

# 塞雷

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Tel: +86 577 6289 0205

Web: [www.chinasuntree.com](http://www.chinasuntree.com)

Main products: Solar Accessories, such as Combiner box, DC breaker, DC isolator switch, DC SPD, etc,

Shanghai SUNTREE Electric Co., Ltd. (Production base 1)

Add: No. 65 Haifeng Road, Baoshan District, Shanghai, China

Tel: +86 21 5161 9313

Main items: ATS, Load isolator switch, circuit breaker, etc

Zhejiang Nudy Electric Equipment Co., Ltd. (production base 2)

Add: Fangdouyan Industrial Zone, Liushi, Yueqing Zhejiang China

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Main products: power distribution cabinet, etc

Shenzhen Lito New Energy Co., Ltd. (production base 3)

Add: Bldg. B, Bafangyuan Science Park, Sanmin Rd. No. 3 Rd., Shuitian, Shiyuan, Baoan, Shenzhen.

Tel: 86-755-8170 7800

Main products: on-grid inverter, hybrid inverter, etc,

International Sales Companies: Yueqing Xincheng Imp&Exp Co., Ltd.

Add: Wanjia Industrial Zone, Malu, N. Baixiang, Wenzhou, Zhejiang, 325603, China

Tel: +86 577 6289 0205

Web: [www.chinasuntree.com](http://www.chinasuntree.com)

E-mail: [tony@chinasuntree.com](mailto:tony@chinasuntree.com)

sell all products which are produced by suntree group in international market



# INVERTER PRODUCT INTRODUCTION

Change Future, Unchange Nature

## High efficiency On-grid Inverter

- New SiC-Mosfet+SiC-SBD design
- 54K ultra high operating frequency
- Weight reduction of 30%
- Volume reduction of 20%
- Multi-string technology
- Wide MPPT range
- With 99.98% MPPT efficiency
- Remote monitoring by WIFI
- All Weather Proof IP 65

## Hybrid inverter

- Self-consumption and Feed-in to the grid
- Programmable supply priority
- User-adjustable battery charging current
- Programmable multiple operations modes
- Built-in Timer for various mode
- Monitoring software for real time



**Litto**





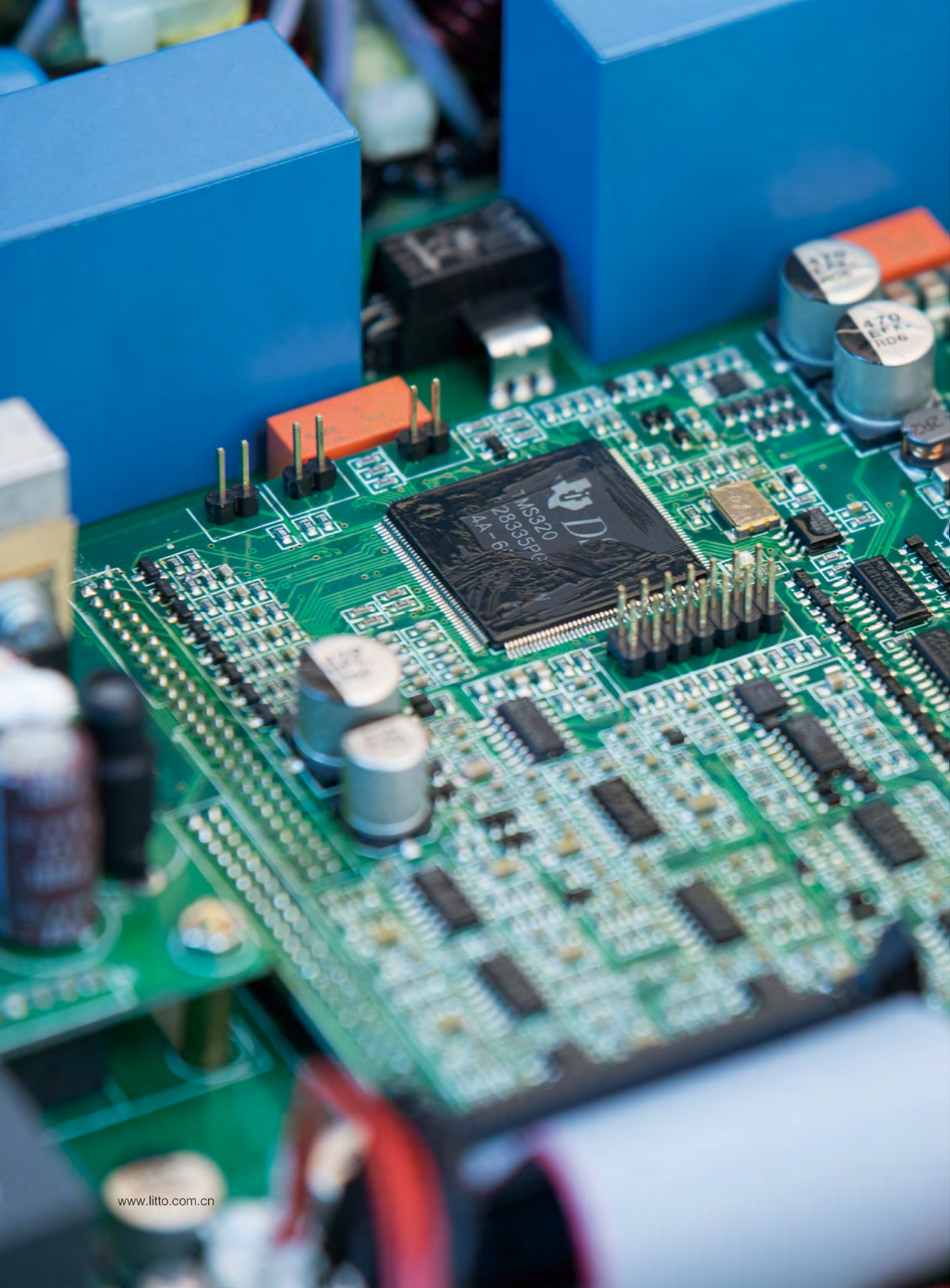
Bathed in the fields of spring  
It is our home given by nature

Innocent child  
It is the tomorrow that touches our hearts

Technology  
Changing the world all the time

LITTO, Always stick to  
Change future, Unchange Nature







We have 10 years  
experience in PV inverter design  
and manufacturing

Our engineers have served in

1 (STAR  
EMERSON

and other enterprises

NCC US Ti Vintech

We use first class Zettler LEM  
brand components:

Our products meet global standards:

Thailand India Australia Brazil

United Kingdom Sweden

Mexico Netherlands . . . . .

and other European countries and regions.



# QUALIFICATION CERTIFICATION

With the expansion of business, Litto's vision is also more open.

We are trying to understand more about the needs of global users,  
And strive to make our products and services,  
Consistent with the rules of the country and region where it is located.



**SAA APPROVALS**

Product: SAA160161

Manufacturer: SanMi in Suzhou, China

Technical specifications: 100-500Vdc 1 民间15/1且, JEC6210' 约国1.0, IEC 62109-2 Ed 1.0

Manufacturer info: S.V. 160161orR00, 28 路 \*\* Y2016, 28 路 \*\* rv 2021

Seal: SAA Approved CERTIFIED

**amm**

Test Verification of Conformity

Product: SAA160161

Manufacturer: SanMi in Suzhou, China

Test results: Compliant with relevant standards.

Test Verification of Conformity

Product: SAA160161

Manufacturer: SanMi in Suzhou, China

Test results: Compliant with relevant standards.

**Intertek**

Test Verification of Conformity

Product: SAA160161

Manufacturer: SanMi in Suzhou, China

Test results: Compliant with relevant standards.

Test Verification of Conformity

Product: SAA160161

Manufacturer: SanMi in Suzhou, China

Test results: Compliant with relevant standards.

# TECHNICAL Specifications

Certificated ✓  
 working on certificate ✓  
 No certification ✓

| Model        | CQC | CE | B | VDE012:JI              | 甘                      | TSE | ◆ METRO ◆              | 叫 |
|--------------|-----|----|---|------------------------|------------------------|-----|------------------------|---|
| LS 1000H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS 1500H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS 2000H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS3000H      | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS 4000H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS 5000H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS3000HD     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS 4000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LS 5000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LF 1500H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LF 2000H     | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LF3000H      | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LF 4000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LF 5000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 5000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 6000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 8000HD    | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 10000HD   | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 15000HD   | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 18000HD   | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 20000HD   | ✓   | ✓  | ✓ | ✓                      | ✓                      | ✓   | ✓                      | ✓ |
| LT 25000HD   | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | ✓                      | ✓ |
| LT 28000HD   | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | ✓                      | ✓ |
| LT30000HD    | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | ✓                      | ✓ |
| LT33000HD    | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | ✓                      | ✓ |
| LT 40000HD   | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | working on certificate | ✓ |
| LT 40000HD-M | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | working on certificate | ✓ |
| LT 50000HD   | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | working on certificate | ✓ |
| LT 60000HD   | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | working on certificate | ✓ |
| LT 70000HD   | ✓   | ✓  | ✓ | working on certificate | working on certificate | ✓   | working on certificate | ✓ |



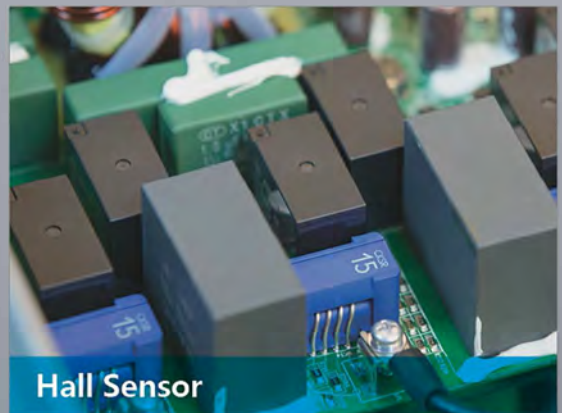
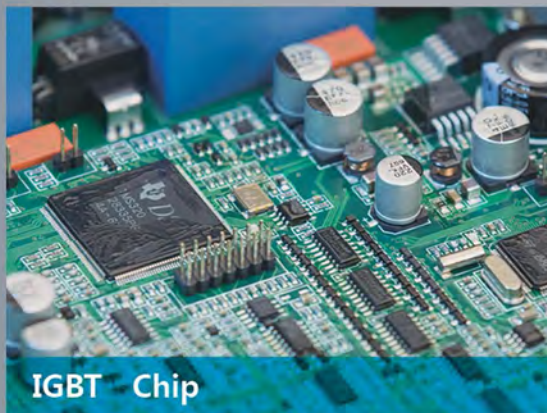




# QUALITY COMES FROM DETAILS

Quality comes from details  
Every quality related detail will be doubly focused

We choose first-class components to form high quality foundation  
Coupled with exquisite workmanship and perfect quality control  
Ensure the stability and efficiency of the products









# CONTENTS

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# LITTO GLOBAL MONITOR PLATFORM

It is the WEB front end product of the light house management system. It presents data of different dimensions of power plants and equipment from different perspectives of users, including data tables, charts, maps etc, while providing device control functions.

Smart WIFI system allows to monitor PV system performance in realtime and remote service on phone or PC. Low maintenance project.



Litto 朗拓

Plants Overview

vplant Proprietor

English

Plants Overview Energy Overview

Plants Location Map(Google)

Today energy 40.00MWh  
Monthly energy 203.07MWh  
Year energy 554.49MWh  
Total energy

Gas 621,032.28  
CO2 saved 121.93t  
CO2 reduced 17.19t  
SO2 reduced 12.75t



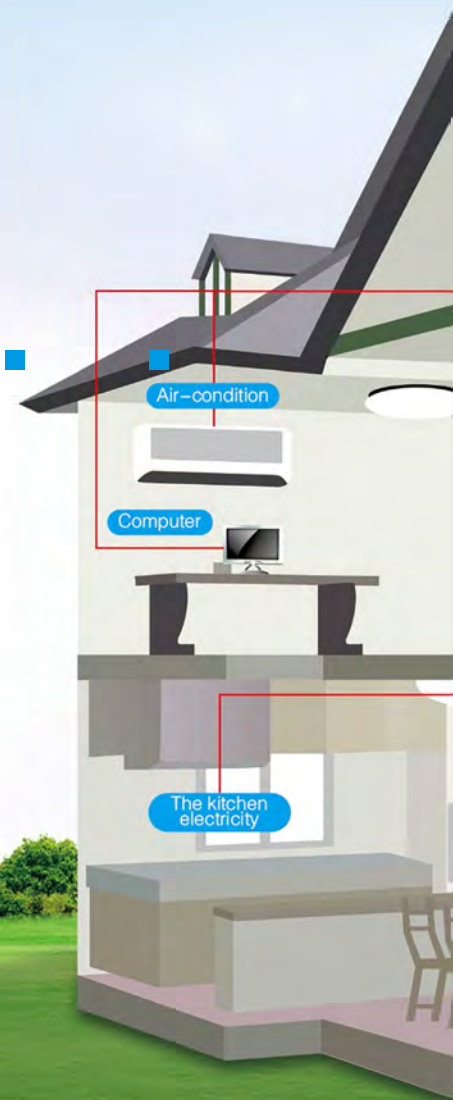


## SO00W ON-GRID SYSTEM APPLICATION EXAMPLE

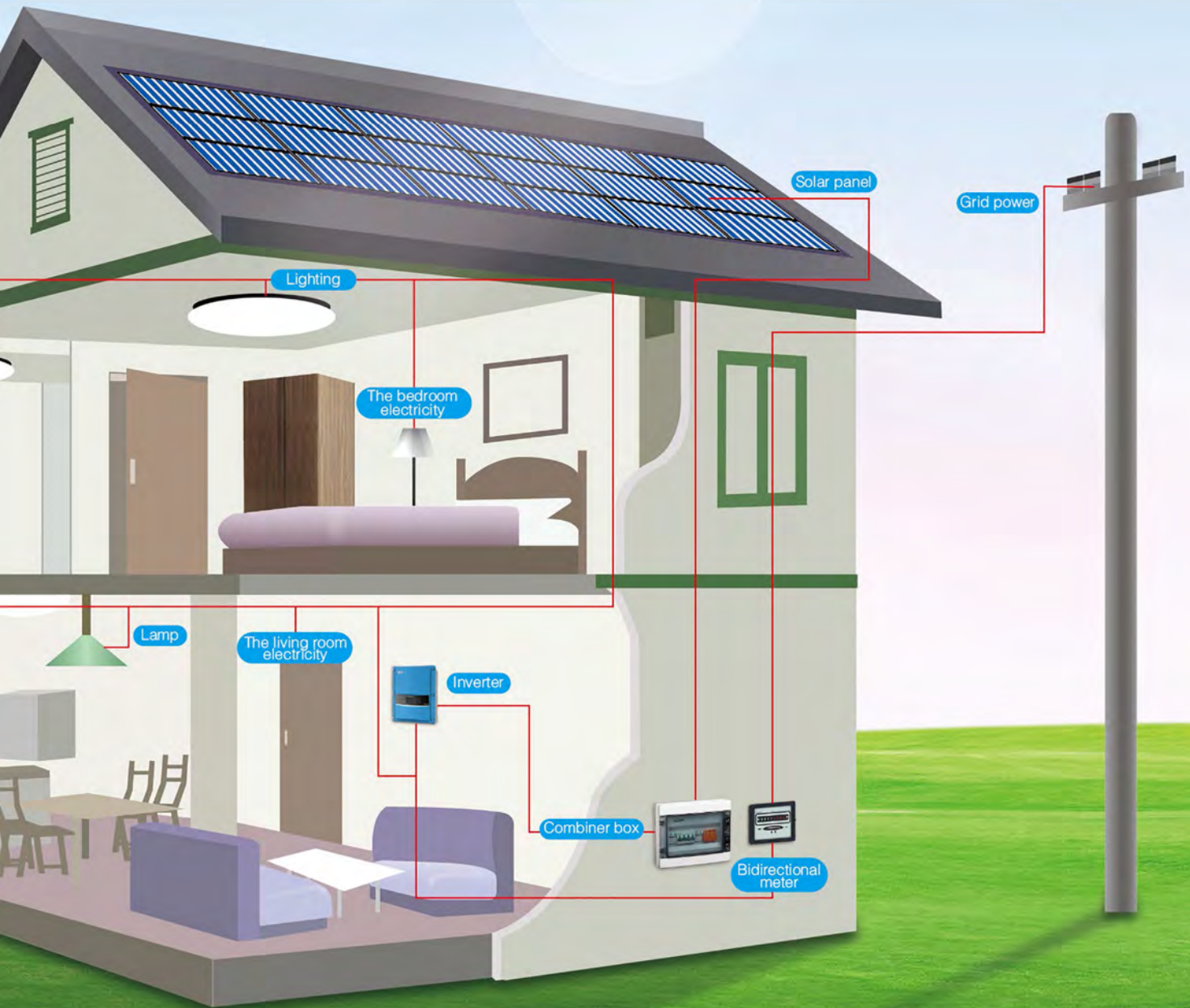
ON-Grid solar power generation system is a DC power generated from solar modules direct access to the public power grid after grid inverter into alternating current, which meet the requirements of electric supply. The grid power generation systems have a centralized type large grid power station, Which are national power station generally. The main feature is the power transported directly to the grid. The grid united distributing the power, then supply to the user. But there hasn't been as much development for this power station due to large investment, long construction period, large occupancy area. However, the decentralized small-scale and power generation systems, especially BIPV power generation systems, due to the small investment, the construction of fast, small occupancy area, more policy support etc. It is becoming the mainstream of the grid.

We use SKW on-grid power generation system, which components listed as below:

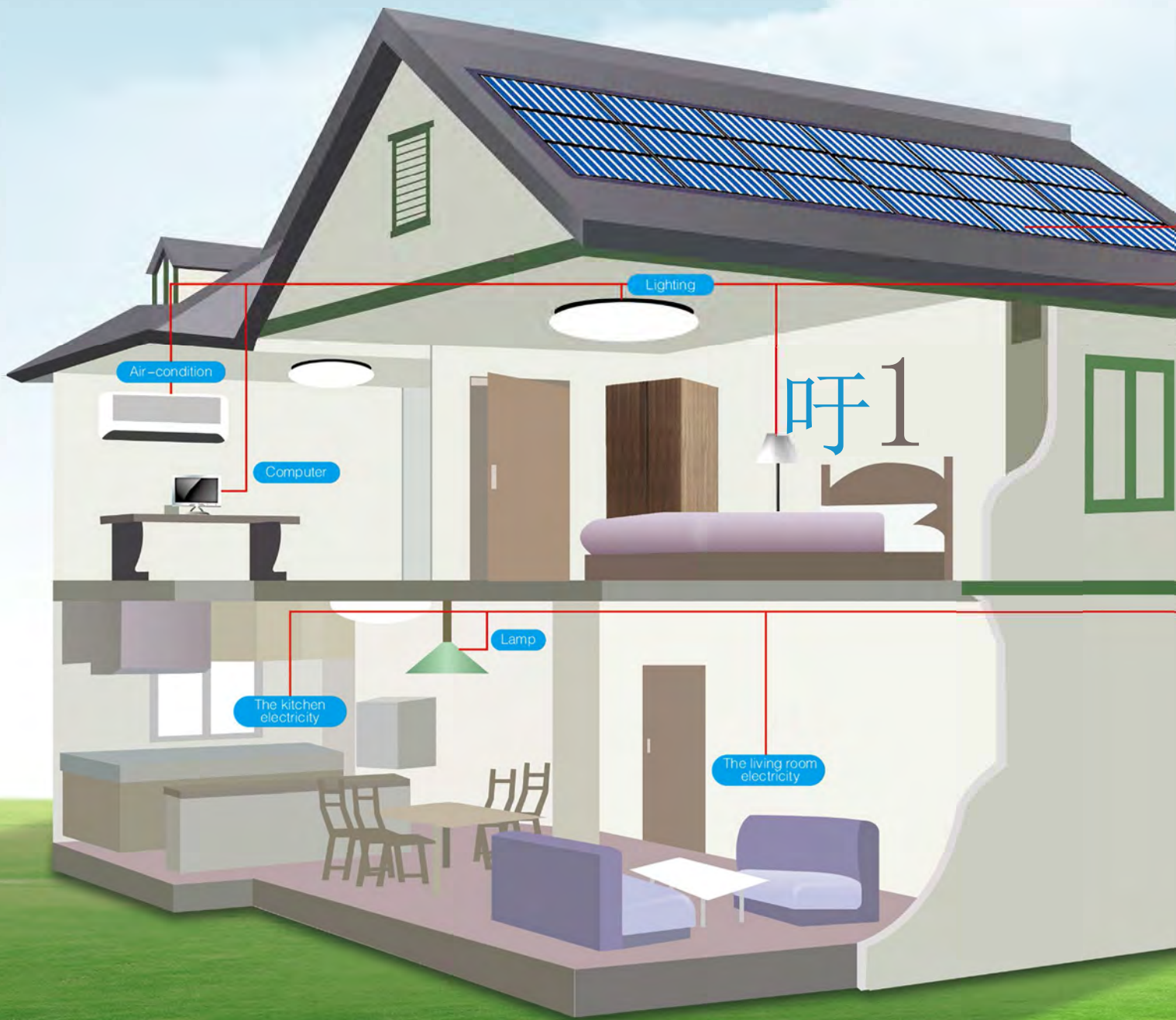
|        |         |
|--------|---------|
| 太阳能电池板 | 1 PCS   |
| 逆变器    | 1 PCS   |
| 配电箱    | 20 PCS  |
| 电表     | 2 PCS   |
| 并网柜    | 1 PCS   |
| 太阳能支架  | 1 SET   |
| MC4连接器 | 12 SETS |
| 其他配件   |         |













## 5000W OFF-GRID SYSTEM APPLICATION EXAMPLE

Off-Grid PV power generation system is suitable for the area without grid connected power or power grid instability. Off-grid PV System usually consists of solar modules, controllers, inverters, batteries and bracket system. They generate DC power through the day or stored in the battery group directly, for providing electricity at night or in cloudy or rainy days.

We use 5KW off-grid power generation system, which components listed as below:

| Material  | QTY                          |
|---|------------------------------|
| 5KW Off-grid inverter   | 1 PCS                        |
| 250W solar panel  | 20 PCS                       |
| DC isolator switch 16A (optional)                                   | 1 PCS                        |
| 63A 250V miniature circuit breaker (with wall-mounted junction box) | 1 PCS                        |
| Solar panel bracket   | 1 SET                        |
| MC4 connector   | 4 SETS                       |
| Photovoltaic special cable  | RED AND BLACK 30 METERS EACH |
| 1mm <sup>2</sup> PV cable   | 12 PCS                       |





# ES 3000H ES 4000HD / ES 5000HD

## Efficient power generation

- Support 1.1 m overload;
- Charge and discharge power 2.5KW
- Backup power 2.3KVA
- Battery charge and discharge efficiency 94.5%

## Intelligent management

- Support USB port communication and U disk upgrade
- Support RS485, WIFI, GPRS communication
- Support remote management, maintenance, monitoring, upgrade, parameter setting.

## Safe and reliable

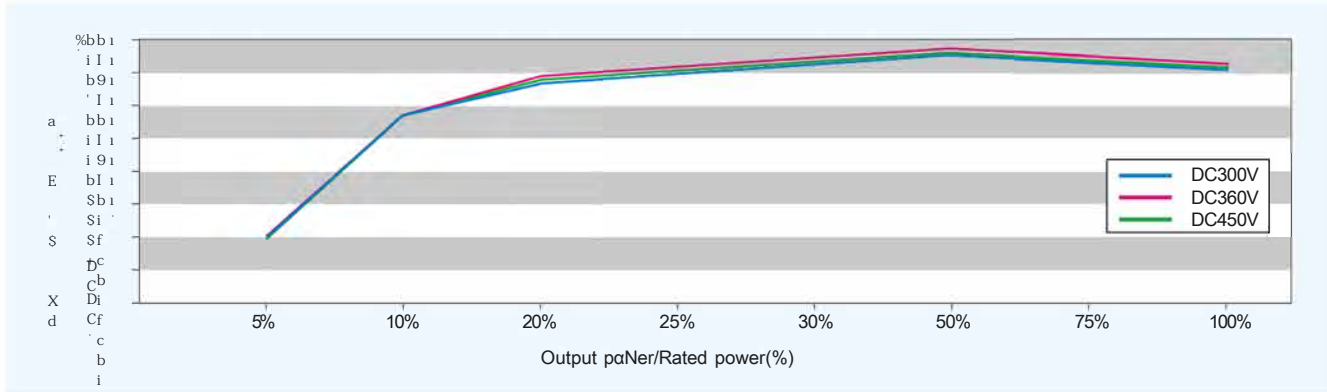
- The circuit of battery charging and discharging of high-frequency is isolated.
- Grid to off-grid transform time less than 8ms.

## Grid friendly

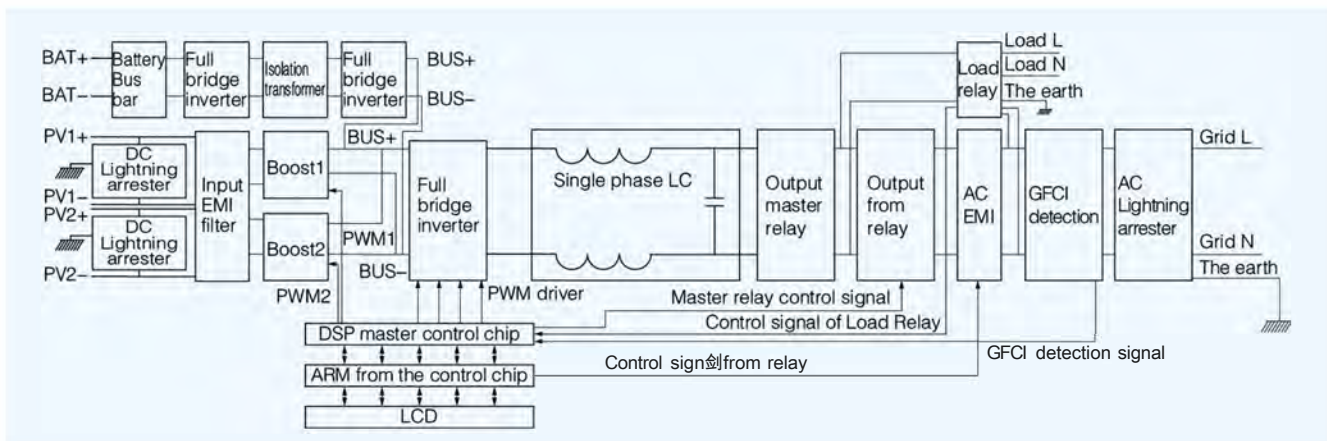
- Supports state grid dispatch instructions
- Active power and reactive power adjustable
- Built-in anti-current mode



## Efficiency curve



## Circuit diagram





## Technical specifications

| TECHNICAL SPECIFICATIONS  | 3600W  | 4800W                      | 6000W                      |
|---|--|----------------------------|----------------------------|
| <b>INPUT DATA(DC)</b>   |  |                            |                            |
| Max.DC power  | 3600W  | 4800W                      | 6000W                      |
| Max.DC voltage  | 600V   | 600V                       | 600V                       |
| Start voltage   | 70V  | 70V                        | 70V                        |
| DC voltage range  | 70-600V  | 70-600V                    | 70-600V                    |
| MPPT work voltage range (nominal voltage)   | 70-550V / 360V   | 70-550V / 360V             | 70-550V / 360V             |
| Max.input current   | 13.0A  | 24.0A                      | 26.0A                      |
| Max.input current per string  | 13.0A  | 12.0A / 12.0A              | 13.0A / 13.0A              |
| MPPT track number   | 1 / 2  | 2 / 1                      | 2 / 1                      |
| <b>OUTPUT</b>   |  |                            |                            |
| Rated AC output power   | 3300W  | 4000W                      | 5000W                      |
| Max.output apparent power   | 3300VA   | 4400VA                     | 5500VA                     |
| Max.output current  | 15.0A  | 20.0A                      | 25.0A                      |
| Rated grid voltage: Grid voltage range per phase  | 220V / 230V / 240V 180-280Vac  |                            |                            |
| Rated grid frequency; Grid frequency range  | 50Hz, 60Hz $\pm$ 5Hz   |                            |                            |
| Power factor (cos $\phi$ )  | 0.8 $\leq$ 1 $\leq$ 0.8 c  |                            |                            |
| Current harmonics (THDI)  | < 3% (At nominal output power)   |                            |                            |
| AC grid connection type   | Single Phase   |                            |                            |
| <b>BATTERY</b>  |  |                            |                            |
| Type  | Lithium battery / lead acid battery                                      |                            |                            |
| Rated battery voltage   | 48V  | 48V                        | 48V                        |
| Max charge voltage  | $\approx$ 60V(Adjustable )   | $\approx$ 60V(Adjustable ) | $\approx$ 60V(Adjustable ) |
| Max charge / discharge current  | 50A / 50A  | 50A / 50A                  | 50A / 50A                  |
| Battery capacity  | 50-2000Ah  | 50-2000Ah                  | 50-2000Ah                  |
| Charging curve  | Three sections   | Three sections             | Three sections             |
| <b>PROTECTION DEVICES</b>   |  |                            |                            |
| Max.output apparent power   | 2300VA   | 2300VA                     | 2300VA                     |
| Peak output apparent power  | 3500VA, 10\$   | 3500VA, 10\$               | 3500VA, 10\$               |
| Switch time   | 8ms  | 8ms                        | 8ms                        |
| Rated output voltage (frequency THD)  | 230V ( $\pm$ 2%), 50Hz / 60Hz $\pm$ 0.2%, THD < 3% ( linear Load )       |                            |                            |
| Max.output current  | 10A  | 10A                        | 10A                        |
| <b>EFFICIENCY</b>   |  |                            |                            |
| Max.Efficiency (PV)   | 97.6%  | 97.6%                      | 97.6%                      |
| Max.Efficiency (Battery )   | 94.5%  | 94.5%                      | 94.5%                      |
| Euro- Efficiency  | 97.1%  | 97.1%                      | 97.1%                      |
| MPPT Efficiency   | 99.9%  | 99.9%                      | 99.9%                      |
| <b>PROTECTION DEVICES</b>   |  |                            |                            |
| DC reverse polarity protection  | Integrated   | Integrated                 | Integrated                 |
| DC switch for each MPPT   | Integrated (opt)   | Integrated (opt)           | Integrated (opt)           |
| Output over current protection  | Integrated   | Integrated                 | Integrated                 |
| SPD protection  | Integrated   | Integrated                 | Integrated                 |
| Insulation Resistance detection   | Integrated   | Integrated                 | Integrated                 |
| Leakage current protection  | Integrated   | Integrated                 | Integrated                 |
| <b>GENERAL DATA</b>   |  |                            |                            |
| Dimensions (W x H x D) (mm)   | 360 x 450 x 175mm  | 360 x 450 x 175mm          | 360 x 450 x 175mm          |
| Weight  | 17.0KG   | 18.0KG                     | 18.0KG                     |
| Operating temperature range   | -25°C ~ + 60°C   |                            |                            |
| Install way   | Wall hanging fixed   |                            |                            |
| Noise emission  | 25db(A)  |                            |                            |
| Altitude  | 3000m  |                            |                            |
| Self-consumption at night   | < 8W   |                            |                            |
| Topology  | PV with battery high-frequency isolation but not isolated from the grid. |                            |                            |
| Cooling concept   | Natural  |                            |                            |
| Overall protection level  | IP65   |                            |                            |
| Relative humidity (No condensation)   | 0-98%  |                            |                            |
| <b>FEATURES</b>   |  |                            |                            |
| DC connection   | H4 / MC4   | H4 / MC4                   | H4 / MC4                   |
| AC connection   | C16 / 3  | C16 / 3                    | C16 / 3                    |
| Display   | LCD / LED  | LCD / LED                  | LCD / LED                  |
| Communication: USS / WIFI / RS485 / GPRS  | yes / opt / yes / opt  | yes / opt / yes / opt      | yes / opt / yes / opt      |
| Warranty: 5 years / 10 years  | yes / opt  | yes / opt                  | yes / opt                  |
| <b>CERTIFICATES AND APPROVALS</b>   |  |                            |                            |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS/NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |  |                            |                            |



1. iot  
INTERNET OF THINGS



IEC CB CE C10/11 MEA PEA



Intertek



# SUBLIME 系列

Double MPPT Tracker, MPPT Tracking accuracy more than 99.8%

Max.Efficiency 97.8%, European efficiency 97.2%

Transformerless design and high power density, offer lighter and more convenient installation

Internal DC Switch for added safety protection

Power factor continuously adjustable

Flexible communication connection, support USB, WiFi, Ethernet

Support online update from USB or ethernet

5 years standard warranty

Comply with European, Asia-Pacific safety regulations





# LS 3000HD-S LS 4000HD-S / LS 5000HD-S LS 4000H-S / LS 5000H-S

## Efficient power generation

- SiC-MOSFET+SiC-SBD, 64KHZ Ultra-high operating frequency.
- Wide DC voltage input range
- Support 1.1m overload

## Intelligent management

- Support USB port communication and U disk upgrade
- Support RS485, WIFI, GPRS communication
- Support remote monitoring, parameter setting, troubleshooting and software upgrade.

## Safe and reliable

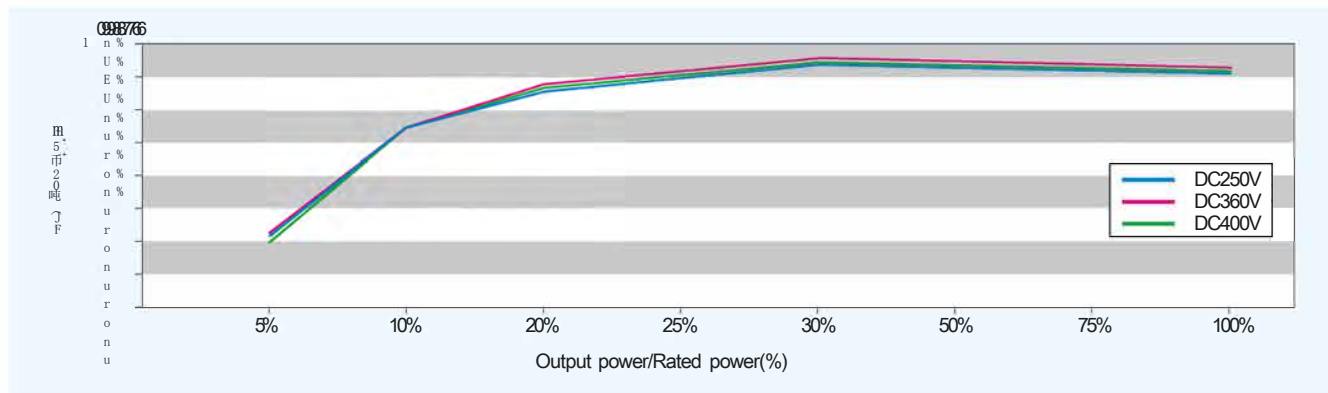
- Industrialized appearance design, Smaller & lighter
- Adopt the first-class brand components
- Easy to plug, easy to installation

## Grid friendly

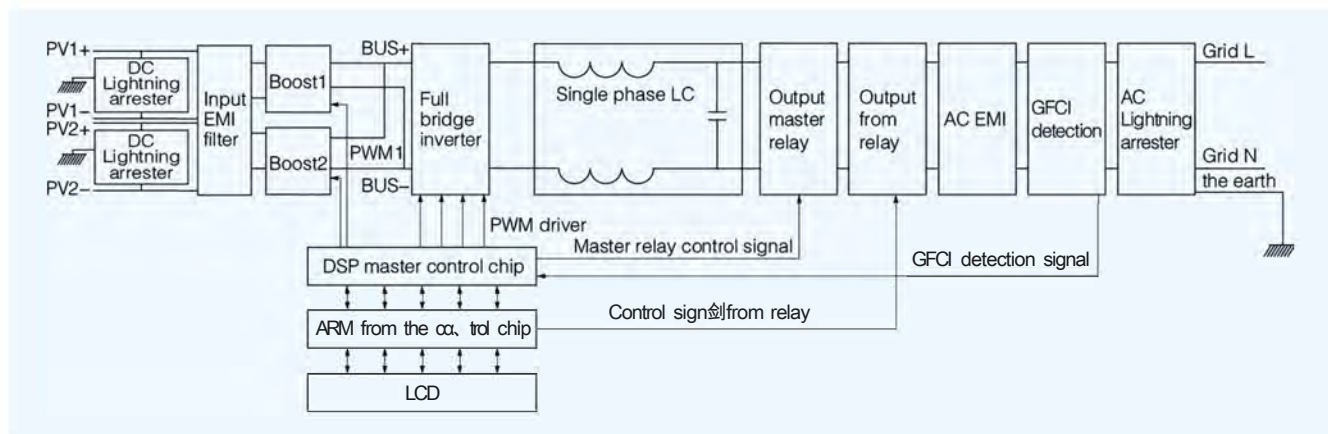
- Built-in anti-current mode
- Supports state grid dispatch instructions
- Active power and reactive power adjustable



## Efficiency curve



## Circuit diagram





## Technical specifications

|  | 3000W                                    | 4000W            | 5000W            | 4800W            | 6000W            |
|--|--|------------------|------------------|------------------|------------------|
| <b>INPUT DATA(DC)</b>  |  |                  |                  |                  |                  |
| Max.recommended PV power   | 3600W                                    | 4800W            | 6000W            | 4800W            | 6000W            |
| Max.PV power of per MPPT   | 3xXJW                                    | 4000W            | 5000W            | 4800W            | 6000W            |
| Max.DC voltage   | 600V                                     | 600V             | 600V             | 600V             | 600V             |
| Start voltage  | 70V                                      | 70V              | 70V              | 70V              | 70V              |
| PV voltage range   | 70-600V                                  | 70-600V          | 70-600V          | 70-600V          | 70-600V          |
| MPPT work voltage range I nominal voltage  | 70-550V / 360V                           | 70-550V I360V    | 70-550V I360V    | 70-550V I360V    | 70-550V / 360V   |
| Full load DC voltage range   | 150-SOOV                                 | 200-SOOV         | 250-SOOV         | 200-SOOV         | 250-SOOV         |
| Max.input current  | 24.0A                                    | 24.0A            | 26.0A            | 24.0A            | 24.0A            |
| Max.input current per string of tracker A I tracker B  | 13.0A/ 13.0A                             | 13.0A/13.0A      | 13.0A / 13.0A    | 24.0A            | 24.0A            |
| Number of independent MPPT trackers I strings per MPPT tracker   | 2 / 1                                    | 2 / 1            | 2 / 1            | 1 / 2            | 1 / 2            |
| <b>OUTPUT(AC)</b>  |  |                  |                  |                  |                  |
| Rated AC output power  | 3300W                                    | 4000W            | 5000W            | 4000W            | 5000W            |
| Max.AC output power  | 3300W                                    | 4400W            | 5500W            | 4400W            | 5500W            |
| Max. AC apparent power   | 3300VA                                   | 4400VA           | 5500VA           | 4400VA           | 5500VA           |
| Max.output current   | 15.0A                                    | 20.0A            | 25.0A            | 20.0A            | 25.0A            |
| AC nominal voltage ; range   | 220V / 230V / 240V 180-280Vac            |                  |                  |                  |                  |
| AC grid frequency; range   | 50Hz, 60Hz ; ±5Hz                        |                  |                  |                  |                  |
| Power factor (cosφ)  | 0.80 capacitive ...0.80 inductive        |                  |                  |                  |                  |
| Current harmonics(THDI)  | < 3% (At nominal output power)           |                  |                  |                  |                  |
| AC grid connection type  | Single phase                             |                  |                  |                  |                  |
| <b>EFFICIENCY</b>  |  |                  |                  |                  |                  |
| Max.Efficiency   | 98.0%                                    | 98.0%            | 98.0%            | 98.0%            | 98.0%            |
| Euro-eta   | 97.4%                                    | 97.4%            | 97.4%            | 97.4%            | 97.4%            |
| MPPT Efficiency  | 99.9%                                    | 99.9%            | 99.9%            | 99.9%            | 99.9%            |
| <b>FEATURES/DEVICES</b>  |  |                  |                  |                  |                  |
| DC reverse polarity protection   | Integrated                               | Integrated       | Integrated       | Integrated       | Integrated       |
| DC switch for each MPPT  | Integrated (opt)                         | Integrated (opt) | Integrated (opt) | Integrated (opt) | Integrated (opt) |
| Output over current protection   | Integrated                               | Integrated       | Integrated       | Integrated       | Integrated       |
| Output overvoltage protection-varistor   | Integrated                               | Integrated       | Integrated       | Integrated       | Integrated       |
| Ground fault monitoring  | Integrated                               | Integrated       | Integrated       | Integrated       | Integrated       |
| Grid monitoring  | Integrated                               | Integrated       | Integrated       | Integrated       | Integrated       |
| Integrated all-pole sensitive Leakage current monitoring unit  | Integrated                               | Integrated       | Integrated       | Integrated       | Integrated       |
| <b>GENERAL</b>   |  |                  |                  |                  |                  |
| Dimensions (W x H x D)(mm)   | 355×365×160                              | 355×365×160      | 355×365×160      | 355×365×160      | 355×365×160      |
| Weight   | 10KG                                     | 11KG             | 11KG             | 11KG             | 11KG             |
| Operating temperature range  | -25°C ~+60°C                             | -25°C ~+60°C     | -25°C → 60°C     | -25°C ~+60°C     | -25°C ~+60°C     |
| Relative humidity  | 0%-98% No condensation                   |                  |                  |                  |                  |
| Noise emission   | 25dB (A)                                 |                  |                  |                  |                  |
| Altitude   | 3xXJm without derating                   |                  |                  |                  |                  |
| Self-consumption at night  | 0W                                       |                  |                  |                  |                  |
| Topology   | Transformerless                          |                  |                  |                  |                  |
| Cooling concept  | Natural                                  |                  |                  |                  |                  |
| Overall protection level   | IP65                                     |                  |                  |                  |                  |
| <b>CONNECTORS</b>  |  |                  |                  |                  |                  |
| DC connection  | H4/MC4                                   | H4/MC4           | H4/MC4           | H4/MC4           | H4/MC4           |
| AC connection  | C16/3                                    | C16/3            | C16/3            | C16/3            | C16/3            |
| Display  | LCD, LED                                 | LCD, LED         | LCD, LED         | LCD, LED         | LCD, LED         |
| Communication interface  | USB IWiFi (opt)/ RS485 (opt) IGPRS (opt) |                  |                  |                  |                  |
| Warranty: 5 years / 10years  | yes Iopt                                 |                  |                  |                  |                  |
| <b>CERTIFICATES AND APPROVALS</b>  |  |                  |                  |                  |                  |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS I NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683, INMETRO |  |                  |                  |                  |                  |



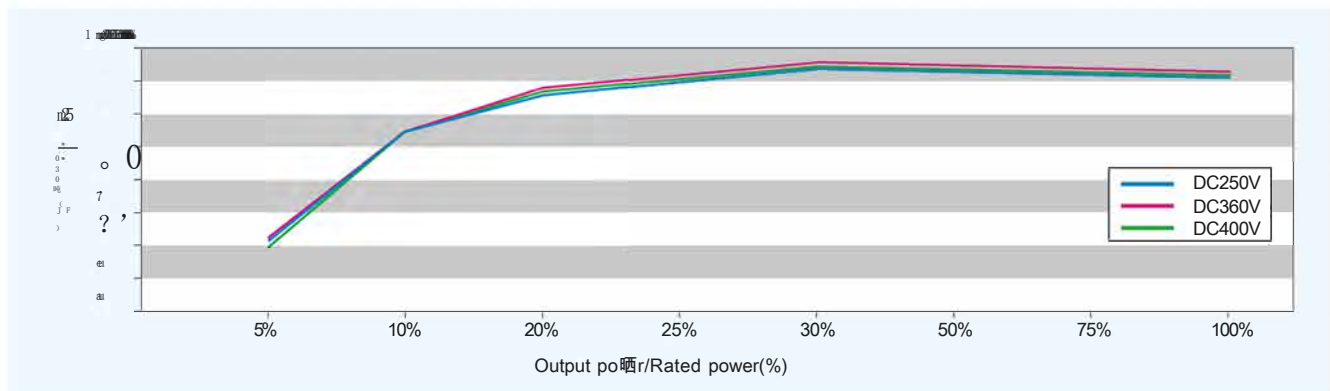
# LS 1000H LS 1500H / LS 2000H

## Leading -edge technology

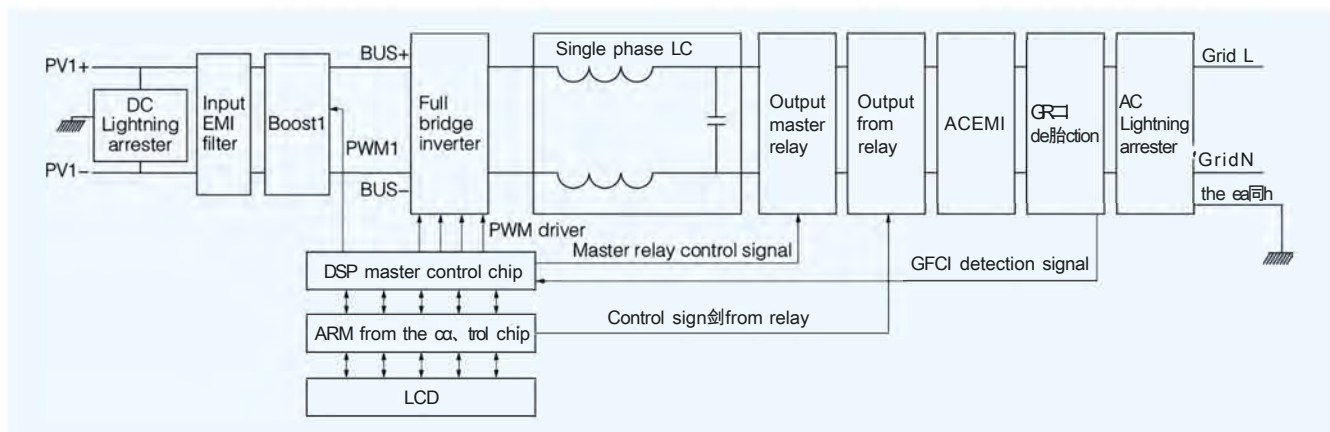
- Max. Efficiency 97.2%
- Internal DC Switch for added safety protection
- Transformerless design and easy installation
- Compact design
- Power Factor continuously adjustable
- Flexible communication connection, support USB, WiFi, Ethernet
- Support online update from USB or ethernet
- 5 years standard warranty



## Efficiency curve



## Circuit diagram



## Technical specifications

| DATASHEET  | LS 1000H                       | LS 1500H                       | LS 2000H                       |
|--|--------------------------------|--------------------------------|--------------------------------|
| <b>INPUT DATA (DC)</b>   |                                |                                |                                |
| Max.DC power   | 1200W                          | 1800W                          | 2400W                          |
| Max.PV power of per MPPT   | 1200W                          | 1800W                          | 2400W                          |
| Max.DC voltage   | 450V                           | 450V                           | 450V                           |
| Start voltage  | 70V                            | 70V                            | 70V                            |
| DC voltage range   | 70-450V                        | 70-450V                        | 70-450V                        |
| MPPT work voltage range [nominal voltage]  | 70-400V / 180V                 | 70-400V / 250V                 | 70-400V / 250V                 |
| Full load DC voltage range   | 110-400V                       | 150-400V                       | 200-400V                       |
| Max.input current  | 11.0A                          | 11.0A                          | 11.0A                          |
| Max.input current per string   | 11.0A                          | 11.0A                          | 11.0A                          |
| MPPT tracking number   | 1 / 1                          | 1 / 1                          | 1 / 1                          |
| <b>OUTPUT (AC)</b>   |                                |                                |                                |
| Rated AC output power  | 1000W                          | 1500W                          | 2000W                          |
| Max.AC output power  | 1100W                          | 1650W                          | 2200W                          |
| Max.output apparent power  | 1100VA                         | 1650VA                         | 2200VA                         |
| Max.output current   | 5.0A                           | 7.5A                           | 10.0A                          |
| Rated grid voltage; Grid voltage range per phase   | 220V / 230V / 240V 180-280VAC  | 220V / 230V / 240V 180-280VAC  | 220V / 230V / 240V 180-280VAC  |
| Rated power grid frequency; Grid frequency range   | 50Hz/60Hz: ±5Hz                | 50Hz/60Hz: ±5Hz                | 50Hz/60Hz: ±5Hz                |
| Power factor (cosφ)  | 0.8 i...1 ...0.8 c             | 0.8 i...1...0.ac               | 0.8 i...1 ...0.8 c             |
| Current harmonics (THDI)   | < 3% (At nominal output power) | < 3% (At nominal output power) | < 3% (At nominal output power) |
| AC grid connection type  | Single Phase                   | Single Phase                   | Single Phase                   |
| <b>EFFICIENCY</b>  |                                |                                |                                |
| Max.Efficiency   | 97.0%                          | 97.2%                          | 97.2%                          |
| Euro- Efficiency   | 96.5%                          | 96.7%                          | 96.7%                          |
| MPPT Efficiency  | 99.9%                          | 99.9%                          | 99.9%                          |
| <b>PROTECTION DEVICES</b>  |                                |                                |                                |
| DC reverse polarity protection   | Integrated                     | Integrated                     | Integrated                     |
| DC switch for each MPPT  | Integrated (opt)               | Integrated (opt)               | Integrated (opt)               |
| Output over current protection   | Integrated                     | Integrated                     | Integrated                     |
| Output over voltage protection   | Integrated                     | Integrated                     | Integrated                     |
| Ground fault monitoring  | Integrated                     | Integrated                     | Integrated                     |
| Grid monitoring  | Integrated                     | Integrated                     | Integrated                     |
| Leakage current protection   | Integrated                     | Integrated                     | Integrated                     |
| Island protection  | Rated                          | Rated                          | Integrated                     |
| <b>GENERAL</b>   |                                |                                |                                |
| Dimensions (W x H x D)(mm)   | 355×295×170mm                  | 355×295×170mm                  | 355×295×170mm                  |
| Weight   | 9.7KG                          | 10.5KG                         | 10.5KG                         |
| Install way  | Wall hanging fixed             | Wall hanging fixed             | Wall hanging fixed             |
| Operating temperature range  | -25°C ~ +60°C                  | -25°C - +60°C                  | -25°C ~ +60°C                  |
| Noise emission   | 25db(A)                        | 25db(A)                        | 25db(A)                        |
| Altitude   | 3000m                          | 3000m                          | 3000m                          |
| Self-consumption at night  | ≤0.5W                          | ≤0.5W                          | ≤0.5W                          |
| Topology   | H6 / Transformerless           | H6 / Transformerless           | H6 / Transformerless           |
| Cooling concept  | Natural                        | Natural                        | Natural                        |
| Overall protection level   | IP65                           | IP65                           | IP65                           |
| Relative humidity (No condensation)  | 0-98%                          | 0~98%                          | 0~98%                          |
| <b>FEATURES</b>  |                                |                                |                                |
| DC connection  | H4 / MC4                       | H4 / MC4                       | H4 / MC4                       |
| AC connection  | C16 / 3                        | C16 / 3                        | C16 / 3                        |
| Display  | LCD/LED                        | LCD/LED                        | LCD/LED                        |
| Communication: USB / WiFi / RS485 / GPRS   | yes / opt / yes / opt          | yes / opt / yes / opt          | yes / opt / yes / opt          |
| Warranty: 5 years / 10 years   | yes / opt                      | yes / opt                      | yes / opt                      |
| <b>CERTIFICATES AND APPROVALS</b>  |                                |                                |                                |
| CE, VDE0126-1, IEC 62109, G83-2, G59-3, AS4777, AS/NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |                                |                                |                                |



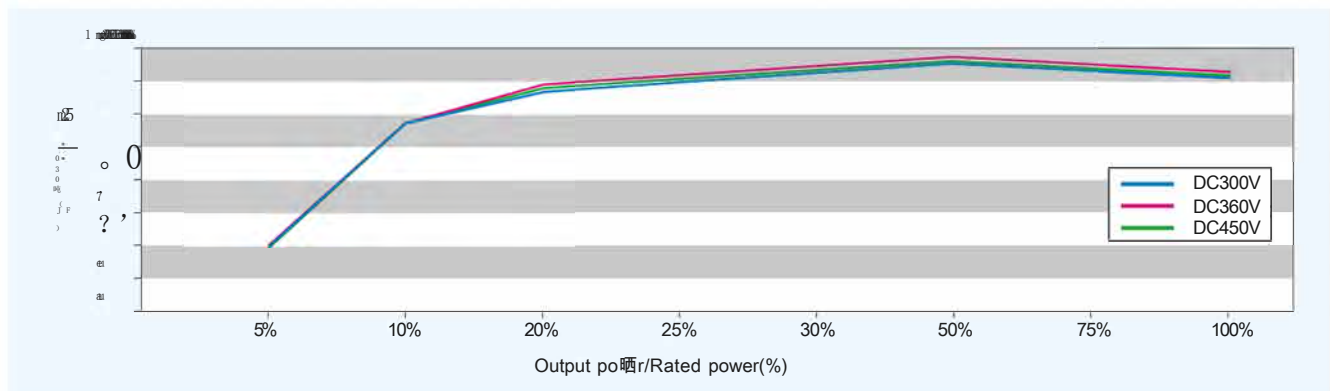
# LS 3000H LS 4000H / LS 5000H

## Leading -edge technology

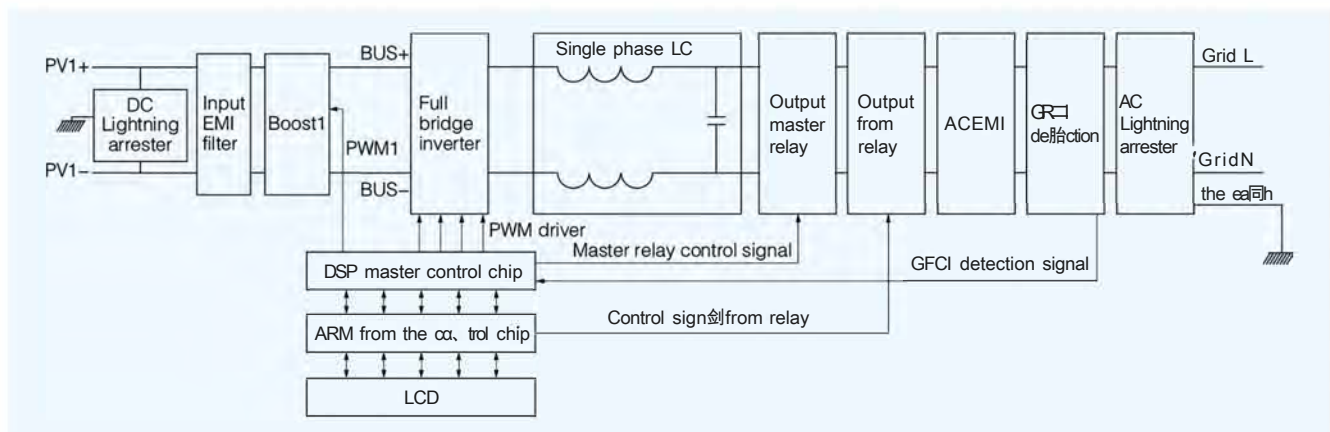
- Max. Efficiency 97.2%
- Internal DC Switch for added safety protection
- Transformerless design and easy installation
- Compact design
- Power Factor continuously adjustable
- Flexible communication connection, support USB, WiFi, Ethernet
- Support online update from USB or ethernet
- 5 years standard warranty



## Efficiency curve



## Circuit diagram



## Technical specifications

| DATASHEET   | LS 3000H                       | LS 4000H                       | LS 5000H                       |
|---|--------------------------------|--------------------------------|--------------------------------|
| <b>INPUT DATA (DC)</b>  |                                |                                |                                |
| Max.DC power  | 3600W                          | 4800W                          | 6000W                          |
| Max.PV power of per MPPT  | 3600W                          | 4800W                          | 6000W                          |
| Max.DC voltage  | 550V                           | 600V                           | 600V                           |
| Start voltage   | 100V                           | 100V                           | 100V                           |
| DC voltage range  | 100-SSOV                       | 100-600V                       | 100-600V                       |
| MPPT work voltage range Inominal voltage  | 100-SOOV / 360V                | 100-SSOV / 360V                | 100-SSOV / 360V                |
| Full load DC voltage range  | 250-SOOV                       | 200-SOOV                       | 250-SOOV                       |
| Max.input current   | 13.0A                          | 23.0A                          | 23.0A                          |
| Max.input current per string  | 13.0A                          | 23.0A                          | 23.0A                          |
| MPPT tracking number  | 1 / 1                          | 1 / 2                          | 1 / 2                          |
| <b>OUTPUT DATA (AC)</b>   |                                |                                |                                |
| Rated AC output power   | 3000W                          | 4000W                          | 5000W                          |
| Max.AC output power   | 3300W                          | 4400W                          | 5500W                          |
| Max.output apparent power   | 3300VA                         | 4400VA                         | 5500VA                         |
| Max.output current  | 15.0A                          | 20.0A                          | 25.0A                          |
| Rated grid voltage; Grid voltage range per phase  | 220V / 230V / 240V 180-280VAC  | 220V / 230V / 240V 180-280VAC  | 220V / 230V / 240V 180-280VAC  |
| Rated power grid frequency; Grid frequency range  | 50Hz / 60Hz : , ±5Hz           | 50Hz/60Hz : , ±5Hz             | 50Hz / 60Hz : , ±5Hz           |
| Power factor (cosφ)   | 0.8 i..1 ...0.8 c              | 0.8 i..1 ...0.8 c              | 0.8 i..1 ...0.8 c              |
| Current harmonics (THDI)  | < 3% (At nominal output power) | < 3% (At nominal output power) | < 3% (At nominal output power) |
| AC grid connection type   | Single Phase                   | Single Phase                   | Single Phase                   |
| <b>EFFICIENCY</b>   |                                |                                |                                |
| Max.Efficiency  | 97.5%                          | 97.5%                          | 97.6%                          |
| Euro- Efficiency  | 97%                            | 97%                            | 97.1%                          |
| MPPT Efficiency   | 99.9%                          | 99.9%                          | 99.9%                          |
| <b>PROTECTION DEVICES</b>   |                                |                                |                                |
| DC reverse polarity protection  | Integrated                     | Integrated                     | Integrated                     |
| DC switch to reach MPPT   | Integrated (opt)               | Integrated (opt)               | Integrated (opt)               |
| Output over current protection  | Integrated                     | Integrated                     | Integrated                     |
| Output over voltage protection  | Integrated                     | Integrated                     | Integrated                     |
| Ground fault monitoring   | Integrated                     | Integrated                     | Integrated                     |
| Grid monitoring   | Integrated                     | Integrated                     | Integrated                     |
| Leakage current protection  | Integrated                     | Integrated                     | Integrated                     |
| Island protection   | Integrated                     | Integrated                     | Integrated                     |
| <b>GENERAL INFORMATION</b>  |                                |                                |                                |
| Dimensions (W x H x D) (mm)   | 340×290×160mm                  | 355×395×170mm                  | 355×395×170mm                  |
| Weight  | 8.7KG                          | 13.5KG                         | 13.5KG                         |
| Install way   | Wall hanging fixed             | Wall hanging fixed             | Wall hanging fixed             |
| Operating temperature range   | -25°C ~ +60°C                  | -25°C - +60°C                  | -25°C ~ +60°C                  |
| Noise emission  | 25db(A)                        | 25db(A)                        | 25db(A)                        |
| Altitude  | 3000m                          | 3000m                          | 3000m                          |
| Self-consumption at night   | ≤ 0.5W                         | ≤ 0.5W                         | ≤ 0.5W                         |
| Topology  | H6 / Transformerless           | H6 / Transformerless           | H6 / Transformerless           |
| Cooling concept   | Natural                        | Natural                        | Natural                        |
| Overall protection level  | IP65                           | IP65                           | IP65                           |
| Relative humidity (No condensation)   | 0 ~ 98%                        | 0-98%                          | 0~98%                          |
| <b>CONNECTORS</b>   |                                |                                |                                |
| DC connection   | H4/MC4                         | H4/ MC4                        | H4/MC4                         |
| AC connection   | C16/3                          | C16/3                          | C16/3                          |
| Display   | LCD/LED                        | LCD/LED                        | LCD/LED                        |
| Communication: USB /WiFi /RS485 / GPRS  | yes /opt /yes /opt             | yes /opt /yes /opt             | yes /opt /yes /opt             |
| Warranty: 5 years / 10years   | yes /opt                       | yes /opt                       | yes /opt                       |
| <b>CERTIFICATIONS</b>   |                                |                                |                                |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS / NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |                                |                                |                                |



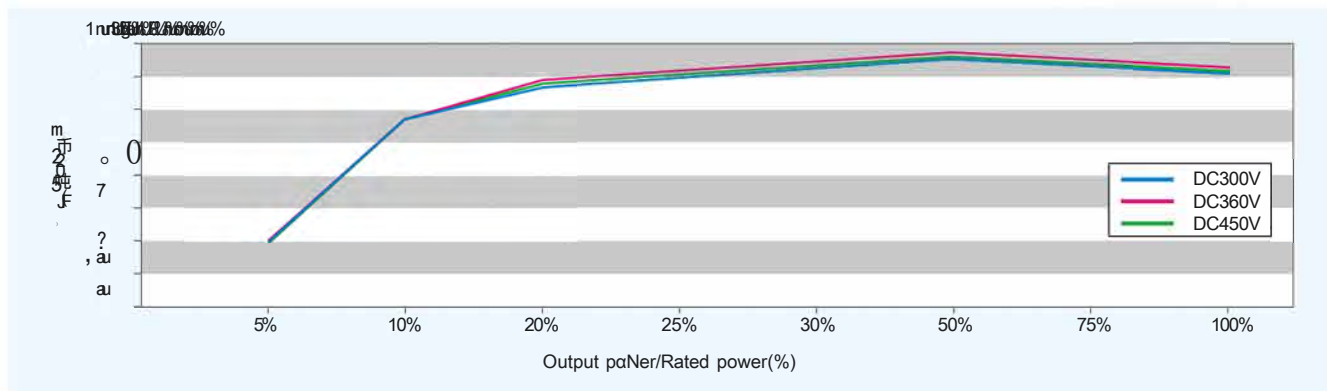
# LS 3000HD LS 4000HD / LS 5000HD

## Leading -edge technology

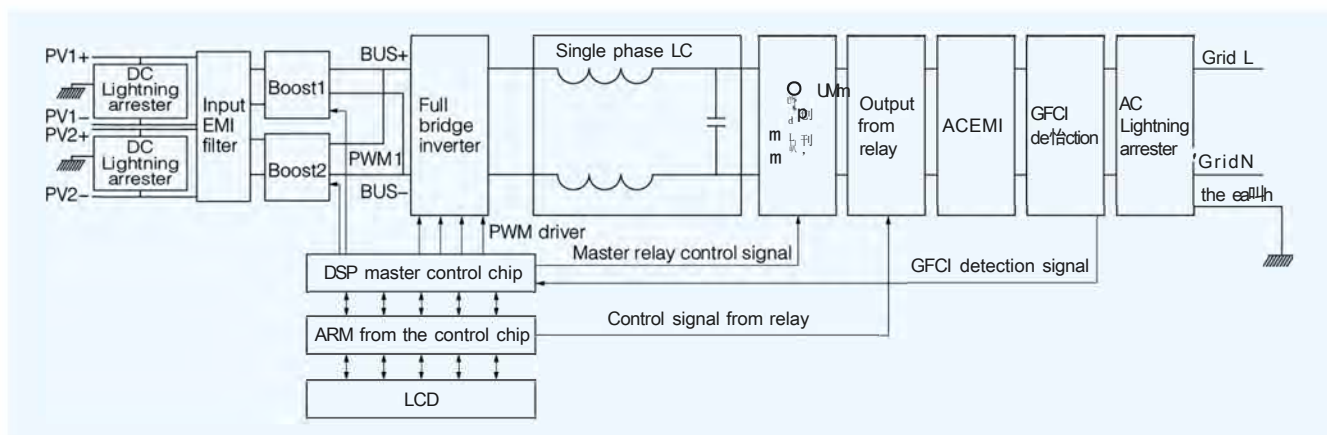
- Double MPPT Track, MPPT Tracking accuracy more than 99.8%
- Max.Efficiency 97.8%, European efficiency 97.2%
- Internal DC Switch for added safety protection
- Power factor continuously adjustable
- Flexible communication connection, support USB, WiFi, Ethernet
- Support online update from USB or Ethernet
- 5 years standard warranty
- Comply with European, Asia-Pacific safety regulations
- Transformerless design and high power density, offer lighter and more convenient installation



## Efficiency curve



## Circuit diagram



## Technical specifications

| DATASHEET   | LS 3000HD                      | LS 4000HD                      | LS 5000HD                      |
|---|--------------------------------|--------------------------------|--------------------------------|
| <b>INPUT DATA (DC)</b>  |                                |                                |                                |
| Max.DC power  | 3600W                          | 4800W                          | 6000W                          |
| Max.PV power of per MPPT  | 3000W                          | 4000W                          | 5000W                          |
| Max.DC voltage  | 600V                           | 600V                           | 600V                           |
| Start voltage   | 100V                           | 100V                           | 100V                           |
| DC voltage range  | 100-600V                       | 100-600V                       | 100-600V                       |
| MPPT work voltage range (nominal voltage)   | 100-550V / 360V                | 100-550V / 360V                | 100-550V / 360V                |
| Full load DC voltage range  | 150-500V                       | 200-500V                       | 250-500V                       |
| Max.input current   | 24.0A                          | 24.0A                          | 26.0A                          |
| Max.input current per string of tracker (A) (max)   | 12.0A/12.0A                    | 12.0A/ 12.0A                   | 13.0A/13.0A                    |
| MPPT tracking number  | 2 / 1                          | 2 / 1                          | 2 / 1                          |
| <b>OUTPUT DATA (AC)</b>   |                                |                                |                                |
| Rated AC output power   | 3000W                          | 4000W                          | 5000W                          |
| Max.output apparent power   | 3300W                          | 4400W                          | 5500W                          |
| Max.AC apparent power   | 3300VA                         | 4400VA                         | 5500VA                         |
| Max.output current  | 15.0A                          | 20.0A                          | 25.0A                          |
| Rated grid voltage; Grid voltage range per phase  | 220V / 230V / 240V 180-280VAC  | 220V / 230V / 240V 180-280VAC  | 220V / 230V / 240V 180-280VAC  |
| Rated power grid frequency; Grid frequency range  | 50Hz/60Hz: ±5Hz                | 50Hz/60Hz: ±5Hz                | 50Hz/60Hz: ±5Hz                |
| Power factor (cosφ)   | 0.8 i.l. ... 0.8 c             | 0.8 i.l. ... 0.8 c             | 0.8 i.l. ... 0.8 c             |
| Current harmonics (THDI)  | < 3% (At nominal output power) | < 3% (At nominal output power) | < 3% (At nominal output power) |
| AC grid connection type   | Single Phase                   | Single Phase                   | Single Phase                   |
| <b>EFFICIENCY</b>   |                                |                                |                                |
| Max.Efficiency  | 97.8%                          | 97.8%                          | 97.8%                          |
| Euro- Efficiency  | 97.2%                          | 97.2%                          | 97.2%                          |
| MPPT Efficiency   | 99.9%                          | 99.9%                          | 99.9%                          |
| <b>PROTECTION DEVICES</b>   |                                |                                |                                |
| DC reverse polarity protection  | Integrated                     | Integrated                     | Integrated                     |
| DC switch to reach MPPT   | Integrated (opt)               | Integrated (opt)               | Integrated (opt)               |
| Output over current protection  | Integrated                     | Integrated                     | Integrated                     |
| Output over voltage protection  | Integrated                     | Integrated                     | Integrated                     |
| Ground fault monitoring   | Integrated                     | Integrated                     | Integrated                     |
| Grid monitoring   | Integrated                     | Integrated                     | Integrated                     |
| Leakage current protection  | Integrated                     | Integrated                     | Integrated                     |
| Island protection   | Integrated                     | Integrated                     | Integrated                     |
| <b>GENERAL INFORMATION</b>  |                                |                                |                                |
| Dimensions (W x H x D) (mm)   | 355×395×170mm                  | 355×395×170mm                  | 355×395×170mm                  |
| Weight  | 12.9KG                         | 13.5KG                         | 13.5KG                         |
| Install way   | Wall hanging fixed             | Wall hanging fixed             | Wall hanging fixed             |
| Operating temperature range   | -25°C ~ +60°C                  | -25°C - +60°C                  | -25°C ~ +60°C                  |
| Noise emission  | 25db(A)                        | 25db(A)                        | 25db(A)                        |
| Altitude  | 3000m                          | 3000m                          | 3000m                          |
| Self-consumption at night   | ≤ 0.5W                         | ≤ 0.5W                         | ≤ 0.5W                         |
| Topology  | H6 / Transformerless           | H6 / Transformerless           | H6 / Transformerless           |
| Cooling concept   | Natural                        | Natural                        | Natural                        |
| Overall protection level  | IP65                           | IP65                           | IP65                           |
| Relative humidity (No condensation)   | 0~98%                          | 0~98%                          | 0~98%                          |
| <b>CONNECTORS</b>   |                                |                                |                                |
| DC connection   | H4/MC4                         | H4/ MC4                        | H4/MC4                         |
| AC connection   | C16/3                          | C16/3                          | C16/3                          |
| Display   | LCD/LED                        | LCD/LED                        | LCD/LED                        |
| Communication: USB / WiFi / RS485 / GPRS  | yes / opt / yes / opt          | yes / opt / yes / opt          | yes / opt / yes / opt          |
| Warranty: 5 years / 10years   | yes / opt                      | yes / opt                      | yes / opt                      |
| <b>CERTIFICATIONS</b>   |                                |                                |                                |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS/NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |                                |                                |                                |



# AMBER SERIES

- Wide input voltage, DC input voltage up to 1000V
- Maximum efficiency of 98.5%
- Standard configuration USB IWIFI, monitoring more flexible, more convenient
- T three level design, more efficient, more power generation
  - Internal DC Switch
- Compact design, no fan, low noise technique
- Fanless design, easy maintenance
  - IP65 compatible
- Small size, light weight, easy installation
- Film capacitor design, 25 years of design service life

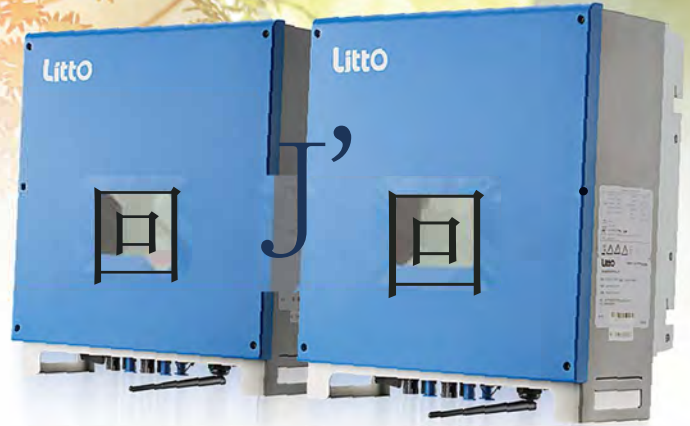








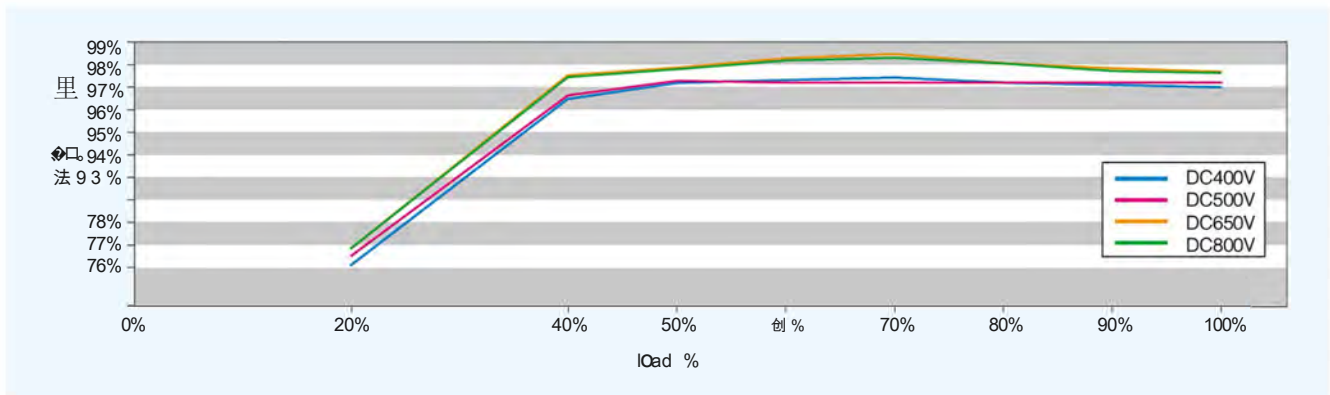
# LT 5000HD / LT 6000HD LT 8000HD / LT 10000HD



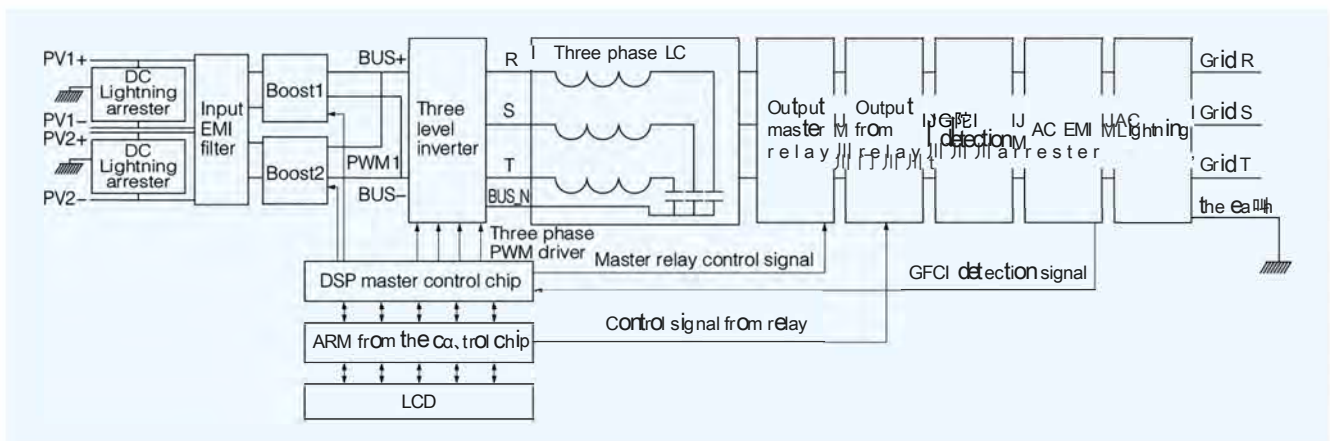
## Leading -edge technology

- 0 Wide input voltage, DC input voltage up to 1400V
- 0 Compact design, no fan, low noise technique
- 0 Maximum efficiency of 98.5%
- 0 Three level design, more efficient, more power generation
- 0 Internal DC Switch
- 0 Fanless design, easy maintenance
- 0 IP65 compatible
- 0 Small size, light weight, easy installation
- 0 Film capacitor design, 25 years of design service life
- 0 Standard configuration USB /WIFI, monitoring more flexible, more convenient

## Efficiency curve



## Circuit diagram

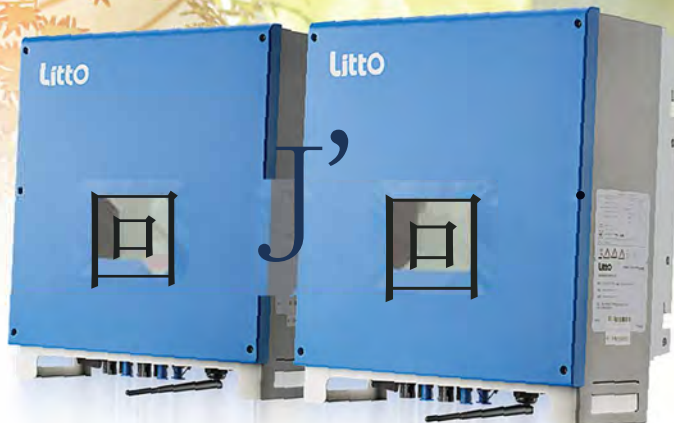


## Technical specifications

| INPUT DATA(DC)  |   |                       |                                     |                       |
|---|---|-----------------------|-------------------------------------|-----------------------|
| Max.DC power  | 6500W   | 8000W                 | 10000W                              | 14000W                |
| Max.PV power of per MPPT  | 3000W   | 3500W                 | 4500W                               | 5500W                 |
| Max.DC voltage  | 1000V   | 1000V                 | 1000V                               | 1000V                 |
| Rated DC voltage  | 580Vdc  | 580Vdc                | 580Vdc                              | 580Vdc                |
| DC voltage range  | 250-1000V   | 250-1000V             | 250-1000V                           | 250-1000V             |
| MPPT work voltage range (Nominal voltage)   | 250V-820V   | 250V-820V             | 250V-820V                           | 250V-820V             |
| Full load DC voltage range  | 250-800V  | 250-800V              | 400-800V                            | 400-800V              |
| Max.input current   | 22.0A   | 24.0A                 | 28.0A                               | 28.0A                 |
| MPPTMax input current per string of tracker   | 11.0A / 11.0A   | 12.0A / 12.0A         | 14.0A / 14.0A                       | 14.0A / 14.0A         |
| MPPT tracking number  | 2 / 2   | 2 / 2                 | 2 / 2                               | 2 / 2                 |
| OUTPUT(AC)  |   |                       |                                     |                       |
| Rated AC output power   | 5500W   | 6600W                 | 8800W                               | 11000W                |
| Max.output apparent power   | 5500VA  | 6600VA                | 8800VA                              | 11000VA               |
| Max.output current  | 8.1A Iper phase   | 9.7A Iper phase       | 13.0A Iper phase                    | 16.2A Iper phase      |
| Rated grid voltage;<br>Grid voltage range per phase   | 3 / N   PE: 220 / 380V; 3 / N   PE: 230 / 400V; 3 / N   PE: 240 / 415V;<br>per phase: 185-276V AC |                       |                                     |                       |
| Rated power grid frequency; Grid frequency range  | 50Hz / 60Hz; 45-55Hz / 55-65Hz  |                       |                                     |                       |
| Power factor (cosφ)   | 0.8 min ... 0.98  |                       |                                     |                       |
| Current harmonics (THDI)  | < 3% (At nominal output power)  |                       |                                     |                       |
| AC grid connection type   | Single Phase  |                       |                                     |                       |
| EFFICIENCY  |   |                       |                                     |                       |
| Max.Efficiency  | 98.0%   | 98.2%                 | 98.5%                               | 98.5%                 |
| Euro- Efficiency  | 97.6%   | 97.8%                 | 98.0%                               | 98.0%                 |
| MPPT Efficiency   | 99.8%   | 99.8%                 | 99.8%                               | 99.8%                 |
| PROTECTION DEVICES  |   |                       |                                     |                       |
| DC reverse polarity protection  | Integrated  | Integrated            | Integrated                          | Integrated            |
| DC switch for each MPPT   | Integrated (opt)  | Integrated (opt)      | Integrated (opt)                    | Integrated (opt)      |
| Output over current protection  | Integrated  | Integrated            | Integrated                          | Integrated            |
| Output over voltage protection  | Integrated  | Integrated            | Integrated                          | Integrated            |
| Ground fault monitoring   | Integrated  | Integrated            | Integrated                          | Integrated            |
| Grid monitoring   | Integrated  | Integrated            | Integrated                          | Integrated            |
| Leakage current protection  | Integrated  | Integrated            | Integrated                          | Integrated            |
| Island protection   | Integrated  | Integrated            | Integrated                          | Integrated            |
| GENERAL DATA  |   |                       |                                     |                       |
| Dimensions (W x H x D)(mm)  | 400x480x250mm   |                       | 400x480x250mm                       |                       |
| Weight  | 22.5KG  |                       | 25.2KG                              |                       |
| Install way   | Wall hanging fixed  |                       | Wall hanging fixed                  |                       |
| Operating temperature range   | -25°C ~+60°C  |                       | -25°C ~+60°C                        |                       |
| Noise emission  | ≤ 30db(A)   |                       | ≤ 30db(A)                           |                       |
| Altitude  | 3000m   |                       | 3000m                               |                       |
| Self-consumption at night   | 0W  |                       | 0W                                  |                       |
| Topology  | T-type three-level ITransformerless   |                       | T-type three-level ITransformerless |                       |
| Cooling concept   | Natural   |                       | Natural                             |                       |
| Overall protection level  | IP65  |                       | IP65                                |                       |
| Relative humidity (No condensation)   | ≤98%  |                       | ≤98%                                |                       |
| FEATURES  |   |                       |                                     |                       |
| DC connection   | MC4   | MC4                   | MC4                                 | MC4                   |
| AC connection   | C16 / 5   | C16 / 5               | C16 / 5                             | C16 / 5               |
| Display   | LCD   | LCD                   | LCD                                 | LCD                   |
| Communication USS / WIFI / RS485 / GPRS:  | yes / opt / yes / opt   | yes / opt / yes / opt | yes / opt / yes / opt               | yes / opt / yes / opt |
| Warranty: 5 years / 10 years  | yes / opt   | yes / opt             | yes / opt                           | yes / opt             |
| CERTIFICATES AND APPROVALS  |   |                       |                                     |                       |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS / NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |   |                       |                                     |                       |



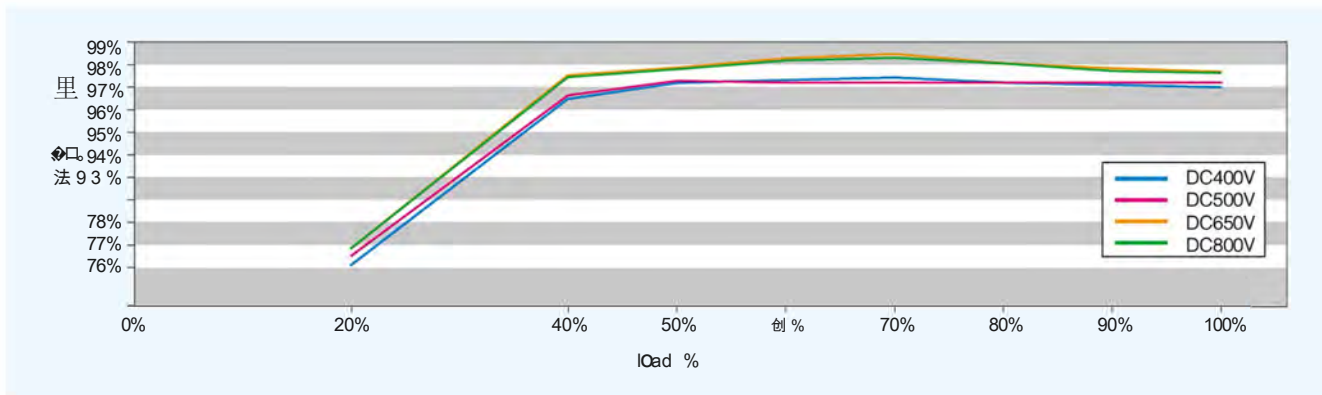
# 15000W, 20000W, 28000W



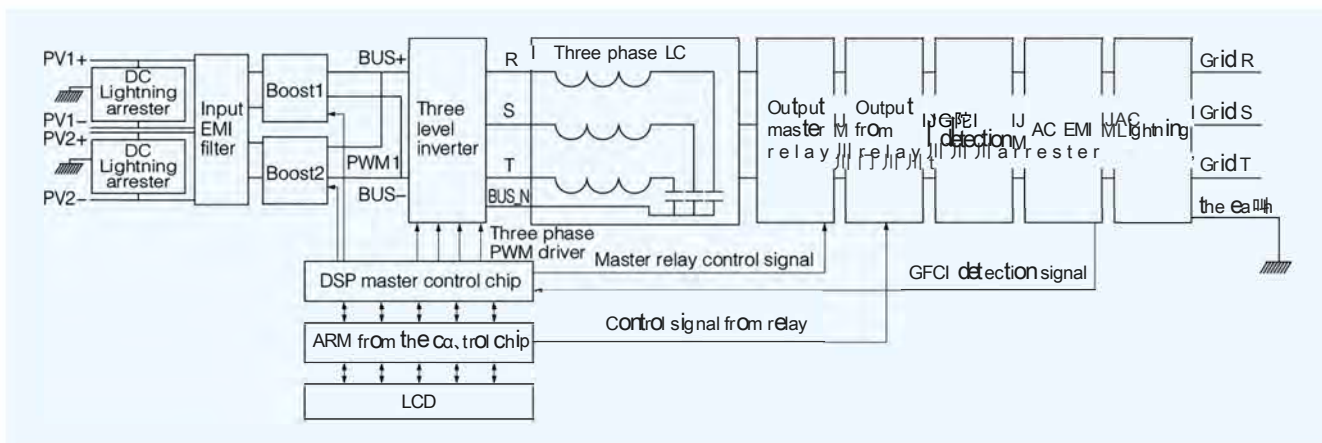
## Leading-edge technology

- Wide input voltage, DC input voltage up to 1500V
- Maximum efficiency of 98.5%
- Three level design, more efficient, more power generation
- Internal DC Switch
- Compact design, no fan, low noise technique
- Fanless design, easy maintenance
- IP65 compatible
- Small size, lightweight, easy installation
- Film Capacitor design, 25 years of design service life
- Standard configuration USB /WIFI, monitoring more flexible, more convenient

## Efficiency curve



## Circuit diagram



## Technical specifications

| DATASHEET   |                                    | 規格: mm: 田 •            |                        |                       |                        | LT 28000HD |
|---|------------------------------------|------------------------|------------------------|-----------------------|------------------------|------------|
| <b>INPUT DATA(DC)</b>   |                                    |                        |                        |                       |                        |            |
| Max.DC power  | 18000W                             | 22000W                 | 24000W                 | 29000W                | 30000W                 |            |
| Max.DC voltage  | 1000Vdc                            | 1000Vdc                | 1000Vdc                | 1000Vdc               | 1000Vdc                |            |
| Rated DC voltage  | 580Vdc                             | 580Vdc                 | 580Vdc                 | 580Vdc                | 700Vdc                 |            |
| MPPT operating voltage range  | 250V-820V                          | 250V-820V              | 250V-820V              | 250V-820V             | 250V-820V              |            |
| MPPT Full load voltage range  | 400-800Vdc                         | 400-800Vdc             | 450-800Vdc             | 480-800Vdc            | 500-800Vdc             |            |
| Input channels  | A: 3 / B: 3                        | A: 3 / B: 3            | A: 3 / B: 3            | A: 3 / B: 3           | A: 3 / B: 3            |            |
| MPPT tracking number  | 2                                  | 2                      | 2                      | 2                     | 2                      |            |
| Max.input current per string of trackerA / trackerB   | 36A / 36A                          | 36A/36A                | 36A/36A                | 36A/36A               | 36A/36A                |            |
| DC connection type  | MC4 connector                      | MC4 connector          | MC4 connector          | MC4 connector         | MC4 connector          |            |
| <b>OUTPUT(AC)</b>   |                                    |                        |                        |                       |                        |            |
| Max.output apparent power   | 15000VA                            | 18000VA                | 20000VA                | 25000VA               | 28000VA                |            |
| Rated AC output power   | 15000W                             | 18000W                 | 20000W                 | 25000W                | 28000W                 |            |
| Max.output power  | 16500W                             | 19800W                 | 22000W                 | 27500W                | 30000W                 |            |
| Rated grid voltage  | 3   N   PE: 220   380V             | 3   N   PE: 230   400V | 3   N   PE: 240   415V |                       | 3   PE: 277 x 3 / 480V |            |
| Grid voltage range per phase  | 184V-276V                          | 184V-276V              | 184V-276V              | 184V-276V             | 221V-330V              |            |
| Rated power grid frequency  | 50Hz                               | 50Hz                   | 50Hz                   | 50Hz                  | 50Hz                   |            |
| Grid frequency range  | 45-55Hz                            | 45-55Hz                | 45-55Hz                | 45-55Hz               | 45-55Hz                |            |
| Max.output current  | 24.3A per phase                    | 29.2A per phase        | 32.3A per phase        | 38A per phase         | 38A per phase          |            |
| Power factor (cosφ)   | 0.8 min. ~ 0.8 max.                |                        |                        |                       |                        |            |
| Current harmonics (THDI)  | < 3% (At nominal output power)     |                        |                        |                       |                        |            |
| AC output terminal connection type  | Plug and play terminal             |                        |                        |                       |                        |            |
| <b>EFFICIENCY</b>   |                                    |                        |                        |                       |                        |            |
| Max.Efficiency  | 98.8%                              | 98.8%                  | 98.8%                  | 98.8%                 | 98.8%                  |            |
| Euro-eta  | 98.3%                              | 98.3%                  | 98.3%                  | 98.3%                 | 98.3%                  |            |
| MPPT Efficiency   | 99.8%                              | 99.8%                  | 99.8%                  | 99.8%                 | 99.8%                  |            |
| <b>PROTECTION DEVICES</b>   |                                    |                        |                        |                       |                        |            |
| Leakage current protection  | Integrated                         | Integrated             | Integrated             | Integrated            | Integrated             |            |
| Island protection   | Integrated                         | Integrated             | Integrated             | Integrated            | Integrated             |            |
| DC Switch   | Integrated (opt)                   | Integrated (opt)       | Integrated (opt)       | Integrated (opt)      | Integrated (opt)       |            |
| DC surge protection   | Integrated                         | Integrated             | Integrated             | Integrated            | Integrated             |            |
| Output over current protection  | Integrated                         | Integrated             | Integrated             | Integrated            | Integrated             |            |
| Insulation Resistance detection   | Integrated                         | Integrated             | Integrated             | Integrated            | Integrated             |            |
| <b>GENERAL DATA</b>   |                                    |                        |                        |                       |                        |            |
| Dimensions (W×HxD)(mm)  | 476×575×265mm                      |                        |                        |                       |                        |            |
| Weight  | 33.5KG                             | 33.6KG                 | 33.6KG                 | 33.6KG                | 33.6KG                 |            |
| Install way   | Wall hanging fixed                 |                        |                        |                       |                        |            |
| Operating temperature range   | -25°C ~ 60°C                       |                        |                        |                       |                        |            |
| Altitude  | 2000m                              |                        |                        |                       |                        |            |
| Relative humidity   | 0% ~ 98% No condensation           |                        |                        |                       |                        |            |
| Noise emission  | ≤55db(A)                           |                        |                        |                       |                        |            |
| Self-consumption at night   | 0W                                 |                        |                        |                       |                        |            |
| Topology  | T-type three-level Transformerless |                        |                        |                       |                        |            |
| Cooling concept   | Natural                            |                        |                        |                       |                        |            |
| Overall protection level  | IP65                               |                        |                        |                       |                        |            |
| Communication interface   | USB   WIFI   RS-485                |                        |                        |                       |                        |            |
| <b>FEATURES</b>   |                                    |                        |                        |                       |                        |            |
| DC connection   | MC4                                | MC4                    | MC4                    | MC4                   | MC4                    |            |
| AC connection   | C16/5                              | C16/5                  | C16/5                  | C16/5                 | C16/5                  |            |
| Display   | LCD                                | LCD                    | LCD                    | LCD                   | LCD                    |            |
| Communication USB   WIFI   RS485 / GPRS:  | yes   opt   yes   opt              | yes   opt   yes   opt  | yes   opt   yes   opt  | yes   opt   yes   opt | yes   opt   yes   opt  |            |
| Warranty: 5 years / 10years   | yes   opt                          | yes   opt              | yes   opt              | yes   opt             | yes   opt              |            |
| <b>CERTIFICATES AND APPROVALS</b>   |                                    |                        |                        |                       |                        |            |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS/NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |                                    |                        |                        |                       |                        |            |



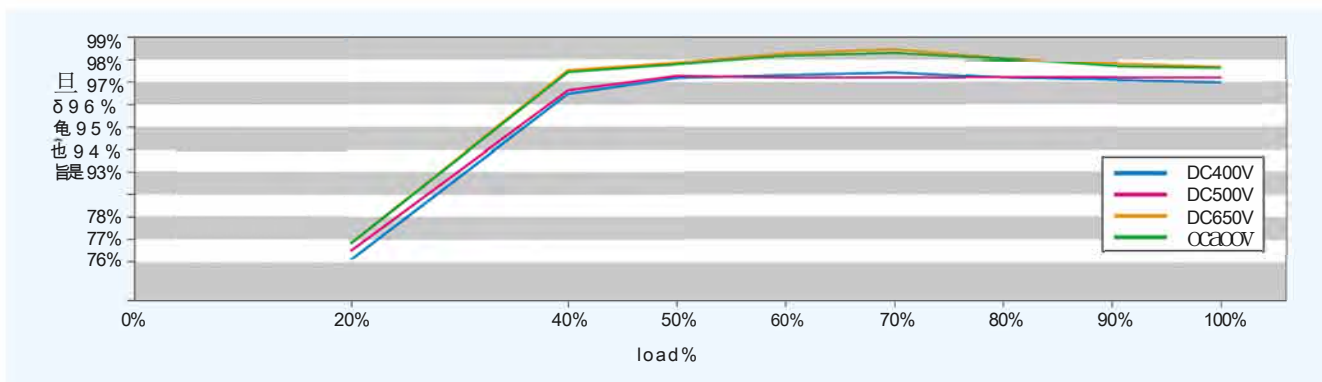
H30000HD  
 133 0QHD  
 LJJ40000HD



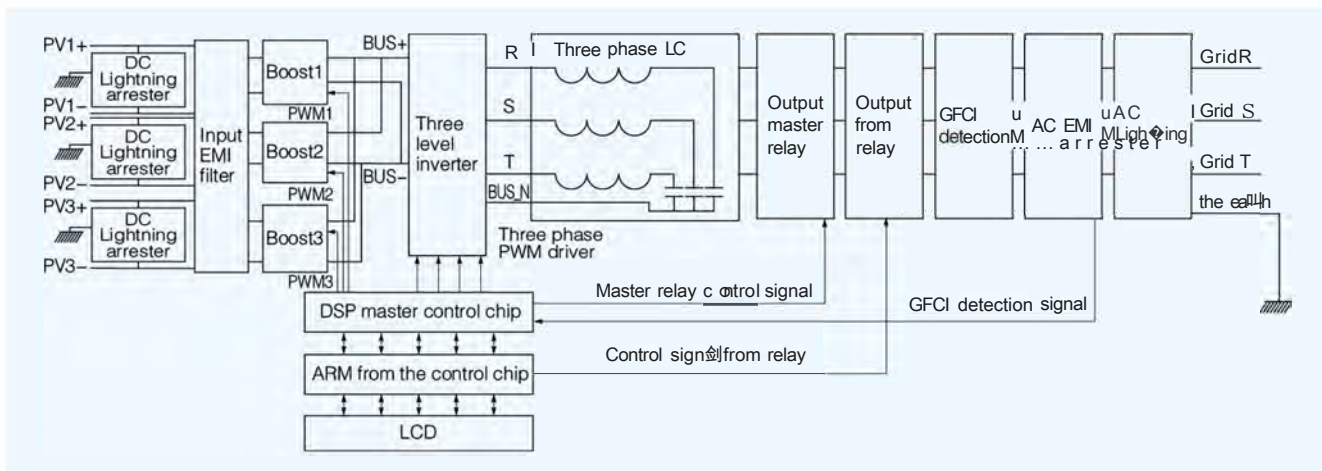
### Leading -edge techn ology

- O Wide input voltage, DC input voltage up to 1000V
- O Compact design, no fan, low noise technique
- O Maximum efficiency of 98.5%
- O Three level des igned, more efficient, more power generation
- O Internal DC Switch
- O Easy maintenance
- O IP65 compatible
- O Small size, light weight, easy installation
- O Film capacitor design, 25 years of design service life
- O Standard configuration USB /WIFI, monitoring more flexible, more convenient

### Efficiency curve



### Circuit diagram



## Technical specifications

| INPUT DATA(DC)  |  |  |                                |
|---|--|--|--------------------------------|
| Max.DC power  | 34αXJW   | 38αXJW   | 44000W                         |
| Max.DC voltage  | 1000Vdc  | 1000Vdc  | 1αXJVdc                        |
| Rated DC voltage  | 580Vdc   | 580Vdc   | 700Vdc                         |
| MPPT operating voltage range  | 250V-820V  | 250V-820V  | 250V-820V                      |
| Input channels  | A   B   C ID: 3  | A   B   C ID: 3  | A   B   C ID: 3                |
| MPPT tracking number  | 3  | 3  | 3                              |
| Max.input current   | 36A   36A   36A  | 36A   36A   36A  | 36A   36A   36A                |
| DC connection type  | MC4 connector  | MC4 connector  | MC4 connector                  |
| OUTPUT(AC)  |  |  |                                |
| Max.output apparent power   | 33αI/OVA   | 36300VA  | 40000VA                        |
| Max.output power  | 33000W   | 36300W   | 40000W                         |
| Rated grid voltage  | 3   N   PE: 220   380V<br>3   N   PE: 230   400V<br>3   N   PE: 240   415V | 3   N   PE: 220   380V<br>3   N   PE: 230   400V<br>3   N   PE: 240   415V | 3   PE: 227×3   480V+PE        |
| Grid voltage range per phase  | 184V-276V  | 184V-276V  | 221V-330V                      |
| Rated power grid frequency  | 50Hz 60Hz  | 50Hz 60Hz  | 50Hz  60Hz                     |
| Grid frequency range  | 45-55Hz   55-65Hz  | 45-55Hz   55-65Hz  | 45-55Hz   55-65Hz              |
| Max.output current  | 48.5A per phase  | 50A per phase  | 50A per phase                  |
| Power factor (cos φ)  | 0.8   1 ... 0.8 c  | 0.8   1 ... 0.8 c  | 0.8   1 ... 0.8 c              |
| Current harmonics (THDI)  | < 3% (At nominal output power)   | < 3% (At nominal output power)   | < 3% (At nominal output power) |
| AC output terminal connection type  | Plug and play terminal   | Plug and play terminal   | Plug and play terminal         |
| EFFICIENCY  |  |  |                                |
| Max.Efficiency  | 98.8%  | 98.8%  | 98.8%                          |
| Euro-eta  | 98.3%  | 98.3%  | 98.3%                          |
| MPPT Efficiency   | 99.8%  | 99.8%  | 99.8%                          |
| PROTECTION DEVICES  |  |  |                                |
| Leakage current protection  | Integrated   | Integrated   | Integrated                     |
| Island protection   | Integrated   | Integrated   | Integrated                     |
| DC Switch   | Integrated (opt)   | Integrated (opt)   | Integrated (opt)               |
| Output over current protection  | Integrated   | Integrated   | Integrated                     |
| Insulation Resistance detection   | Integrated   | Integrated   | Integrated                     |
| GENERAL DATA  |  |  |                                |
| Dimensions (W x H x D)(mm)  | 530x760x265mm  |  |                                |
| Weight  | 42KG   |  |                                |
| Install way   | Wall hanging fixed   |  |                                |
| Operating temperature range   | -25°C ~ +60°C  |  |                                |
| Altitude  | 2α)Om  |  |                                |
| Relative humidity   | 0%~98% No condensation   |  |                                |
| Noise emission  | ≦55db(A)   |  |                                |
| Self-consumption at night   | 0W   |  |                                |
| Topology  | T-type three-level   Transformerless                                       |  |                                |
| Cooling concept   | Natural  |  |                                |
| Overall protection level  | IP65   |  |                                |
| Communication interface   | USB   WIFI (opt)   RS485 (opt)   GPRS (opt)                                |  |                                |
| FEATURES  |  |  |                                |
| DC connection   | MC4  | MC4  | MC4                            |
| AC connection   | C16 5  | C16 5  | C16/5                          |
| Display   | LCD  | LCD  | LCD                            |
| Integrated combiner box   | opt  | opt  | opt                            |
| Communication USB   WIFI   RS485   GPRS:  | yes   opt   yes   opt  | yes   opt   yes   opt  | yes   opt   yes   opt          |
| Warranty: 5 years   10 years  | yes   opt  | yes   opt  | yes   opt                      |
| CERTIFICATES AND APPROVALS  |  |  |                                |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS   NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |  |  |                                |



# 40000HD-M

## 150000Ho I LT6000HD

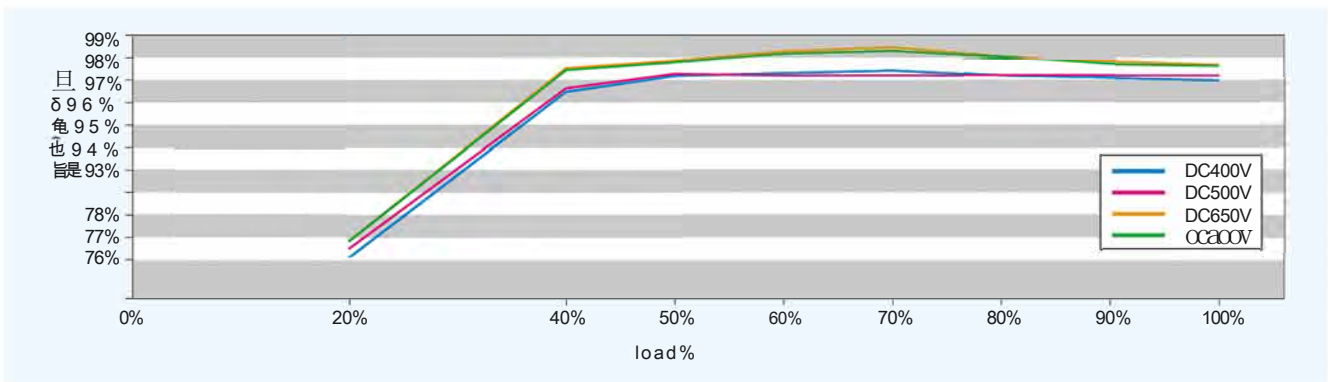
### LJJ65' b. ooHbiT 70000HD



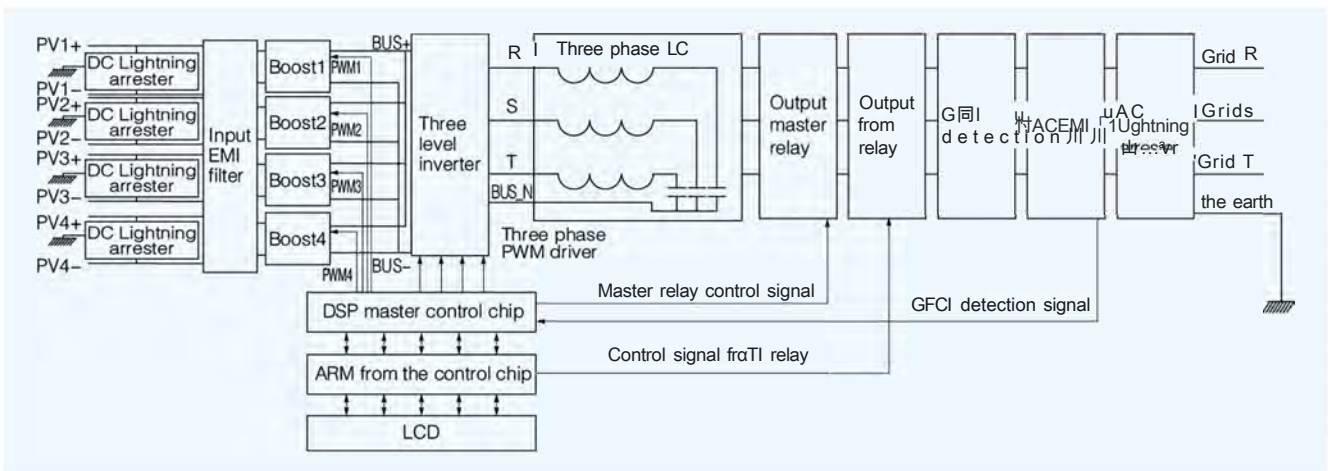
### Leading -edge techn ology

- O Wide input voltage, DC input voltage up to 1000V
- O Compact design, no fan, low noise technique
- O Maximum efficiency of 98.5%
- O Three level des igned, more efficient, more power generation
- O Internal DC Switch
- O Easy maintenance
- O IP65 compatible
- O Small size, light weight, easy installation
- O Film capacitor design, 25 years of design service life
- O Standard configuration USB /WIFI, monitoring more flexible, more convenient

### Efficiency curve



### Circuit diagram



## Technical specifications

| LT70000HD   |  | LT70000HD   |   | LT70000HD                |  |
|---|--|---|---|--------------------------|--|
| <b>INPUT DATA(DC)</b>   |  |   |   |                          |  |
| Max.DC power  | 46000W   | 58000W  | 68000W  | 73000W                   |  |
| Max.DC voltage  | 1000V  | 1000V   | 1000V   | 1000V                    |  |
| Rated DC voltage  | 580Vdc   | 580Vdc  | 580Vdc  | 700Vdc                   |  |
| MPPT operating voltage range  | 250V-820V  | 250V-820V   | 250V-820V   | 250-850Vdc               |  |
| Input channels  | A B C ID: 3  | A B C ID: 3   | A B C ID: 3   | A B C ID: 3              |  |
| MPPT tracking number  | 4  | 4   | 4   | 4                        |  |
| Max.input current   | 36A / 36A I36A / 36A   | 36A I36A / 36A I36A   | 36A I36A I36A I36A  | 36A I36A I36A I36A       |  |
| DC connection type  | MC4 connector  | MC4 connector   | MC4 connector   | MC4 connector            |  |
| <b>OUTPUT(AC)</b>   |  |   |   |                          |  |
| Max.output apparent power   | 4αXVA  | 50000VA   | 6αXJOVA   | 70000VA                  |  |
| Max.output power  | 44αXJW   | 55000W  | 63000W  | 70000W                   |  |
| Rated grid voltage  | 3 IN IPE: 220 I380V<br>3 IN IPE: 230 I400V<br>3 IN IPE: 240 / 415V | 3 IN IPE: 220 / 380V<br>3 IN IPE: 230 I400V<br>3/N/PE: 240/415V | 3 IN IPE: 220 I380V<br>3 IN IPE: 230 I400V<br>3 IN IPE: 240 I415V | 3 IPE<br>227×3 / 480V+PE |  |
| Grid voltage range per phase  | 184V-276V  | 184V-276V   | 184V-276V   | 184V-276V                |  |
| Rated power grid frequency  | 50Hz/60Hz  | 50Hz/60Hz   | 50Hz/60Hz   | 50Hz/60Hz                |  |
| Grid frequency range  | 45-55Hz I55-65Hz   | 45-55Hz I55-65Hz  | 45-55Hz / 55-65Hz   | 45-55Hz I55-65Hz         |  |
| Max.output current  | 60A per phase  | 80A per phase   | 80A per phase   | 90A per phase            |  |
| Power factor (cos φ)  | 0.8 i .1 ...0.8 c  | 0.8 i .1 ...0.8 c   | 0.8 i .1 ...0.8 c   | 0.8 i .1 ...0.8 c        |  |
| Current harmonics (THDI)  | < 3% (At nominal output power)                                     |   |   |                          |  |
| AC output terminal connection type  | Plug and play terminal   |   |   |                          |  |
| <b>EFFICIENCY</b>   |  |   |   |                          |  |
| Max.Efficiency  | 99.0%  | 99.0%   | 99.0%   | 99.0%                    |  |
| Euro-eta  | 98.6%  | 98.6%   | 98.6%   | 98.6%                    |  |
| MPPT Efficiency   | 99.8%  | 99.8%   | 99.8%   | 99.8%                    |  |
| <b>PROTECTION DEVICES</b>   |  |   |   |                          |  |
| Leakage current protection  | Integrated   | Integrated  | Integrated  | Integrated               |  |
| Island protection   | Integrated   | Integrated  | Integrated  | Integrated               |  |
| DC Switch   | Integrated (opt)   | Integrated (opt)  | Integrated (opt)  | Integrated (opt)         |  |
| Output over current protection  | Integrated   | Integrated  | Integrated  | Integrated               |  |
| Insulation Resistance detection   | Integrated   | Integrated  | Integrated  | Integrated               |  |
| <b>GENERAL DATA</b>   |  |   |   |                          |  |
| Dimensions (W × H × D) (mm)   | 580 × 760 × 265mm  | 580 × 760 × 265mm   | 580 × 760 × 265mm   | 580 × 760 × 265mm        |  |
| Weight  | 50KG   | 55KG  | 55KG  | 55KG                     |  |
| Install way   | Wall hanging fixed   | Wall hanging fixed  | Wall hanging fixed  | Wall hanging fixed       |  |
| Operating temperature range   | -25°C ~+60°C   | -25°C ~+60°C  | -25°C ~+60°C  | -25°C ~+60°C             |  |
| Altitude  | 2αXJm  | 2000m   | 2000m   | 2000m                    |  |
| Relative humidity   | 0%~98% No condensation   |   |   |                          |  |
| Noise emission  | ≤ 55dB (A)   |   |   |                          |  |
| Self-consumption at night   | OW   |   |   |                          |  |
| Topology  | T-type three-level ITransformerless                                |   |   |                          |  |
| Cooling concept   | Air cooling  |   |   |                          |  |
| Overall protection level  | IP65   |   |   |                          |  |
| Communication interface   | USB IWiFi (opt) IRS485 (opt) IGPRS (opt)                           |   |   |                          |  |
| <b>FEATURES</b>   |  |   |   |                          |  |
| DC connection   | MC4  | MC4   | MC4   | MC4                      |  |
| AC connection   | C16/5  | C16 / 5   | C16/5   | C16/5                    |  |
| Display   | LCD  | LCD   | LCD   | LCD                      |  |
| Integrated combiner box   | opt  | opt   | opt   | opt                      |  |
| Communication USB IWiFi IRS485 / GPRS:  | yes Iopt Iyes Iopt   | yes Iopt Iyes Iopt  | yes Iopt Iyes Iopt  | yes Iopt Iyes Iopt       |  |
| Warranty: 5 years I10years  | yes Iopt   | yes Iopt  | yes Iopt  | yes Iopt                 |  |
| <b>CERTIFICATES AND APPROVALS</b>   |  |   |   |                          |  |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS/NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |  |   |   |                          |  |



# LT 5000HD LT6000HD LT10000HD

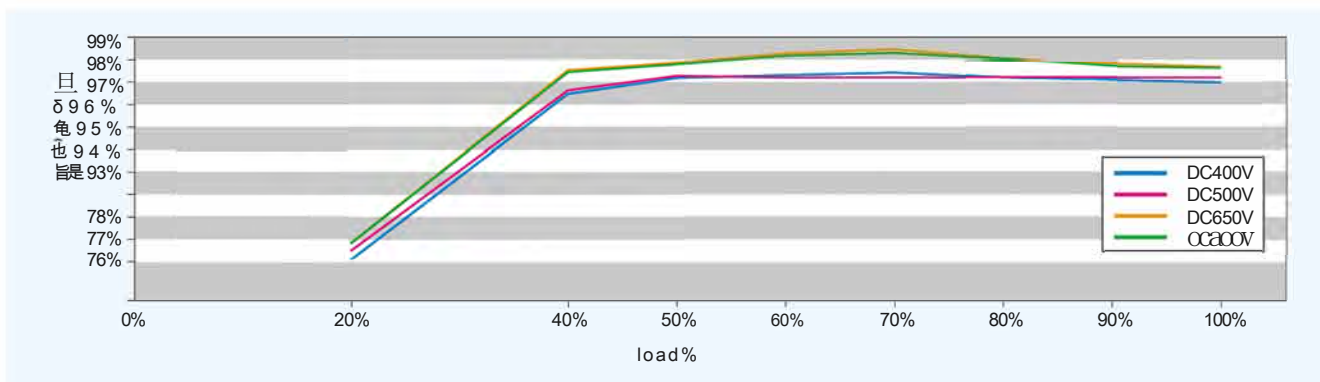
## Inverter with Extra control



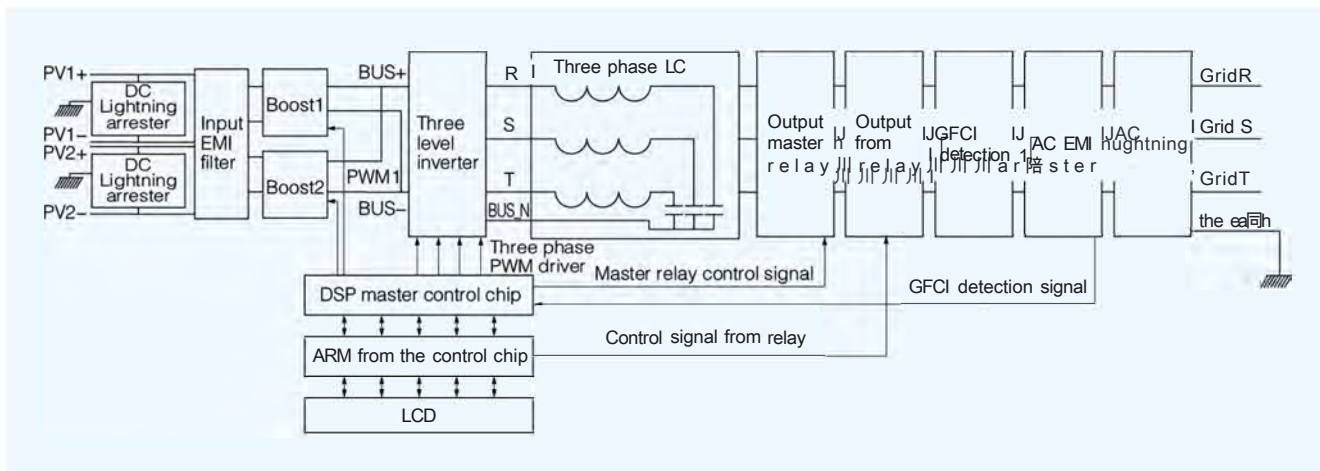
### Leading -edge technology

- Wide input voltage, DC input voltage up to 600V
- Maximum efficiency of 98.5%
- T three level design, more efficient, more power generation
- Compact design, no fan, low noise technique
- Fanless design, easy maintenance
- IP65 compatible
- USB dual-mode. monitor and upgrade
- WIFI |GPRS remote control to adjust parameter and revise data, easy maintenance
- Remote shutdown and start-up
- Use CREE SIC MOS pa 高, high power design and power density ( three phase of 5-10 KW)

### Efficiency curve



### Circuit diagram



## Technical specifications

| DATASHEET                              |   |                               |                               |                               |
|--|---|-------------------------------|-------------------------------|-------------------------------|
| 10cn...NP.U11 叫ETER-                   |   |                               |                               |                               |
| Max. DC power                          | 6000W   | 7000W                         | 9000W                         | 11000W                        |
| Max. DC voltage                        | 600Vdc  | 600Vdc                        | 600Vdc                        | 600Vdc                        |
| Rated DC voltage                       | 380Vdc  | 380Vdc                        | 380Vdc                        | 380Vdc                        |
| MPPT operation voltage range           | 150-420 Vdc   | 150-420Vdc                    | 150-420 Vdc                   | 150-420 Vdc                   |
| MPPT full load voltage range           | 200-420Vdc  | 200-420Vdc                    | 200-420Vdc                    | 200-420Vdc                    |
| Input channels                         | A:2/B:2   | A:2/B:2                       | A:3/B:3                       | A:3 / B:3                     |
| MPPT tracking number                   | 2   | 2                             | 2                             | 2                             |
| Max. input current                     | 15A/ 15A  | 15A/15A                       | 30A/30A                       | 30A/30A                       |
| DC connection type                     | MC4terminal   | MC4 terminal                  | MC4 terminal                  | MC4 terminal                  |
| AC OUTPUT PARAMETERS                   |   |                               |                               |                               |
| Max. output apparent power             | 5000VA  | 6000VA                        | 8000VA                        | 10000VA                       |
| Rated output power                     | 5000W   | 6000W                         | 8000W                         | 10000W                        |
| Rated grid voltage                     | 3/N/PE: 127 /220V   | 3 / N / PE: 127 / 220V        | 3/N/PE: 127 /220V             | 3 / N / PE: 127 / 220V        |
| Grid voltage range per phase           | 120V-140V / 207V-242V   | 120V-140V / 207V-242V         | 120V-140V / 207V-242V         | 120V-140V / 207V-242V         |
| Rated power grid frequency             | 50 Hz/60Hz  | 50Hz /60Hz                    | 50Hz / 60Hz                   | 50 Hz / 60Hz                  |
| Grid frequency range                   | 45-55Hz / 55-65Hz   | 45-55Hz /55-65Hz              | 45-55Hz /55-65Hz              | 45-55Hz /55-65Hz              |
| Max. output current                    | 13.8A per phase   | 16.7A per phase               | 22.2A per phase               | 27.8A per phase               |
| Power factor (cosφ)                    | 0.8i...1...0.8c   | 0.8i...1...0.8c               | 0.8i...1...o.ac               | 0.8i...1...0.8c               |
| Current harmonics (THDI)               | <3%(under Rated output power)   | <3%(under Rated output power) | <3%(under Rated output power) | <3%(under Rated output power) |
| AC output terminal connection type     | Plug and play terminal  | Plug and play terminal        | Plug and play terminal        | Plug and play terminal        |
| EFFICIENCY                             |   |                               |                               |                               |
| Max. efficiency                        | 98.2%   | 98.2%                         | 98.5%                         | 98.5%                         |
| EJ efficiency                          | 97.8%   | 97.8%                         | 98.2%                         | 98.2%                         |
| MPPT efficiency                        | 99.8%   | 99.8%                         | 99.8%                         | 99.8%                         |
| GENERAL DATA                           |   |                               |                               |                               |
| (W ID IH) size                         | 400×480×250mm   |                               | 540 x 680 x 265 mm            |                               |
| N.W                                    | 25Kg  |                               | 40KG                          |                               |
| Install way                            | Wall hanging fixed  |                               |                               |                               |
| Operating temperature range            | - 25°C ~ + 60°C   |                               |                               |                               |
| Max. altitude                          | 2000m   |                               |                               |                               |
| Relative temperature                   | 0%-98% No condensation  |                               |                               |                               |
| Noise                                  | ≤ 30dB(A)   |                               |                               |                               |
| Night consumption                      | 0W  |                               |                               |                               |
| Electrical isolation                   | Transformerless   |                               |                               |                               |
| Cooling mode                           | Air natural convection  |                               |                               |                               |
| Overall protection level               | IP65  |                               |                               |                               |
| Communication interface                | USB /WIFI /RS-485   |                               |                               |                               |
| SAFETY AND COMPLIANCE                  |   |                               |                               |                               |
| Safety standard                        | EN 62109.AS I NZS 3100  |                               |                               |                               |
| Electromagnetic compatibility standard | EN 61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-11, EN61000-3-12 |                               |                               |                               |
| Grid connected standard                | VDE-AR-4105, VDE0126-1-1, G59 / 2, AS4777, CQC                                  |                               |                               |                               |



# 15000W, 10000L, 20000V

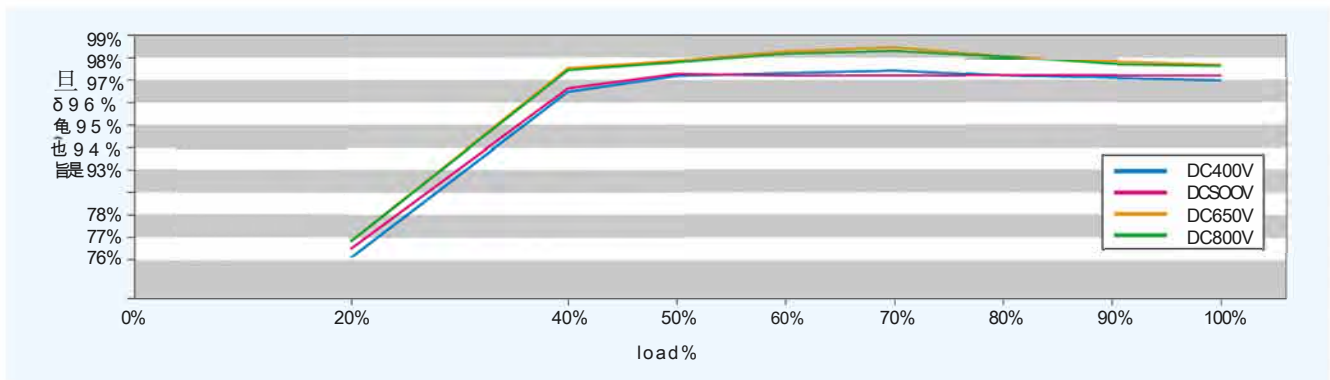
Inverter with Extra control



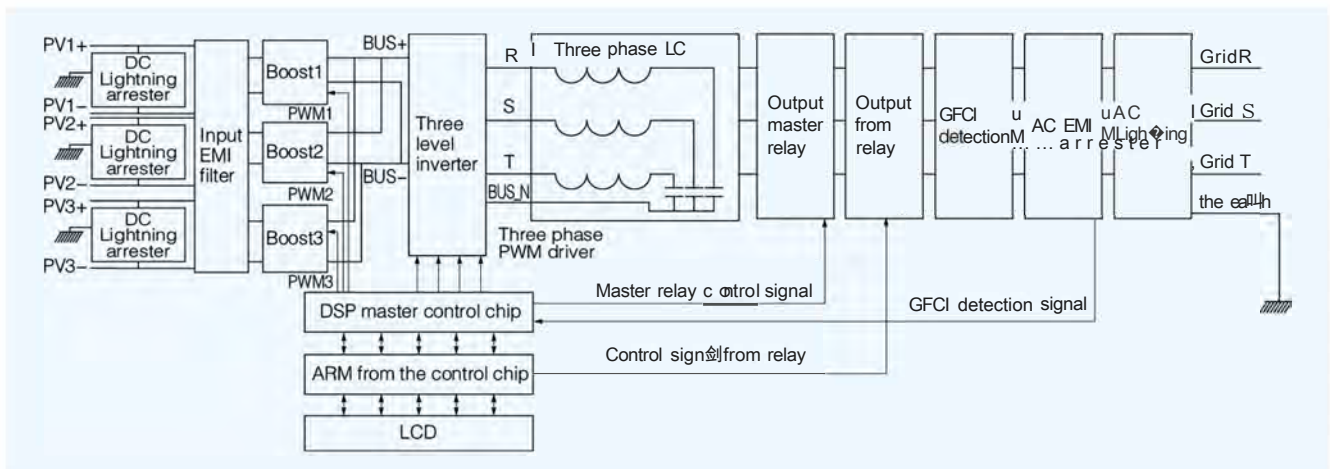
## Leading -edge technology

- Wide input voltage, DC input voltage up to 600V
- Maximum efficiency of 98.8%
- T three level design, more efficient, more power generation
- Compact design, no fan, low noise technique
- Fanless design, easy maintenance
- OIP65 compatible
- USB dual-mode. monitor and upgrade
- WIFI |GPRS remote control to adjust parameter and revise data, easy maintenance
- Remote shutdown and start-up

## Efficiency curve



## Circuit diagram



## Technical specifications

| DATASHEET                              |   |                               |                               |
|--|---|-------------------------------|-------------------------------|
| 10cn...NP.U11 叫 ETER-                  |   |                               |                               |
| Max. DC power                          | 16500W  | 19200W                        | 22000W                        |
| Max. DC voltage                        | 600Vdc  | 600Vdc                        | 600Vdc                        |
| Rated DC voltage                       | 380Vdc  | 380Vdc                        | 380 Vdc                       |
| MPPT operation voltage range           | 150-420 Vdc   | 150-420Vdc                    | 150-420 Vdc                   |
| MPPT full load voltage range           | 200-420Vdc  | 200-420Vdc                    | 200-420Vdc                    |
| Input channels                         | A:3 / B:3 / C:3   | A:3 / B:3 / C:3               | A:3 / B:3 / C:3               |
| MPPT tracking number                   | 3   | 3                             | 3                             |
| Max. input current                     | 30A/30A   | 35A/35A                       | 35A/35A                       |
| DC connection type                     | MC4 terminal  | MC4 terminal                  | MC4 terminal                  |
| AC OUTPUT PARAMETERS                   |   |                               |                               |
| Max. output apparent power             | 15000VA   | 18000VA                       | 20000VA                       |
| Rated output power                     | 15000W  | 18000W                        | 20000W                        |
| Rated grid voltage                     | 3/N/PE: 127/220V  | 3 IN IPE: 127 I220V           | 3 IN IPE: 127 I220V           |
| Grid voltage range per phase           | 120V-140V / 207V-242V   | 120V-140V / 207V-242V         | 120V-140V / 207V-242V         |
| Rated power grid frequency             | 50 Hz/60Hz  | 50Hz/60Hz                     | 50Hz/60Hz                     |
| Grid frequency range                   | 45-55Hz / 55-65Hz   | 45-55Hz / 55-65Hz             | 45-55Hz / 55-65Hz             |
| Max. output current                    | 41.7A per phase   | 50A per phase                 | 50A per phase                 |
| Power factor (cosφ)                    | 0.8i...1...0.8c   | 0.8i...1...0.8c               | 0.8i...1...0.8c               |
| Current harmonics (THDI)               | <3%(under Rated output power)   | <3%(under Rated output power) | <3%(under Rated output power) |
| AC output terminal connection type     | Plug and play terminal  | Plug and play terminal        | Plug and play terminal        |
| EFFICIENCY                             |   |                               |                               |
| Max. efficiency                        | 98.8%   | 98.8%                         | 98.8%                         |
| EJ efficiency                          | 98.4%   | 98.4%                         | 98.4%                         |
| MPPT efficiency                        | 99.8%   | 99.8%                         | 99.8%                         |
| GENERAL DATA                           |   |                               |                               |
| (W ID IH) size                         | 540×710×265mm   |                               |                               |
| N.W                                    | 50Kg  |                               |                               |
| Install way                            | Wall hanging fixed  |                               |                               |
| Operating temperature range            | - 25°C ~ + 60°C   |                               |                               |
| Max. altitude                          | 2000m   |                               |                               |
| Relative temperature                   | 0%-98% No condensation  |                               |                               |
| Noise                                  | ≦ 40dB(A)   |                               |                               |
| Night consumption                      | 0W  |                               |                               |
| Electrical isolation                   | Transformerless   |                               |                               |
| Cooling mode                           | Air natural convection  |                               |                               |
| Overall protection level               | IP65  |                               |                               |
| Communication interface                | USB / WIFI / RS-485   |                               |                               |
| Safety standard                        |   |                               |                               |
| Safety standard                        | EN 62109, AS / NZS 3100   |                               |                               |
| Electromagnetic compatibility standard | EN 61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-6-5, EN61000-6-6, EN61000-6-7, EN61000-6-8, EN61000-6-9, EN61000-6-10, EN61000-6-11, EN61000-6-12, EN61000-6-13, EN61000-6-14, EN61000-6-15, EN61000-6-16, EN61000-6-17, EN61000-6-18, EN61000-6-19, EN61000-6-20, EN61000-6-21, EN61000-6-22, EN61000-6-23, EN61000-6-24, EN61000-6-25, EN61000-6-26, EN61000-6-27, EN61000-6-28, EN61000-6-29, EN61000-6-30, EN61000-6-31, EN61000-6-32, EN61000-6-33, EN61000-6-34, EN61000-6-35, EN61000-6-36, EN61000-6-37, EN61000-6-38, EN61000-6-39, EN61000-6-40, EN61000-6-41, EN61000-6-42, EN61000-6-43, EN61000-6-44, EN61000-6-45, EN61000-6-46, EN61000-6-47, EN61000-6-48, EN61000-6-49, EN61000-6-50, EN61000-6-51, EN61000-6-52, EN61000-6-53, EN61000-6-54, EN61000-6-55, EN61000-6-56, EN61000-6-57, EN61000-6-58, EN61000-6-59, EN61000-6-60, EN61000-6-61, EN61000-6-62, EN61000-6-63, EN61000-6-64, EN61000-6-65, EN61000-6-66, EN61000-6-67, EN61000-6-68, EN61000-6-69, 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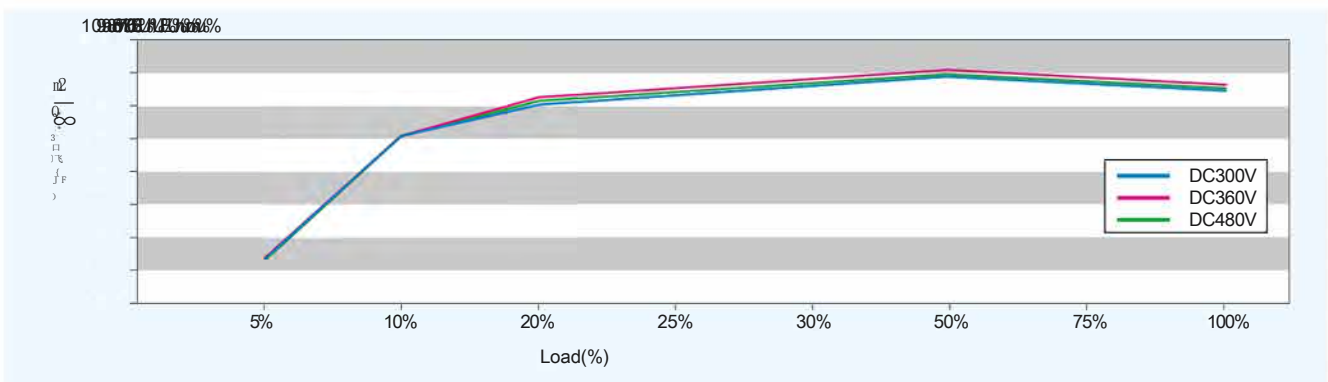
# LF J500H LF 2000H LF 3000H LF 5000H



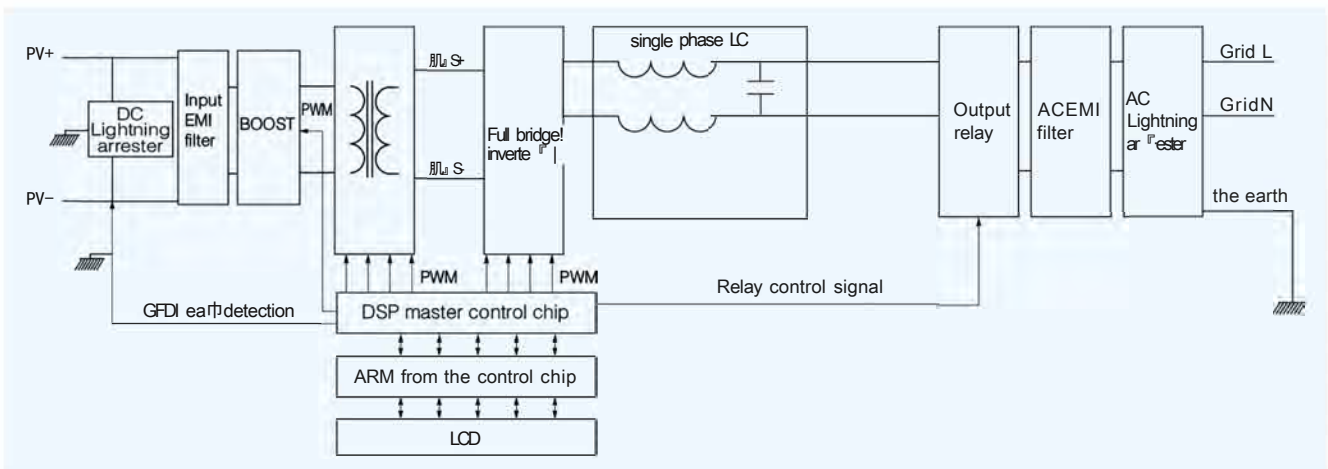
## Leading -edge technology

- High efficiency 96.7%, output power support overload 110%
- Wide voltage input range
- Built in high frequency transformer
- Easy maintenance
- IP65 compatible
- Standard configuration USB /WiFi (Optional)
- USB dual mode USB interface (supports both USB and USB Communications)
- Easy installation, compact design
- Compatible silicon and thin film assemblies
- PIO inhibition function

## Efficiency curve



## Circuit diagram



## Technical specifications

| DATASHEET   | LF 1500H                               | LF 2000H              | LF 3000H              | LF 4000HD             | LF 5000HD             |
|---|--|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>INPUT DATA(DC)</b>   |  |                       |                       |                       |                       |
| Max.DC power  | 2500W                                  | 3000W                 | 4000W                 | 5000W                 | 6000W                 |
| Max.PV power of per MPPT  | 2000W                                  | 2500W                 | 3600W                 | 2300W                 | 2750W                 |
| Max.DC voltage  | 600V                                   | 600V                  | 600V                  | 600V                  | 600V                  |
| Start voltage   | 80V                                    | 80V                   | 80V                   | 100V                  | 100V                  |
| DC voltage range  | 80-600V                                | 80-600V               | 80-600V               | 100-600V              | 100-600V              |
| MPPT work voltage range (Nominal voltage)   | 120-480V / 3串V                         | 120-480V / 3串V        | 120-480V / 3串V        | 120-480V / 3串V        | 120-480V / 3串V        |
| Full load DC voltage range  | 160-480V                               | 180-480V              | 180-480V              | 240-480V              | 240-480V              |
| Max.input current   | 25.0A                                  | 25.0A                 | 25.0A                 | 40.0A                 | 40.0A                 |
| Max.input current per string  | 25.0A                                  | 25.0A                 | 25.0A                 | 25.0A / 25.0A         | 25.0A / 25.0A         |
| MPPT tracking number  | 1 / 2                                  | 1 / 2                 | 1 / 2                 | 2 / 1                 | 2 / 1                 |
| <b>OUTPUT(AC)</b>   |  |                       |                       |                       |                       |
| Rated AC output power   | 1500W                                  | 2000W                 | 3000W<br>3000W        | 4000W                 | 5000W<br>5000W        |
| Max.AC output power   | 1650W                                  | 2200W                 |                       | 4400W                 |                       |
| Max.output apparent power   | 1650VA                                 | 2200VA                |                       | 4400VA                |                       |
| Max.output current  | 7.9A                                   | 10.5A                 |                       | 20.9A                 |                       |
| Rated grid voltage: Grid voltage range per phase  | 220V / 230V / 240V 180-280VAC          |                       |                       |                       |                       |
| Rated power grid frequency; Grid frequency range  | 50Hz / 60Hz; 45Hz-55Hz                 |                       |                       |                       |                       |
| Power factor (cosφ)   | 0.8i...1...0.8c                        |                       |                       |                       |                       |
| Current harmonics (THDI)  | less than 3% (At nominal output power) |                       |                       |                       |                       |
| AC grid connection type   | Single phase                           |                       |                       |                       |                       |
| <b>EFFICIENCY</b>   |  |                       |                       |                       |                       |
| Max.Efficiency  | 96.7%                                  | 97%                   | 97%                   | 96%                   | 96%                   |
| Euro- Efficiency  | 96.3%                                  | 96.3%                 | 96.3%                 | 95.5%                 | 95.5%                 |
| MPPT Efficiency   | 99.8%                                  | 99.8%                 | 99.8%                 | 99.8%                 | 99.8%                 |
| <b>FUNCTIONAL DEVICES</b>   |  |                       |                       |                       |                       |
| DC reverse polarity protection  | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| DC switch for each MPPT   | Integrated (opt)                       | Integrated (opt)      | Integrated (opt)      | Integrated (opt)      | Integrated (opt)      |
| Output over current protection  | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| Output over voltage protection  | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| Ground fault monitoring   | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| Grid monitoring   | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| Leakage current protection  | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| Island protection   | Integrated                             | Integrated            | Integrated            | Integrated            | Integrated            |
| <b>GENERAL DATA</b>   |  |                       |                       |                       |                       |
| Dimensions (W × H × D) (mm)   | 365 × 376 × 154mm                      |                       |                       | 365 × 470 × 195mm     |                       |
| Weight  | 12.5KG                                 |                       |                       | 15.4KG                |                       |
| Install way   | Wall hanging fixed                     |                       |                       | Wall hanging fixed    |                       |
| Operating temperature range   | -25°C ~ +60°C                          |                       |                       | -25°C ~ +60°C         |                       |
| Noise emission  | ≤ 25db(A)                              |                       |                       | ≤ 25db(A)             |                       |
| Altitude  | 3000m                                  |                       |                       | 3000m                 |                       |
| Self-consumption at night   | 0W                                     |                       |                       | 0W                    |                       |
| Topology  | Transformer isolation                  |                       |                       | Transformer isolation |                       |
| Cooling concept   | Natural                                |                       |                       | Natural               |                       |
| Overall protection level  | IP65                                   |                       |                       | IP65                  |                       |
| Relative humidity (No condensation)   | 0~98%                                  |                       |                       | 0~98%                 |                       |
| <b>FEATURES</b>   |  |                       |                       |                       |                       |
| DC connection   | MC4                                    | MC4                   | MC4                   | MC4                   | MC4                   |
| AC connection   | C16 / 3                                | C16 / 3               | C16 / 3               | C16 / 3               | C16 / 3               |
| Display   | LCD ILED                               | LCD ILED              | LCD ILED              | Display               | LCD ILED              |
| Communication: USB / WiFi / RS485 / GPRS  | yes / opt / yes / opt                  | yes / opt / yes / opt | yes / opt / yes / opt | yes / opt / yes / opt | yes / opt / yes / opt |
| Warranty: 5 years / 10 years  | yes / opt                              | yes / opt             | yes / opt             | yes / opt             | yes / opt             |
| <b>CERTIFICATES</b>   |  |                       |                       |                       |                       |
| CE, VDE 0126-1-1, IEC 62109, G83-2, G59-3, AS4777, AS/NZS 3100, VDE-AR-N4105, EN50438, EN62116, CQC, MEA, PEA, IEC61683 |  |                       |                       |                       |                       |



# SIMLINE WEB BOX

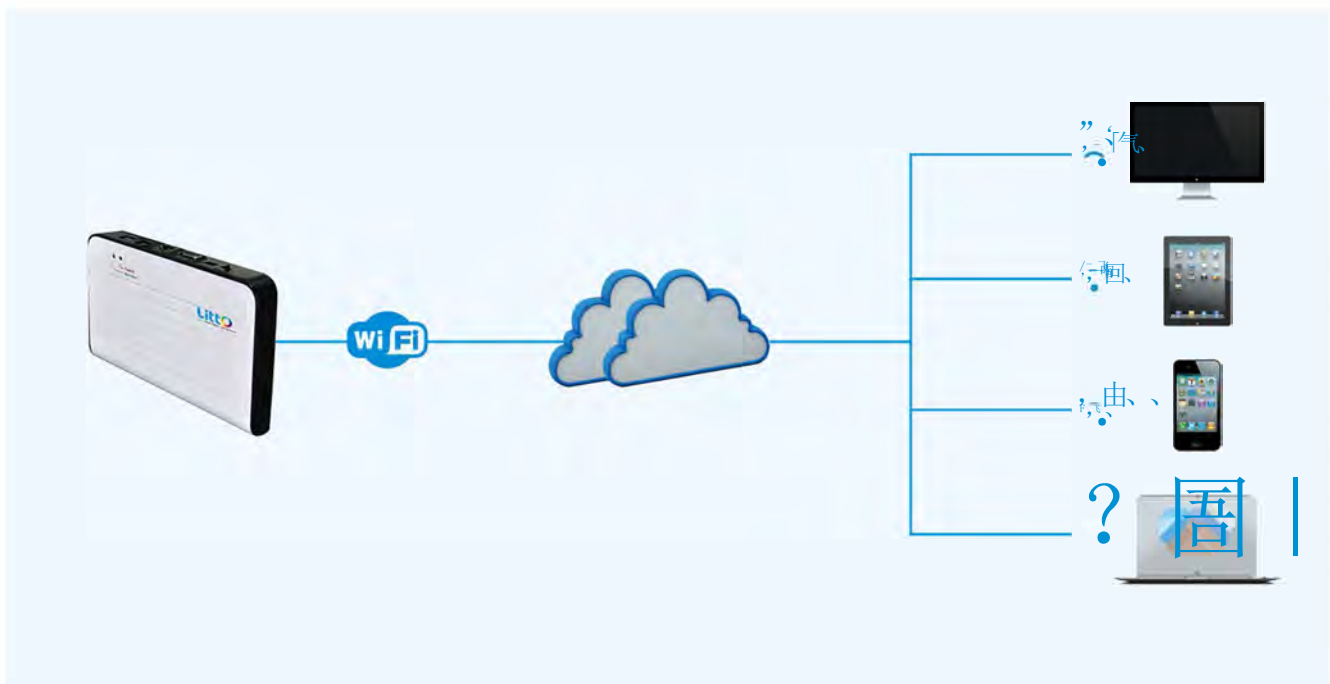
It is a cost-effective and compact monitoring device, specially designed for solar power plant. Using stable Linux operating system with high-speed CPU, smartly record your system features. Provide local data storage, wireless and easy TCP / IP configuration, and present plant data over internet.



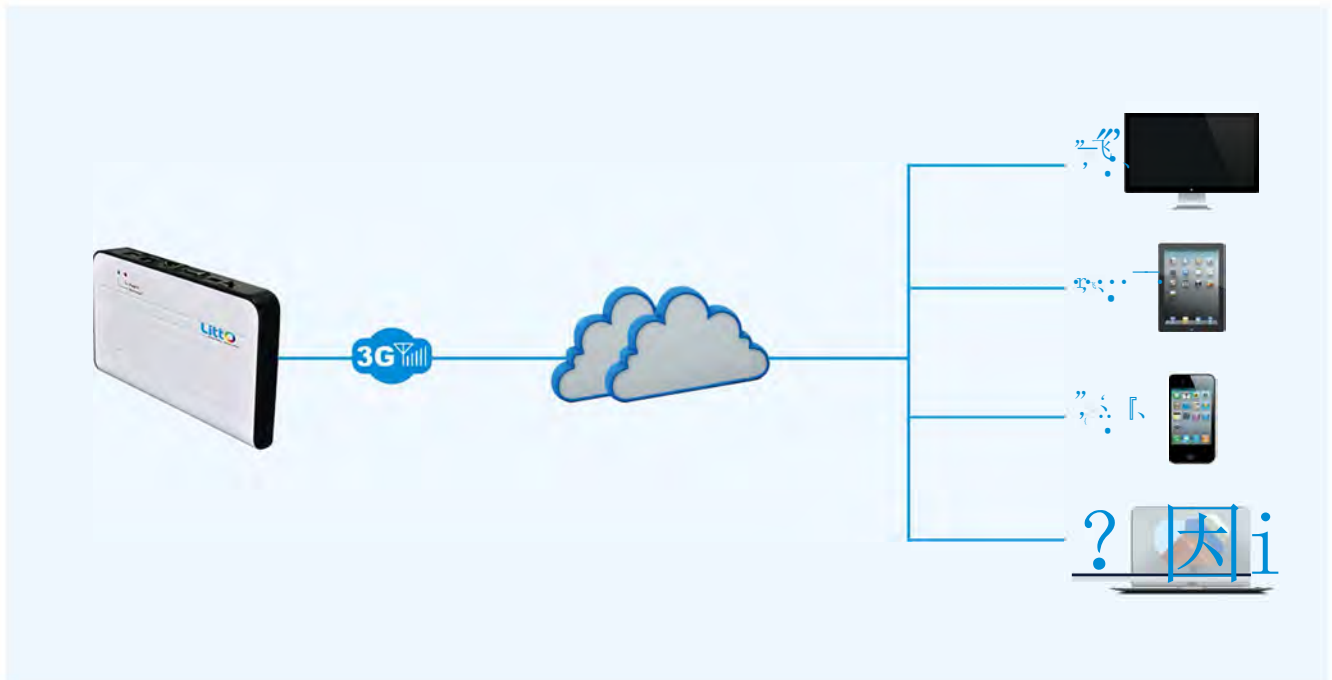
## Features

- Keep user informed of the system's status at any time
- Remote monitoring and maintenance to medium and large solar power plants
- Flexible display, evaluation and rapid detection of any change
- A multi-functional and high-performance communication data logger
- Collects data and uploads information over the internet in near real-time to Shine Server platform
- Massive storage with flexible parameters setting, system information management, reactive power control, error prompt and record

## We make itLOMple



No WIFI @ home? We still have 3G!



## Technical specifications

| 中文 SHEET                        | SHINE WEB BOX  |
|---------------------------------|--|
| <b>COMUNICATION DATA</b>        |  |
| Communication with inverters    | RS485 (Wire connection)<br>ZigBee(WiFi less connection)              |
| Communication with PC           | 10 / 100 Mbit Ethernet   |
| Communication range             | RS485: 1200 m<br>ZigBee: 300 m (Without obstacle)<br>Ethernet: 100 m |
| <b>ELECTRICAL DATA</b>          |  |
| Power adapter                   | Input: 10 O240V, 50 / 60Hz AC; Output: 5V, 2A DC                     |
| Power consumption               | 2.5W   |
| <b>ENVIRONMENTAL CONDITIONS</b> |  |
| Ambient temperature             | 0-45 °C  |
| Relative air humidity           | 5%-95%   |
| <b>GENERAL DATA</b>             |  |
| Dimensions (WI HID)             | 158 / 125/ 30 mm   |
| Weight                          | 0.42 KG  |
| Mounting location               | Indoor   |
| Mounting type                   | Wall mount 吨 , tabletop device                                       |
| Status indicator                | LED  |
| Language                        | English  |
| Data update frequency           | 5 minutes  |