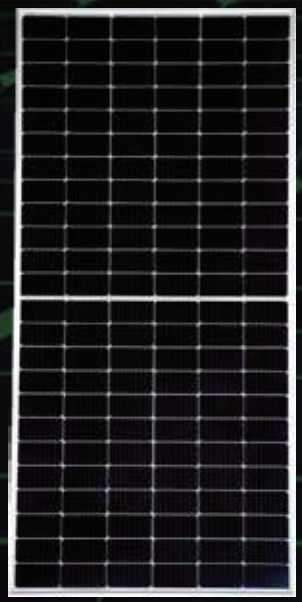


VDS POWER

VDS-S144/M6H

435-460W

166 mm Half Cell , 144 Cells
Monocrystalline Solar Module

21.1%	460W	12 YEARS	25 YEARS
Module Efficiency	Highest Power Output	Material & Workmanship Warranty	Linear Output Warranty

-2.5% First year power degradation **-0.55%** Annual degradation

PRODUCT ADVANTAGES

High Power Output
Compared to 158.75 mm module, the power output can increase 25W-30W

High Reliability
Passed 3*IEC standard test

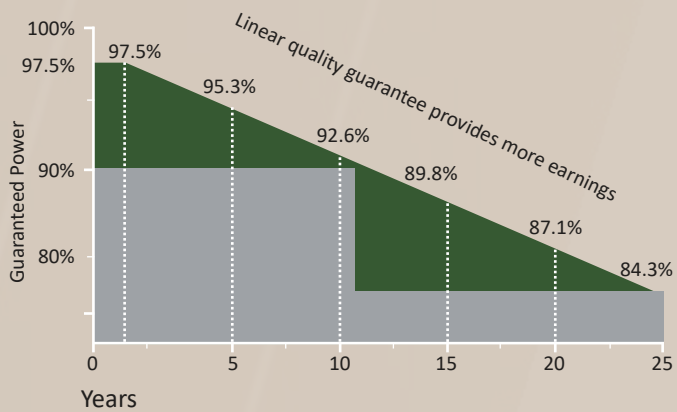
Low Hot-spot Risk
1/2 current reducing the hot spot temperature

Excellent loading capability
2400Pa wind loads, 5400Pa snow loads, 8000Pa extra support

Low NMOT
As low as 43°C, improving the power generation efficiency

Half Cell, MBB Technology
Series-then-parallel cell connection design more reliable soldering technology

PRODUCT GUARANTEE



Standard linear power guarantee
VDS linear power guarantee

Certifications of Product and Manufacturer

VDS Power GmbH
Rudolf-Diesel-Strasse 10, 33178 Borchen
www.vdspower.eu

VDS-S144/M6H

ELECTRICAL CHARACTERISTICS

STC	435	440	445	450	455	460
Maximum Power at STC (Pmax)	435W	440W	445W	450W	455W	460W
Optimum Operating Voltage (Vmp)	40.8V	41.0V	41.2V	41.4V	41.6V	41.8V
Optimum Operating Current (Imp)	10.67A	10.74A	10.81A	10.87A	10.94A	11.01A
Open Circuit Voltage (Voc)	48.6V	48.8V	49.0V	49.2V	49.4V	49.6V
Short Circuit Current (Isc)	11.4A	11.47A	11.54A	11.61A	11.68A	11.75A
Module Efficiency	20.0%	20.2%	20.5%	20.7%	20.9%	21.1%
Operating Module Temperature	-40°C to +85°C					
Maximum System Voltage	1500V DC (IEC)					
Maximum Series Fuse rating	20 A					
Power Tolerance	0~+5W					

STC: Irradiance 1000 W/m², module temperature 25°C, AM=1.5; Measuring tolerance: ± 3%.

NMOT	435	440	445	450	455	460
Maximum Power at NMOT (Pmax)	334.9W	339.0W	343.1W	348.1W	352.2W	356.8W
Optimum Operating Voltage (Vmp)	38.5V	38.7V	38.9V	39.2V	39.4V	39.6V
Optimum Operating Current (Imp)	8.70A	8.76A	8.82A	8.88A	8.94A	9.01A
Open Circuit Voltage (Voc)	46.8V	47.0V	47.2V	47.4V	47.6V	47.8V
Short Circuit Current (Isc)	9.19A	9.24A	9.30A	9.36A	9.42A	9.48A

NMOT: Irradiance 800 W/m², ambient temperature 20°C, AM=1.5, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature (NMOT)	42±2°C
Temperature Coefficient of Pmax	-0.34%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.040%/°C

MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline silicon 166 mm (9BB)
No. of Cells	144 (6 × 24)
Dimensions	2095 × 1039 × 35 mm
Weight	23.8 kgs
Front Glass	3.2 mm tempered glass with AR coating
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm², cable length 350 mm or customized length

PACKING CONFIGURATION

Container	20' GP	40' HC
Pieces per pallet	31	31+2
Pallets per container	5	22
Pieces per container	155	726

COMPANY PROFILE

VDS Power GmbH is a German based company with vast experiece in providing photovoltaic solutions worldwide. Our management team has been focusing on the European market for more than 10 years. We have satisfied customers in Germany , Spain , Italy , Bulgaria and many other European countries. Through direct access to production , we control the quality of photovoltaic modules by monitoring and documenting the manufacturing processes from material procurement to final testing. With a warehouse in Rotterdam , we ensure fast delivery within the EU. This enables us to respond quickly to the needs of different purchase quantities. We attach great importance to a reliable partnership and cooperation with our customers. We value reliability , commitment , safety and transparency.