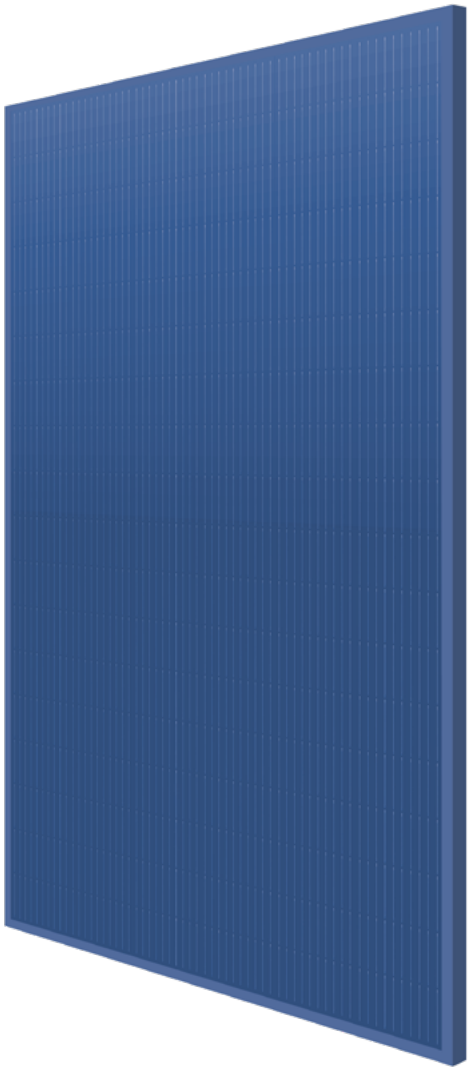
European Experts
in Residential Modules

Sapphire TOPCon N-type

FRONT SIDE

420W

› Double Glass Bifacial



Module efficiency
Module efficiency up to 20.02 %

Colour RAL
5023 (frame) 5009 (glass)
Perfect integration on demanding BIPV projects

PID resistance
Certified according to IEC TS 62804 standards

Bifacial cell
Bifaciality factor: 80 ± 5 %

Sustainable product
High percentage of recyclable materials

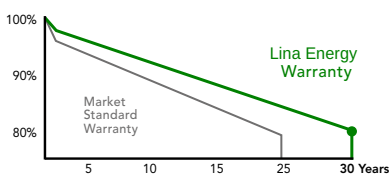
Easy to handle
Comfortable installation thanks to an optimized area size

European Quality

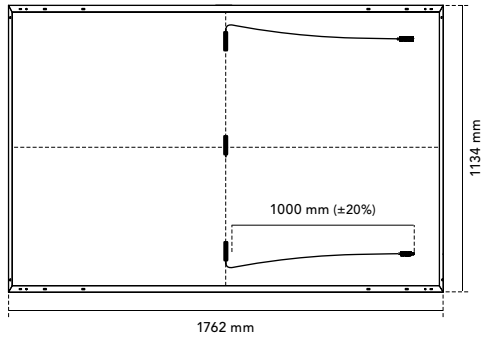
20 Years
Product Warranty
+5 years for Premium Partners

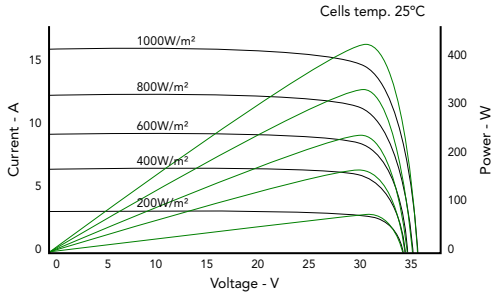
30 Years
Performance Warranty
Linear Warranty

80% performance at 30 years



LE MEPV — SAPPHIRE DG Bif 420W





Mechanical specification	
Solar cells	N-Type bifacial monocrystalline silicon cells
Front Glass	2 mm anti-reflective surface tempered solar glass
Back Glass	2 mm tempered uncolored solar glass
Frame	Sapphire anodized aluminium
Junction Box	IP68, 3 by-pass diodes
Connector	Original MC4-Evo 2
Cable	1000 mm (±20%) length and 4 mm² section
Dimension	1762 x 1134 x 30 mm (±1%)
Area	2.00 m²
Weight	25.5 kg

Temperature coeficients	
Temperature coeficient of Isc (α)	0.05 %/°C
Temperature coeficient of Voc (β)	-0.28 %/°C
Temperature coeficient of Pmax (γ)	-0.29 %/°C
Temperature range	-40 °C ~ +85 °C
Nominal operating cell temperature (NOCT)	45 ± 2 °C

	MEPV 420	
Electrical characteristics	STC	NOCT
Nominal power. Pmax	420 Wp	311 Wp
Short-circuit current (Isc)	15.31 A	12.09 A
Open-circuit voltage (Voc)	35.22 V	33.27 V
Maximum power current (Imp)	14.72 A	11.63 A
Maximum power voltage (Vmp)	28.53 V	26.72 V
Module efficiency	21.02 %	
Electrical characteristics	**Bifacial gain 10%**	
Nominal power. Pmax	462 Wp	
Short-circuit current (Isc)	16.84 A	
Open-circuit voltage (Voc)	35.22 V	
Maximum power current (Imp)	16.19 A	
Maximum power voltage (Vmp)	28.53 V	

* STC: 1000 W/m², module temperature 25°C, AM 1.5 * NOCT: 800 W/m², ambient temperature 20°C, AM 1.5

Operating parameters	
Maximum voltage	1500 V
Maximum series fuse rating. Ir	25 A
Power output tolerance	0 - +3 %
Voc and Isc tolerance	± 3 %
Fire rating	Broof (t4) (EN 13501-5)
	Class A or C (UL 790)
Protection class	Class II (IEC 61140)
Mechanical loads	Front load 5400 Pa, Back load 2400 Pa

Corporative and product certificates
ECOVADIS rating - Platinum Medal (TOP 1%)
Solar Industry Forced Labor Prevention Pledge by SEIA
ISO9001:2015 - Quality Management Systems
ISO14001:2015 - Environmental Management System
WEEE compliance in Germany
PV CYCLE Italy
IEC 61215 - Terrestrial photovoltaic (PV) modules - Design qualification and type approval
IEC 61730 - Photovoltaic (PV) module safety qualification
IEC 61701 - Photovoltaic (PV) modules - Salt mist corrosion testing
IEC 62716 - Photovoltaic (PV) modules - Ammonia corrosion testing
IEC TS 62804 - Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation
Hail resistance HW3/RG3
Certificate of Factory Production Control (UK) - MCS
Fire reaction class: 1 - LAPI
Swissolar Quality Certificate

NOTE: All information contained in this data sheet is provided for general information purposes only. Product specifi cations may be subject to technical modifi cations. Reception installation and use shall comply with the applicable Installation Manual, General Conditions of Sale and Warranty Terms and Conditions.

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Crafting a brighter future

Since 2016, our primary focus has been on providing high-quality, durable photovoltaic module that enable us and future generations to sustainably generate clean energy for the preservation of our planet.