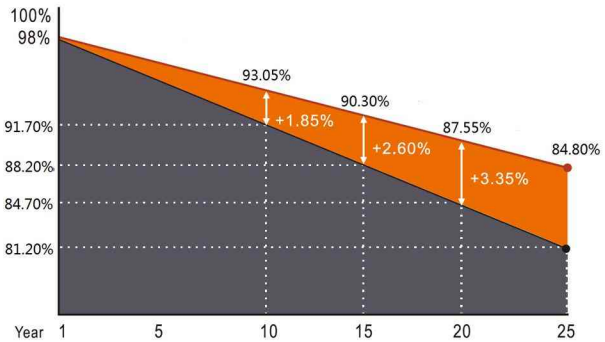
PM410W(108)

- Half Cut Cell Technology
- Gallium-doped Technology
- Less Hot Spot Shading Effects
- Anti-PID Low LID Performance
- Enduring High Reliability & Performance

FRAME

Linear performance Warranty



Comprehensive Certificates

- TÜV NORD
- ISO9001:2015
- ISO14001:2015
- ISO45001:2018
- IEC61215/IEC61730

Becker Tech GmbH
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PM410W(108)

Module		PM-410W(108)	
Efficiency	(%)	20.97	
Tolerance	(W)	0 ~ +5	
Standard Test		STC	NOCT
Maximum Power	(Pmax/W)	410	310
Open Circuit Voltage	Voc(V)	37.45	35.23
Short Circuit Current	Isc(A)	14.02	11.16
Maximum Power Voltage	Vmp(V)	31.61	29.72
Maximum Power Current	Imp(A)	13.13	10.43
Cells	(mm)	MBB-182×91mm Mono Perc	
Cells Qty	(Pcs)	108(6×18)	
Max System Voltage	(V)	DC1500	
Open Circuit Voltage Temp	(%/°C)	-0.282	
Circuit Current Temp	(%/°C)	0.05	
Peak Power Temp	(%/°C)	-0.348	
Operate Temp	(°C)	-40 to 85	
Nominal Operating Temp	(°C)	45±2	
Max Series Fuse Rating	(A)	25	
Frontal Static Load	(Pa)	5400	
Back Static Load	(Pa)	2400	

Standard Test Conditions[STC]: irradiance 1,000 W/m2; AM 1,5; module temperature 25°C.

Measuring uncertainty of power is within±3%Tolerance of Pmpp: 0-+3%. Certified in accordance with IEC61215,IEC61730-1/2.

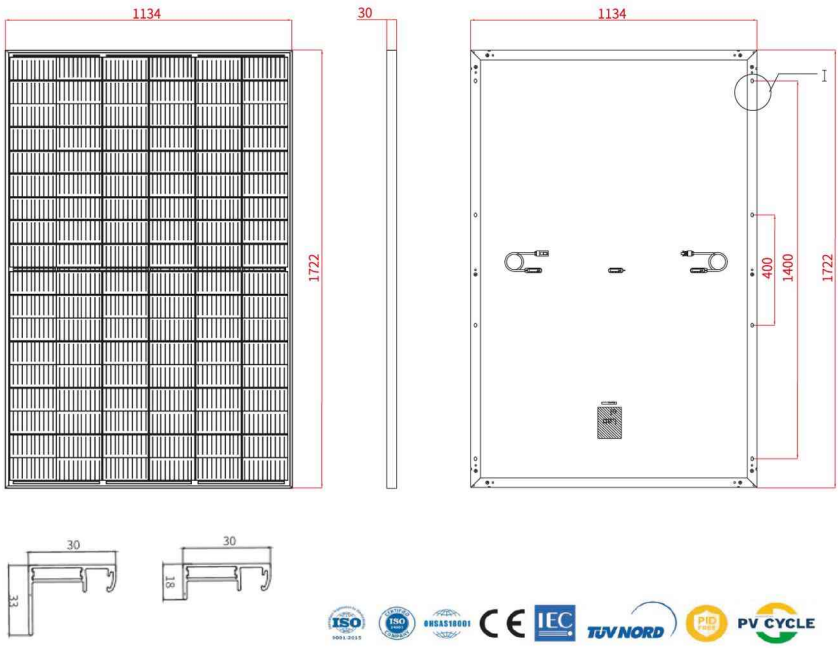
Raw material

Frame	Alloy Aluminium	Glass (mm)	3.2
Cell	6x18pcs 182x91mm Mono solar cells perc	Junction box	IP≥68, TÜV & UL
Diode Qty	3	Connector	4mm² , MC4 or EVO 2
Cable (mm)	300		

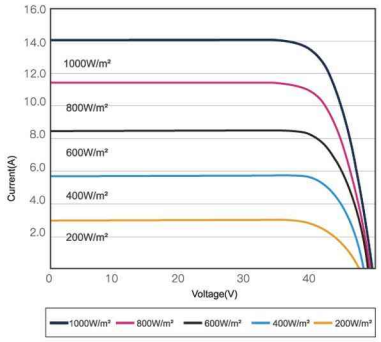
Package

Module size (mm)	1722×1134×30	Weight (kg)	21.5
Loading	936 PCS/40HQ	Package	36PCS/PLT

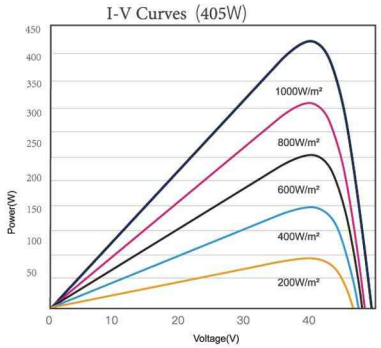
Engineering Drawings



IV CURVES



I-V Curves (405W)



P-V Curves(405W)

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TÜV NORD ZERTIFIKAT

TÜV NORD

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Becker Tech GmbH
Soederbergstr. 14, 84513 Toeging am Inn
Germany

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

TÜV NORD CERT GmbH Type Tested

Valid from: 2023-05-17
Valid until: 2026-10-27

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 23 406749 - 126
Manufacturer:	see Annex 1
Test Report No.:	492012415.001
File No.:	PVP04126/23P

TÜV NORD CERT GmbH
Certification Body
Consumer Products

Essen, 2023-05-17

Please also pay attention to the information stated overleaf.

TÜV NORD CERT GmbH | Am TÜV 1 | Fon +49 (0)201 825 5120 | D-45307 Essen | Fax +49 (0)201 825 3209 | www.tuev-nord-cert.de | prodcert@tuev-nord.de

Description of product(s):

Module types:	**PV Modules with Half-cut 166mm Mono-crystalline Silicon Solar Cells:** 144 cells: PM6-xxxW(144) (xxx=440-470, in steps of 5) 120 cells: PM6-xxxW(120) (xxx=365-390, in steps of 5) 72 cells: PM6-xxxW(72) (xxx=220-235, in steps 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 or 2400Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	**PV Modules with Half-cut 182mm Mono-crystalline Silicon Solar Cells:** 144 cells: PM-xxxW(144) (xxx=520-550, in steps of 5) 132 cells: PM-xxxW(132) (xxx=475-505, in steps of 5) 120 cells: PM-xxxW(120) (xxx=435-455, in steps of 5) 108 cells: PM-xxxW(108) (xxx=390-410, in steps of 5) 72 cells: PM-xxxW(72) (xxx=260-275, in steps 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 or 2400Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

TÜV NORD CERT GmbH
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Consumer Products

Manufacturer:

Manufacturer:	**Coded by debitor no. 55519477**
Factory inspection report no.:	862010573.002

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

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Module types:	**PV Modules with Half-cut 210mm Mono-crystalline Silicon Solar Cells:** 132 cells: PM12-xxxW(132) (xxx=650-670, in steps of 5) 120 cells: PM12-xxxW(120) (xxx=590-610, in steps of 5) 110 cells: PM12-xxxW(110) (xxx=540-555, in steps of 5) 72 cells: PM12-xxxW(72) (xxx=355-365, in steps of 5)
Maximum system voltage:	1500V
Fuse rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
Design load (positive / negative):	2400Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Remark:
For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.

TÜV NORD CERT GmbH
Certification Body
Consumer Products