CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

DualSun SAS
2 rue Marc Donadille
13013 Marseille
FRANCE

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

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Valid from: 2024-08-22
Valid until: 2029-07-03

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 61215-1:2021 / EN IEC 61215-1:2021; IEC 61215-1-1:2021 / EN IEC 61215-1-1:2021; IEC 61215-2:2021 / EN IEC 61215-2:2021; IEC 61730-1:2023; IEC 61730-2:2023.
Registered No.:	44 780 24 406749 - 346
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492013319.001
File No.:	PVP07169/24P

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Essen, 2024-08-22

Please also pay attention to the information stated overleaf.

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Description of product(s):

Module types:	**Double Glass PV Modules with 182mm Half-cut Mono N-type Bifacial Solar Cells:** 156 cells: DSxxx-156M10TB-01 (xxx=610-635, in steps of 5) 144 cells: DSxxx-144M10TB-01 (xxx=545-590, in steps of 5) 108 cells: DSxxx-108M10TB-01 (xxx=415-445, in steps of 5) 156 cells: DSxxx-156M10TB-02 (xxx=610-635, in steps of 5) 144 cells: DSxxx-144M10TB-02 (xxx=545-590, in steps of 5) 108 cells: DSxxx-108M10TB-02 (xxx=415-445, in steps of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T_{98})	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C or Class A according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Module types:	**Double Glass PV Modules with 182.2mm*183.75mm Half-cut Mono N-type Bifacial Solar Cells:** 156 cells: DSxxx-156M10TB-03 (xxx=610-645, in steps of 5) 144 cells: DSxxx-144M10TB-03 (xxx=570-595, in steps of 5) 108 cells: DSxxx-108M10TB-03 (xxx=420-450, in steps of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T_{98})	70°C

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Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C or Class A according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	**Double Glass PV Modules with 182.2mm*186.7mm and 182.2mm*187.5mm Half-cut Mono N-type Bifacial Solar Cells:** 120 cells: DSxxx-120M10TB-03 (xxx=480-515, in steps of 5) 108 cells: DSxxx-108M10RTB-03 (xxx=430-460, in steps of 5) 120 cells: DSxxx-120M10TB-04 (xxx=480-515, in steps of 5) 108 cells: DSxxx-108M10RTB-04 (xxx=430-460, in steps of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T_{98})	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C or Class A according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	**Double Glass PV Modules with 182.2mm*191.6mm Half-cut Mono N-type Bifacial Solar Cells:** 144 cells: DSxxx-144M10RTB-05 (xxx=595-625, in steps of 5) 120 cells: DSxxx-120M10TB-05 (xxx=495-525, in steps of 5) 108 cells: DSxxx-108M10RTB-05 (xxx=445-470, in steps of 5) 144 cells: DSxxx-144M10RTB-06 (xxx=595-625, in steps of 5) 120 cells: DSxxx-120M10TB-06 (xxx=495-525, in steps of 5) 108 cells: DSxxx-108M10RTB-06 (xxx=445-470, in steps of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A

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Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T_{98})	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C or Class A according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	**Double Glass PV Modules with 182mm*210mm Half-cut Mono N-type Bifacial Solar Cells:** 132 cells: DSxxx-132M10RTB-07 (xxx=595-625, in steps of 5) 120 cells: DSxxx-120M10TB-07 (xxx=540-570, in steps of 5) 108 cells: DSxxx-108M10RTB-07 (xxx=485-515, in steps of 5) 96 cells: DSxxx-96M10RTB-07 (xxx=430-460, in steps of 5) 132 cells: DSxxx-132M10RTB-08 (xxx=595-625, in steps of 5) 120 cells: DSxxx-120M10TB-08 (xxx=540-570, in steps of 5) 108 cells: DSxxx-108M10RTB-08 (xxx=485-515, in steps of 5) 96 cells: DSxxx-96M10RTB-08 (xxx=430-460, in steps of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	35A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T_{98})	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C or Class A according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

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Module types:	**Double Glass PV Modules with 182mm*199mm Half-cut Mono N-type Bifacial Solar Cells:** 144 cells: DSxxx-144M10RTB-07 (xxx=610-640, in steps of 5) 144 cells: DSxxx-144M10RTB-08 (xxx=610-640, in steps of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	35A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T_{98})	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C or Class A according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) attached to test report with same file no.

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