

CERTIFICATE

Hangzhou Vestwoods Technology Co., LTD

Floor 3, Building 1, Yongle Countryside, Cangqian Street, Yuhang District, Hangzhou City, Zhejiang Province, 311121, P.R. China

is authorized to provide the product(s) mentioned below with the mark as illustrated:



Description of product(s) (details see Annex 2):

Secondary Lithium Battery

It is certified by **TÜV NORD CERT GmbH** that the product(s) described above has(have) been assessed according to the certification program mentioned below and found in compliance with the requirements of below specified certification fundamental(s). This certification is based on evaluation results as documented in test report(s) referenced below and production site(s) audit results as documented in factory inspection report(s) referenced in Annex 1. This certificate is valid in conjunction with these quoted report(s).

Certification program: P31-VA-01 Rev. 02 04.20

Certification fundamental(s): IEC 62619:2022

Registered no.: 44 780 23 406749 -170

Manufacturer and factory(-ies): See Annex 1

Test report no.: 492012498.001

Valid from: 2023-06-21

File no.: PVP04108/23E-02

Valid until: 2028-06-20



TÜV NORD CERT GmbH
Certification Body
Energy Storage System



Essen, 2023-06-21

ANNEX

Annex 1, Page 1 of 1

to Certificate registration no. 44 780 23 406749 - 170

Manufacturer:

Hangzhou Vestwoods Technology Co., LTD

Floor 3, Building 1, Yongle Countryside, Cangqian Street, Yuhang District, Hangzhou City, Zhejiang Province, 311121, P.R. China

Factory(-ies):

Nantong Weimuruopu Technology Co., Ltd.

No.8, Jiangjiawei Road, Yongxing Street, Chongchuan District, Nantong City, Jiangsu Province, China

Factory inspection report no.: 862010720.001

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

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TÜV NORD CERT GmbH
Certification Body
Energy Storage System

Essen, 2023-06-21

ANNEX

Annex 2, Page 1 of 3

to Certificate registration no. 44 780 23 406749 - 170

Description of product(s):

Model type(s):	VT48100E-A1, VT48100E-P1, VE48100E-P1
Cell type:	LF100LA
Battery designation:	IFpP51/161/120/[15S]E/-20+40/95
Rated capacity:	100Ah
Nominal voltage:	48V
Watt-hour:	4800Wh
Recommended charge method:	Charging the battery with 20A constant current until 54V, then constant voltage until charging current reduces to 0.05C
Maximum charge current:	100A (1C)
Maximum charge voltage:	54V
Upper limit charging voltage:	54.75V
Charge temperature range:	From 0°C to 60°C
Recommended discharge method:	Discharging the battery with 20A constant current to discharge cut-off voltage 39.4V
Maximum discharge current:	100A (1C)
Discharge cut-off voltage:	39.4V
Discharge temperature range:	From -20°C to 60°C
Nominal weight:	39.0±0.5kg
Nominal dimension:	440mm×400mm×130mm
Storage temperature range:	From 0°C to 40°C



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ANNEX

Annex 2, Page 2 of 3

to Certificate registration no. 44 780 23 406749 - 170

Description of product(s):

Model type(s):	VT48100E-A2, VT48100E-P2, VE48100E-P2, VE48100E
Cell type:	LF100LA
Battery designation:	IFpP51/161/120/[16S]E/-20+40/95
Rated capacity:	100Ah
Nominal voltage:	51.2V
Watt-hour:	5120Wh
Recommended charge method:	Charging the battery with 20A constant current until 57.6V, then constant voltage until charging current reduces to 0.05C
Maximum charge current:	100A (1C)
Maximum charge voltage:	57.6V
Upper limit charging voltage:	58.4V
Charge temperature range:	From 0°C to 60°C
Recommended discharge method:	Discharging the battery with 20A constant current to discharge cut-off voltage 42.0V
Maximum discharge current:	100A (1C)
Discharge cut-off voltage:	42.0V
Discharge temperature range:	From -20°C to 60°C
Nominal weight:	41±0.5kg
Nominal dimension:	440mm×400mm×130mm
Storage temperature range:	From 0°C to 40°C

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ANNEX

Annex 2, Page 3 of 3

to Certificate registration no. 44 780 23 406749 - 170

Model type(s):	VT48100E-W
Cell type:	LF100LA
Battery designation:	IFpP51/161/120/[16S]E/-20+40/95
Rated capacity:	100Ah
Nominal voltage:	51.2V
Watt-hour:	5120Wh
Recommended charge method:	Charging the battery with 20A constant current until 57.6V, then constant voltage until charging current reduces to 0.05C
Maximum charge current:	100A (1C)
Maximum charge voltage:	57.6V
Upper limit charging voltage:	58.4V
Charge temperature range:	From 0°C to 60°C
Recommended discharge method:	Discharging the battery with 20A constant current to discharge cut-off voltage 42.0V
Maximum discharge current:	100A (1C)
Discharge cut-off voltage:	42.0V
Discharge temperature range:	From -20°C to 60°C
Nominal weight:	43±0.5kg
Nominal dimension:	443mm×450mm×150mm
Storage temperature range:	From 0°C to 40°C
Remark:	For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.

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