

TEST CERTIFICATE

The product Photovoltaic Module has been tested by UL International Germany GmbH and found to comply in accordance with the Standard indicated on this report.

Certificate Number: 4790388765.6

Issue Date: 2023-08-30

Test Location: CHANGZHOU HUAYANG INSPECTION AND TESTING TECHNOLOGY CO., LTD.
(vendor)

Issued to: IFRI-SOL SARL

Tested Model: IF-HTM645-132
(Refer to Report No. 4790388765.6 for BOM and Test details)

Standard(s): IEC 62716, PHOTOVOLTAIC (PV) MODULES - AMMONIA CORROSION TESTING,
Edition 1, Issue Date 06/2013

Models Covered*: Series of Product:
IF-HTM675-132, IF-HTM645-132, IF-HTM615-120, IF-HTM555-108, IF-HTM490-96,
IF-HTM565-110, IF-HTM510-100, IF-HTM460-90, IF-HTM410-80, IF-HTM385-80, IF-
HTM510-132, IF-HTM505-132, IF-HTM500-132, IF-HTM495-132, IF-HTM465-120, IF-
HTM415-108.

* Manufacturer declares that samples submitted for evaluation are representative of the covered models and produced using the same materials, components, equipment, and processes. Details of the bill of materials are provided in Appendix 4 of the test report. Any change in design, materials, components, equipment, and processes may require retesting to maintain the compliance.

Disclaimer: Test results apply only to the sample(s) actually tested by UL International Germany GmbH or its vendor. The client provided all of the test samples for testing by UL. UL did not select the samples or determine whether the samples provided were representative of other manufactured products. UL has not established Follow-Up Service or other surveillance of the product. The client and or manufacturer are solely and fully responsible for conformity of all products to all applicable standards, specifications or requirements. UL Logo and Marks shall not be used in connection with the above tested product(s). Only those products bearing the UL Listing and Classification Marks should be considered as being covered by UL's Listing, Classification and Follow-Up Service. Look for the UL Listing and Classification Mark on the product.

Issued By:



Michael Keil
UL International Germany GmbH

Authorized By



Ali Eminel
UL International Germany GmbH



CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

IFRI-SOL SARL

Industrial Area Enfidha Diet 4030

TUNISIA

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: 2023-06-13

Valid until: 2024-01-02

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC / EN 61215-1:2016; IEC / EN 61215-1-1:2016; IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018.
Registered No.:	44 780 22 406749 - 065R1M1
Manufacturer:	see Annex 1
Test Report No.:	492011976.002
File No.:	PVP04105/23P



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2022-06-13

Please also pay attention to the information stated overleaf.

Description of product(s):

Module types:	Single Glass PV Modules with 6" Half-cut Mono-crystalline Silicon Solar Cells: 144 cells: IF-HTMXXX-144 (xxx = 390 - 455, in increment of 5) 144 cells: IF-HWMXXX-144 (xxx = 390 - 405, 420 - 460, in increment of 5) 132 cells: IF-HMXXX-132 (xxx = 355 - 415, in increment of 5) 132 cells: IF-HWMXXX-132 (xxx = 385 - 420, in increment of 5) 120 cells: IF-HTMXXX-120 (xxx = 325 - 380, in increment of 5) 120 cells: IF-HWMXXX-120 (xxx = 350 - 385, in increment of 5) 120 cells: IF-HBMXXX-120 (xxx = 325 - 335, 350 - 380, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
Design load (positive / negative)*:	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Module types:	Single Glass PV Modules with 7" Half-cut Mono-crystalline Silicon Solar Cells: 156 cells: IF-HTMXXX-156 (xxx = 560 - 605, in increment of 5) 156 cells: IF-HWMXXX-156 (xxx = 560 - 605, in increment of 5) 144 cells: IF-HTMXXX-144 (xxx = 520 - 555, in increment of 5) 144 cells: IF-HWMXXX-144 (xxx = 520 - 555, in increment of 5) 132 cells: IF-HTMXXX-132 (xxx = 475 - 510, in increment of 5) 132 cells: IF-HWMXXX-132 (xxx = 475 - 510, in increment of 5) 132 cells: IF-HMXXX-132 (xxx = 480 - 505, in increment of 5) 120 cells: IF-HTMXXX-120 (xxx = 435 - 465, in increment of 5) 120 cells: IF-HWMXXX-120 (xxx = 435 - 465, in increment of 5) 108 cells: IF-HTMXXX-108 (xxx = 390 - 415, in increment of 5) 108 cells: IF-HWMXXX-108 (xxx = 390 - 415, in increment of 5) 108 cells: IF-HMXXX-108 (xxx = 390 - 415, in increment of 5) 156 cells: IF-HWMXXX/N-156 xxx=585 - 630, in increment of 5) 144 cells: IF-HWMXXX/N-144 xxx=585 - 630, in increment of 5) 132 cells: IF-HWMXXX/N-132 (xxx=495 - 530, in increment of 5) 120 cells: IF-HWMXXX/N-120 (xxx=450 - 485, in increment of 5)
---------------	---



TÜV NORD CERT GmbH
Certification Body
Consumer Products

	108 cells:IF-HWMXXX/N-108 (xxx=405 - 435, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
Design load (positive / negative)*:	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Module types:

Single Glass PV Modules with 8" Half-cut Mono-crystalline Silicon Solar Cells:

150 cells: IF-HTMXXX-150 (xxx = 480 - 515, in increment of 5)
150 cells: IF-HWMXXX-150 (xxx = 480 - 515, in increment of 5)
140 cells: IF-HTMXXX-I (xxx = 450 - 480, in increment of 5)
140 cells: IF-HTMXXX-140 (xxx = 450 - 480, in increment of 5)
140 cells: IF-HWMXXX-I (xxx = 450 - 480, in increment of 5)
130 cells: IF-HTMXXX-130 (xxx = 415 - 445, in increment of 5)
120 cells: IF-HTMXXX-R (xxx = 385 - 410, in increment of 5)
120 cells: IF-HTMXXX-120 (xxx = 385 - 410, in increment of 5)
120 cells: IF-HBMXXX-R (xxx = 385 - 410, in increment of 5)
120 cells: IF-HWMXXX-R (xxx = 385 - 410, in increment of 5)
90 cells: IF-HTMXXX-90 (xxx = 290 - 310, in increment of 5)
150 cells: IF-HMMXXX-150 (xxx = 480 - 515, in increment of 5)
140 cells: IF-HMMXXX-140 (xxx = 450 - 480, in increment of 5)
130 cells: IF-HMMXXX-130 (xxx = 415 - 445, in increment of 5)
120 cells: IF-HMMXXX-120 (xxx = 385 - 410, in increment of 5)
90 cells: IF-HMMXXX-90 (xxx = 290 - 310, in increment of 5)
132 cells IF-HWMXXX-132 (xxx=630 - 670, in increment of 5)
120 cells:IF-HWMXXX-120 (xxx=575 - 610, in increment of 5)
110 cells:IF-HWMXXX-110 (xxx=575 - 610, in increment of 5)
100 cells:IF-HWMXXX-100 (xxx=480 - 510, in increment of 5)
90 cells:IF-HWMXXX-90 (xxx=430 - 455, in increment of 5)
80 cells:IF-HWMXXX-80 (xxx=385 - 405, in increment of 5)

Maximum system voltage:	1500V
Fuse rating:	20/30A
Electrical protection class:	Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

TEST CERTIFICATE

The product Photovoltaic Module has been tested by UL International Germany GmbH and found to comply in accordance with the Standard indicated on this report.

Certificate Number: 4790388765.5

Issue Date: 2023-08-14

Test Location: CHANGZHOU HUAYANG INSPECTION AND TESTING TECHNOLOGY CO., LTD.
(vendor)

Issued to: IFRI-SOL SARL

Tested Model: IF-HTM645-132
(Refer to Report No. 4790388765.5 for BOM and Test details)

Test Sequence: SALT MIST CORROSION TESTING OF PHOTOVOLTAIC (PV) MODULES

Test Condition: Test method 5

Standard(s): IEC 61701, SALT MIST CORROSION TESTING OF PHOTOVOLTAIC (PV)
MODULES, Edition 3, Issue Date 2020-06

Models Covered*: Series of Product:
IF-HTM675-132, IF-HTM645-132, IF-HTM615-120, IF-HTM555-108, IF-HTM490-96,
IF-HTM565-110, IF-HTM510-100, IF-HTM460-90, IF-HTM410-80, IF-HTM385-80,
IF-HTM510-132, IF-HTM505-132, IF-HTM500-132, IF-HTM495-132, IF-HTM465-120,
IF-HTM415-108.

* Manufacturer declares that samples submitted for evaluation are representative of the covered models and produced using the same materials, components, equipment, and processes. Details of the bill of materials are provided in Appendix 4 of the test report. Any change in design, materials, components, equipment, and processes may require retesting to maintain the compliance.

Disclaimer: Test results apply only to the sample(s) actually tested by UL International Germany GmbH or its vendor. The client provided all of the test samples for testing by UL. UL did not select the samples or determine whether the samples provided were representative of other manufactured products. UL has not established Follow-Up Service or other surveillance of the product. The client and or manufacturer are solely and fully responsible for conformity of all products to all applicable standards, specifications or requirements. UL Logo and Marks shall not be used in connection with the above tested product(s). Only those products bearing the UL Listing and Classification Marks should be considered as being covered by UL's Listing, Classification and Follow-Up Service. Look for the UL Listing and Classification Mark on the product.

Issued By:



Michael Keil
UL International Germany GmbH

Authorized By



Ali Eminel
UL International Germany GmbH

