

POWERTRONIK®

SuperSolar

www.powertronik.ch

TPVS-108/M10H

182mm Half Cell Series

390-410w

108-CELL HALF CUT MONOCRYSTALLINE SOLAR MODULE



Product Advantages



10BB half-cut cell technology

New circuit design, lower internal current, lower Rs loss
Ga doped wafer, attenuation < 2% (1st year) / ≤ 0.55% (Linear)



Significantly lower the risk of hot spot

Special circuit design with much lower hot spot temperature



Lower LCOE

2% more power generation, lower LCOE



Excellent Anti-PID performance

2 times of industry standard Anti-PID test by TÜV SÜD



IP68 junction box

High waterproof level

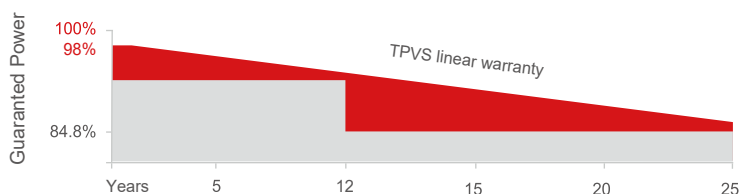
21.0%

Module efficiency

410W

Highest power output

Performance Warranty



- 2.00 %

First year power degradation

- 0.55 %

Annual degradation

12
Years

Materials and workmanship warranty

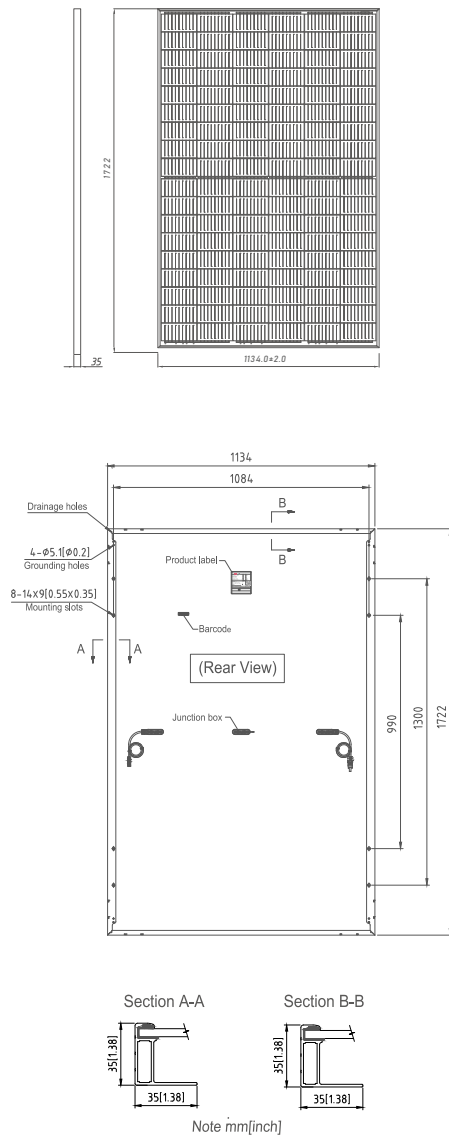
25
Years

Linear power warranty

Product Certification



TECHNICAL DRAWINGS



ELECTRICAL PARAMETERS

Performance at STC (Power Tolerance 0 ~ +3%)

Maximum Power (Pmax/W)	410	405	400	395	390
Operating Voltage (Vmpp/V)	31.59	31.38	31.18	30.98	30.76
Operating Current (Impp/A)	12.98	12.91	12.83	12.76	12.69
Open-Circuit Voltage (Voc/V)	37.45	37.24	37.04	36.84	36.62
Short-Circuit Current (Isc/A)	13.88	13.81	13.73	13.66	13.59
Module Efficiency η m(%)	21.0	20.7	20.5	20.2	19.9

Performance at NMOT

Maximum Power (Pmax/W)	309.6	306.0	302.3	298.6	294.9
Operating Voltage (Vmpp/V)	29.2	29.0	28.8	28.6	28.4
Operating Current (Impp/A)	10.62	10.56	10.50	10.44	10.38
Open-Circuit Voltage (Voc/V)	35.2	35.0	34.8	34.6	34.4
Short-Circuit Current (Isc/A)	11.16	11.10	11.04	10.98	10.93

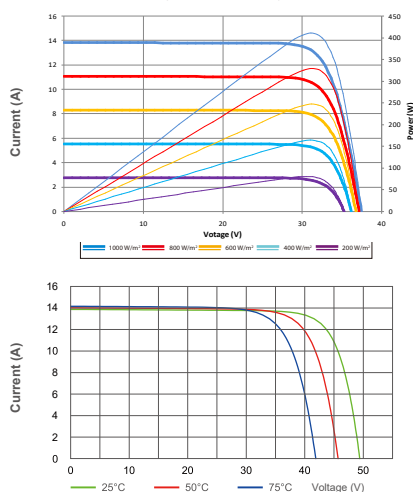
STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

MECHANICAL SPECIFICATION

Cell Type	Monocrystalline
Cell Dimensions	182*182mm
Cell Arrangement	108 (6*18)
Weight	22.1kg
Module Dimensions	1722*1134*35mm
Cable Length	Cable length 350mm or customized length
Cable Cross Section Size	TÜV: 4mm ²
Front Glass	3.2mm AR Coating Tempered Glass
No. of Bypass Diodes	3/6
Packing Configuration	31pcs/Carton, 806pcs/40HQ
Frame	Anodized Aluminium Alloy
Junction Box	IP68

I-V CURVE

Current-Voltage & Power-Voltage Curve (410)



OPERATING CONDITIONS

Maximum System Voltage	1500V/DC(IEC)
Operating Temperature	-40°C ~ +85°C
Maximum Series Fuse	25A
Static Loading	Snow Loading: 5400Pa/ Wind Loading: 2400Pa
Conductivity at Ground	≤ 0.1Ω
Safety Class	II
Resistance	≥ 100MΩ
Connector	MC4 compatible

TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.36%/°C
Temperature Coefficient Voc	-0.304%/°C
Temperature Coefficient Isc	+0.050%/°C
NMOT	42 ± 2 °C