

LP182*182-M-54-MH

Rated Power 400-415W



MBB Cell
New circuit design, lower internal current, lower internal resistance loss.



Low Light Features
Higher performance under low light environment.



Higher Output Power
Module adopts 108 pcs of 182*182mm half cells, the maximum power can reach 415W.



PID Protection
Ensure the attenuation probability caused by PID phenomenon is minimized.

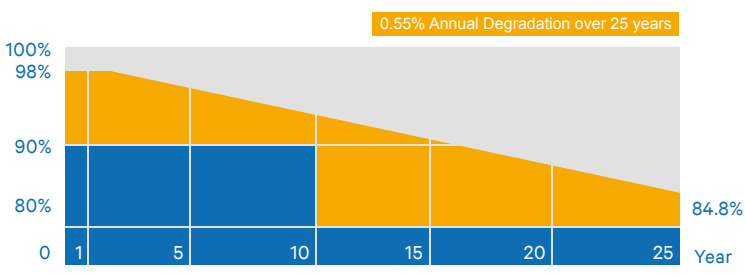


Harsh Environmental Adaptability
Strict salt spray and ammonia corrosion test by TUV Nord.



Load Capacity
Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa done by TUV Nord.

■ Lepton Linear Power Warranty ■ Industry Warranty



IEC 61215-2: 2016
IEC 61730-2: 2016

Headquarter : Leapton Energy Co., Ltd.

📍 Tosei Bldg. 6F, 1-2-1 Aioi-cho, Chuo-ku Kobe-shi, Hyogo, 650-0025, Japan

Manufacturer : Leapton Solar (Changshu) Co., Ltd.

📍 No.9, Sunshine Avenue, Changshu City, Jiangsu, China

☎ +81-78-382-3182

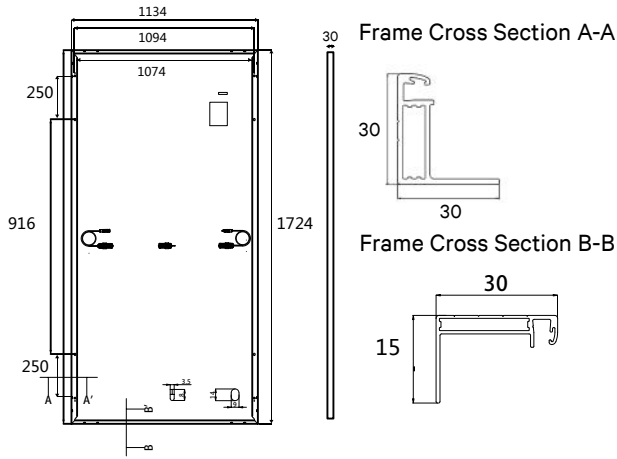
🌐 www.leaptonenergy.jp

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🌐 www.leaptonpv.com

MECHANICAL DIAGRAMS



SPECIFICATIONS

Weight	21kg
Dimensions	1724mm*1134mm*30mm
Cell Dimensions	182*182mm
Cell Amount	54*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm ² , N 1100mm/P 1100mm or customized length
Connector	MC4 compatible
Application Level	Class A

ELECTRICAL PARAMETERS AT STC

Power	400W	405W	410W	415W
Open Circuit Voltage	36.94V	37.14V	37.34V	37.54V
Short Circuit Current	13.60A	13.65A	13.70A	13.75A
Maximum Power Voltage	30.92V	31.12V	31.32V	31.62V
Maximum Power Current	12.94A	13.00A	13.06A	13.12A
Module Efficiency	20.46%	20.72%	20.97%	21.27%

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL PARAMETERS AT NMOT

Power	295W	298W	302W	306W
Open Circuit Voltage	34.49V	34.69V	34.89V	35.09V
Short Circuit Current	10.70A	10.75A	10.80A	11.00A
Maximum Power Voltage	28.78V	28.98V	29.18V	29.38V
Maximum Power Current	10.25A	10.28A	10.35A	10.40A
Module Efficiency	15.09%	15.24%	15.45%	15.66%

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

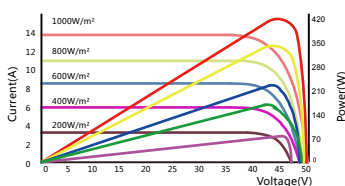
NMOT	41±3°C	Temp Coefficient of ISC	+0.05%/°C
Temp Coefficient of VOC	-0.28%/°C	Temp Coefficient of Pmax	-0.36%/°C

PACKING CONFIGURATION

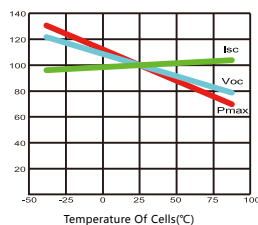
Modules/Pallet	36 Pieces	Modules/40'Container	936 Pieces
Packing Description	26 Pallets, Total=(36+36)x13=936 Pieces		

CHARACTERISTICS

LP182*182-M-54-MH-400W



LP182*182-M-54-MH-400W



MAXIMUM RATING

Output Tolerance	0~+5W
Operating Temperature	-40°C~+85°C
Wind Load/Snow Load	2400pa/5400pa
Fuse Current	25A

20 YEARS Quality Warranty

25 YEARS Power Warranty

Headquarter : Lepton Energy Co., Ltd.

📍 Tosei Bldg. 6F, 1-2-1 Aioi-cho, Chuo-ku Kobe-shi, Hyogo, 650-0025, Japan

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🌐 www.leptonenergy.jp

Manufacturer : Lepton Solar (Changshu) Co., Ltd.

📍 No.9, Sunshine Avenue, Changshu City, Jiangsu, China

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✉ info@leptonenergy.com

🌐 www.leptonpv.com

Declarație UE de conformitate

Noi, în calitate de producător/importator

DAI-TECH SA
Str. Berlin, Nr. 6, 307160
Dumbravita, Romania

declaram că următorul produs

Model name: Bastion WF5K
Part Number: ESWMF51H5110BCV01B

este conform cu

 (simbolul de conformitate europeană)


Testat în standardele acceptate, produsul menționat este conform cu
directiva **2014/30/EU EMC** și cu directiva **2014/35/EU LVD**.

EN IEC 62619:2017
EN 61000-4-3:2006+A1+A2 EN EN
61000-4-6:2013
EN 61000-4-8:2009

EN 61000-4-4:2012
EN 61000-4-5:2014
EN 61000-4-2:2008
EN 61000-6-1:2019

EN 61000-6-2:2019
EN 61000-6-3:2021
EN 61000-6-4:2019

și în conformitate cu

 (simbolul de conformitate RoHS) în acord cu directiva europeană 2011/65/EU.



Ștampila

Nov. 15, 2022
Timișoara

Data și locația

Tommy Lee

Semnătură și nume

Bastion WF5K

PN: ESWMF51H5110BCV01B

EAN: 6422956013356

Specifications

Nominal Voltage	51.2V
Rated Capacity	100Ah
Cell Technology	LifePO4
Energy Stored	5.12KWh
Battery Impedance	≤ 50 mΩ
Charging Cut-off Voltage	56.00 V
Discharge Cut-off Voltage	45.6 V
Max Charge Current	110A (environment 0° ~ 50°C)
Max Continue Discharge Current	110A (environment -10° ~ 55°C)
BMS	Included
Operating Temperature Range	-20 ~ 60°C
Protection	Cell/Pack Under-voltage Cell/Pack Over-voltage Charge / Discharge Over-current Charge / Discharge Under-temperature Charge / Discharge Over-temperature Mosfet Over-temperature Environment Under-temperature Environment Over-temperature Cell Balancing Fire Aerosol Suppression System (optional)
Display	LED
Communication	RS232, RS485, CAN
Storage Environment (50% state of charge)	-20°C ~ 45°C Humidity: 65±20% RH
Environment	Indoor
Installation	Wall mounted /Floor stand
Life Cycle	6000 times @ 80% DOD & 25°C
Cooling	Natural convection
Protection Rating	IP54



Superior Efficiency



High Reliability






Scalability up to 15 units

- Battery monitoring system included
- Scalability up to 15 pcs
- Installation Wall mounted or Floor stand
- Protection IP 54
- Natural cooling, silent operation
- Cell technology Lithium - iron phosphate (LifePO4)

Product dimensions 548 x 485 x 173mm

Logistics

 Carton Box Size (LxWxH)	633 x 558 x 280 mm
 Pieces in the Carton Box	1
 Net & Gross weight / CTN	Net 48 kg / Gross 51 kg

Certificates

RoHS 2011/65/EU 

Safety CB, IEC62619, UN38.3, MSDS, CE-EMC, EN61000-6-1/2/3/4; CE-GPDS, EN62619

335.11.23.0

Declarație UE de conformitate

Noi, în calitate de producător/importator

DAI-TECH SA

**Str. Berlin, Nr 6, C.P. 307160,
Dumbrăvița, Timiș, România**

declaram că următoarele produse

Familia : Astris & Ascet

Astris 3K/1P1T1
Astris 5K/1P2T2
Astris 6K/3P2T2
Astris 8K/1P2T3

Astris 8K/3P2T2
Astris 10K/3P2T2
Astris 10K/3P2T3
Astris 12K/3P2T3

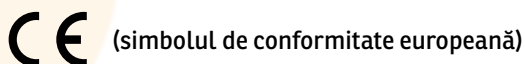
Astris 15K/3P2T3
Astris 20K/3P2T4
Astris 25K/3P2T4
Ascet 5K-120/1P2T2

Part Number:

SIN110030001ATCU0B
SIN120050002ATCU0B
SIN320060002ATCU0B
SIN120080003ATCU0B
SIN320080002ATCU0B
SIN320100002ATCU0B

SIN320100003ATCU0B
SIN320120003ATCU0B
SIN320150003ATCU0B
SIH12005L052ACCU0B
SIN320200004ATCU0B
SIN320250004ATCU0B

sunt conforme cu



Testat în standardele acceptate, produsele menționate sunt conforme cu
directiva **LVD 2014/35/EU** și cu directiva **EMC 2014/30/EU**.

EN50549-1

EN62109-1	EN61000-6-4
EN62109-2	EN 61000-3-11
EN61000-6-1	EN 61000-3-12
EN61000-6-2	EN 61000-3-3
EN61000-6-3	EN 61000-3-2

și în conformitate cu



(simbolul de conformitate RoHS) în acord cu directiva europeană 2011/65/EU; (EU)2015/863.



Ștampila

May 05, 2022
Timișoara

Data și locația

Tommy Lee

Semnătură și nume

Astris 5K/1P2T2

PN: SIN120050002ATCU0B

EAN: 6422956013172

Specifications

Efficiency	
Max. Efficiency	98,2 %
Input	
Max. Input Voltage	550V
Max. PV configuration (STC)	150%
Rated Input Voltage	360V
Max. Input Current	30A (2*15A)
Max.Short Circuit Current	40A (2*20A)
Start Input Voltage	90V
MPPT Operating Voltage Range	70V-540V
Max. Number of PV Strings	2 (1/1)
No. of MPPTS	2
Output (Grid)	
Rated AC Active Power	5,000W
Max. AC Apparent Power	5,500VA
Max. AC Active Power (PF=1)	5,500W
Max. AC Output Current	25A
Rated AC Voltage	220V/230V, L+N+PE
AC Voltage Range	160V-300V (Adjustable)
Rated Grid Frequency	50Hz/60Hz
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)
THDI	<3% (Rated Power)
DC Current Injection	<0.5%In
Power Factor	0.99 Rated power (Adjustable 0.8 Leading-0.8 Lagging)
Protection	
DC switch	Support
Anti-islanding protection	Support
AC overcurrent protection	Support
AC short circuit protection	Support



Superior Efficiency



High Reliability



Intelligent Maintenance

- Maximum efficiency 98.2%
- String current 13A, compatible with high power modules
- 150% PV configuration, 110% output overload
- IP65 waterproof and dustproof, C5 anti-corrosion
- DC/AC SPD optional, AFCI detection optional
- Remote configuration and upgrade
- Supports export power control

DC reverse connection	Support
Surge Arrester	DC Type III (Optional) / AC Type III
Insulation detection	Support
Leakage current protection	Support

General

Topology	Transformerless
IP Rating	IP65
Night Self Consumption	<1W
Cooling	Natural cooling
Operating Temperature Range	-25°C-60°C
Relative Humidity Range	0-100%
Max. Operating Altitude	4000m
Noise (typical)	30dB

HMI & COM




Display	Wireless & APP+LED, LCD (Optional)
Communication	WiFi (included) Optional: GPRS / RS485 /LAN

Physical

Product dimensions	350 x 347 x 137 mm
Product weight	7.9 Kg



Logistics

	Carton Box Size (LxWxH)	445 x 428 x 240 mm
	Pieces in the Carton Box	1
	Net & Gross weight / CTN	7.9 kg / 10 Kg

Certificates

RoHS  **CE**

Safety	IEC62109-1, IEC62109-2
Grid Code	DE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206001/206002-1, IEC 61727/62116, ORDINANCE n° 140 2022, IEEE 1547, UL 1741, AS 4777, VDE 0126-1.



Certificate of conformity with the following European Directives

Registered No.:
44 799 23 406749 - 123

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2023-04-25	PVP04137/23P-03	492012428.002	2023-05-24	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Type designation: See Annex 1

Applicant: **Leapton Solar (Changshu) Co., Ltd.**
No. 9, Sunshine Avenue, Yushan High Technology Industry Zone, Changshu
City
Jiangsu Province, 215500, P.R. China

Standard(s): EN IEC 61730-1:2018; EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018; EN IEC 61730-2:2018/AC:2018-06

This Certificate of conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.



Certification Body
Specialist Manager Consumer Products

TÜV NORD CERT GmbH
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D-45032 Essen
Fon: +49 (0)201 825-5120
Fax: +49 (0)201 825-3209
Email: prodcert@tuev-nord.de

Description of product(s):

Module types:

PV Modules with 6" Poly-crystalline Silicon Solar Cells:

72 cells: LP156*156-P-72-***W(*** = 310-340, in increment of 5)
60 cells: LP156*156-P-60-***W(*** = 260-280, in increment of 5)
54 cells: LP156*156-P-54-***W(*** = 235-255, in increment of 5)
48 cells: LP156*156-P-48-***W(*** = 205-225, in increment of 5)
42 cells: LP156*156-P-42-***W(*** = 180-195, in increment of 5)
36 cells: LP156*156-P-36-***W(*** = 155-170, in increment of 5)
30 cells: LP156*156-P-30-***W(*** = 130-140, in increment of 5)

Module types:

PV Modules with 6" Half Cut Poly-crystalline Silicon Solar Cells:

144 cells: LP156*156-P-72-H-***W (** = 335-370, in increment of 5)
120 cells: LP156*156-P-60-H-***W (** = 280-305, in increment of 5)

Module types:

PV Modules with 6" Mono-crystalline Silicon Solar Cells:

72 cells: LP156*156-M-72-***W(*** = 310-375, in increment of 5)
60 cells: LP156*156-M-60-***W(*** = 260-310, in increment of 5)
54 cells: LP156*156-M-54-***W(*** = 235-270, in increment of 5)
48 cells: LP156*156-M-48-***W(*** = 205-240, in increment of 5)
42 cells: LP156*156-M-42-***W(*** = 185-210, in increment of 5)
36 cells: LP156*156-M-36-***W(*** = 160-180, in increment of 5)
30 cells: LP156*156-M-30-***W(*** = 135-150, in increment of 5)
72 cells: LP158*158-M-72-***W(*** = 380-395, in increment of 5)
60 cells: LP158*158-M-60-***W(*** = 320-330, in increment of 5)



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Module types:

PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells:

144 cells: LP158*158-M-72-H-***W (***) = 365-400, in increment of 5)
132 cells: LP158*158-M-66-H-***W (***) = 335-365, in increment of 5)
120 cells: LP158*158-M-60-H-***W (***) = 305-330, in increment of 5)
144 cells: LP158*158-M-72-MH-***W (***) = 390-410, in increment of 5)
132 cells: LP158*158-M-66-MH-***W (***) = 360-375, in increment of 5)
120 cells: LP158*158-M-60-MH-***W (***) = 325-340, in increment of 5)
144 cells: LP166*166-M-72-MH-***W (***) = 420-455, in increment of 5)
132 cells: LP166*166-M-66-MH-***W (***) = 385-415, in increment of 5)
120 cells: LP166*166-M-60-MH-***W (***) = 350-380, in increment of 5)

Module types:

PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells:

156 cells: LP182*182-M-78-MH-***W (***) = 560-605, in increment of 5)
144 cells: LP182*182-M-72-MH-***W (***) = 515-570, in increment of 5)
132 cells: LP182*182-M-66-MH-***W (***) = 475-520, in increment of 5)
120 cells: LP182*182-M-60-MH-***W (***) = 430-475, in increment of 5)
108 cells: LP182*182-M-54-MH-***W (***) = 390-425, in increment of 5)

Module types:

PV Modules with 8" Half Cut Mono-crystalline Silicon Solar Cells:

132 cells: LP210*210-M-66-MH-***W (***) = 630-670, in increment of 5)
120 cells: LP210*210-M-60-MH-***W (***) = 575-610, in increment of 5)
108 cells: LP210*210-M-54-MH-***W (***) = 515-545, in increment of 5)
96 cells: LP210*210-M-48-MH-***W (***) = 460-485, in increment of 5)
84 cells: LP210*210-M-42-MH-***W (***) = 400-425, in increment of 5)
110 cells: LP210*210-M-55-MH-***W (***) = 520-555, in increment of 5)
100 cells: LP210*210-M-50-MH-***W (***) = 475-505, in increment of 5)
90 cells: LP210*210-M-45-MH-***W (***) = 425-455, in increment of 5)
80 cells: LP210*210-M-40-MH-***W (***) = 380-400, in increment of 5)



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Module types:

PV Modules with half-cut 7" n-type Topcon Bifacial Mono Solar Cells:


156 cells: LP182*182-M-78-NH-***W (***) = 580-625, in increment of 5)

144 cells: LP182*182-M-72-NH-***W (***) = 555-600, in increment of 5)

132 cells: LP182*182-M-66-NH-***W (***) = 510-550, in increment of 5)

120 cells: LP182*182-M-60-NH-***W (***) = 460-500, in increment of 5)

108 cells: LP182*182-M-54-NH-***W (***) = 410-450, in increment of 5)



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Certificate of conformity with the following European Directives

Registered No.:
44 799 23 406749 - 140

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2023-04-25	PVP04137/23P-04	492011763.004	2023-06-12	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Type designation: See Annex 1

Applicant: Leapton Solar (Changshu) Co., Ltd.

No. 9, Sunshine Avenue, Yushan High Technology Industry Zone, Changshu City
Jiangsu Province, 215500, P.R. China

Standard(s): EN IEC 61730-1:2018; EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018; EN IEC 61730-2:2018/AC:2018-06

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Certification Body
Specialist Manager Consumer Products

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Email: prodcert@tuev-nord.de

Description of product(s):

Module types: **Double Glass PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells:**

144 cells: LP182*182-M-72-MB-***W (***) = 520-550, in increment of 5)

132 cells: LP182*182-M-66-MB-***W (***) = 475-505, in increment of 5)

120 cells: LP182*182-M-60-MB-***W (***) = 435-455, in increment of 5)

108 cells: LP182*182-M-54-MB-***W (***) = 390-410, in increment of 5)

Module types: **Double Glass PV Modules with 8" Half Cut Mono-crystalline Silicon Solar Cells:**

132 cells: LP210*210-M-66-MB-***W (***) = 630-670, in increment of 5)

120 cells: LP210*210-M-60-MB-***W (***) = 575-610, in increment of 5)

108 cells: LP210*210-M-54-MB-***W (***) = 515-545, in increment of 5)

96 cells: LP210*210-M-48-MB-***W (***) = 460-485, in increment of 5)

84 cells: LP210*210-M-42-MB-***W (***) = 400-425, in increment of 5)

110 cells: LP210*210-M-55-MB-***W (***) = 520-555, in increment of 5)

100 cells: LP210*210-M-50-MB-***W (***) = 475-505, in increment of 5)

90 cells: LP210*210-M-45-MB-***W (***) = 425-455, in increment of 5)

80 cells: LP210*210-M-40-MB-***W (***) = 380-400, in increment of 5)

Module types: **Double Glass PV Modules with half-cut 7" n-type Topcon Bifacial Mono Solar Cells:**

156 cells: LP182*182-M-78-NB-***W (***) = 580-625, in increment of 5)

144 cells: LP182*182-M-72-NB-***W (***) = 555-605, in increment of 5)

132 cells: LP182*182-M-66-NB-***W (***) = 510-555, in increment of 5)

120 cells: LP182*182-M-60-NB-***W (***) = 460-505, in increment of 5)

108 cells: LP182*182-M-54-NB-***W (***) = 410-450, in increment of 5)



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