)	19.2
Dimensions	1675 x 997 x 38 mm
Area	1.67 m <sup>2</sup>
Weight	18.5 kg



Nominal module operating temperature (NMOT: air mass AM 1.5, irradiance 800 W/m<sup>2</sup>, temperature 20°C, windspeed 1 m/s).

Where xxx indicates the nominal power class (PMPP) at STC indicated above, and can be followed by the suffix xv for 1500V rated modules.

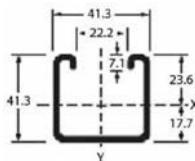


## Intelligent Power Processing Unit

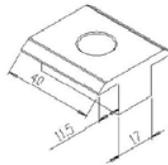
Technical Data	3kW	Rated grid voltage(V)	208/220/230/240(single phase)
DC Input(PV)		Frequency(Hz)	50/60
Max. DC input power(W)	3300W	Rated output current(A)	13A
Max. DC input power(V)	550V	AC output 2(Load)	
MPPT range(V)	120-450V	Rated output power(VA)	3000W
Max. input current(A)	13 A	Off-network switching time (ms)	≤10
AC output 1(Grid)		Dimension (H x W x D)	610 x 425 x 190mm
Rated power(W)	3000W	Weight	19.0 kg

## Structures and Accessories

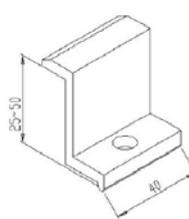
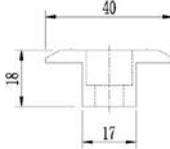
太阳能安装架是由锌、铝和镁组成的高耐腐蚀性结构体系。经过TUV SUD测试和批准认证。



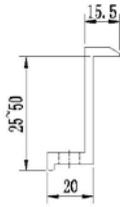
Rail



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



Fuse

10A 1000VDC x 1set



DC Switch Disconnecter

10A 1000VDC x 1set



DC SPD

10A 1000VDC x 1set

## Packaging

Item	Dimensions(LxWxH) mm
Photovoltaic Modules	1800 x 1050 x 100 x 6
Power Processing unit	650 x 600 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