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French manufacturer of solar panels

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TOP BRA
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MODUL
FRANCE
2021 2022

A high efficiency low carbon certified photovoltaic panel. Ideal for installations from 100 to 500kWp.

# FLASH 410 Half-Cut Glass-Glass



## OPTIMIZED PERFORMANCE

High performance monocrystalline cells Bifacial cell allowing up to 30% more power



25 year of product warranty
+5 years extension upon activation of
warranties\*

Performance guarantees on the photovoltaic yield of 30 years

Conditions for activating guarantees on dualsun.com



## **QUALITY & SAFETY**

CE marking
Improved hail resistance
Certified following IEC norms\*
Salt mist corrosion test - IEC standard

\* IEC 61215 & 61730 n° IEC 61701 n° IEC 62716 n°



Sleek and attractive design Mechanical resistance up to 6600 Pa Compatible with all roof installation systems





## INDUSTRY OF THE FUTURE LABEL

Photovoltaic cells laminated in Asia for an optimized value chain

Systematic audit of productions by third-party control office

## **IDEAL PANEL FOR ROOF TYPES:**

RESIDENTIAL

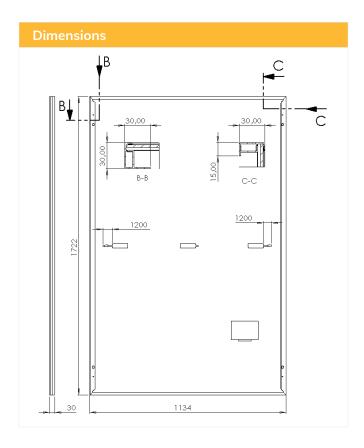
COMMERCIAL











# 100% 98% 98% 94% 91,7% 89,5% 87,2% Years



 $Dim (L \times W \times t)$  $1722 \text{ mm} \times 1134 \text{ mm} \times 30 \text{mm}$ 

Weight 25,1 kg 108 1/2 Number of cells

Cell type PERC Monocrystalline< MC4 Original Stäubli Connectors Cable length 1200 / 1200 mm IP67 - 3 diodes Junction box

Maximum load 6600 Pa (Snow) 3600 Pa (Wind) Frame / Backsheet Black anodised aluminium / transparent

ECS value 462 (PPE2) kg CO<sub>2</sub>/kWc-e

Glass thickness 2+2mm Bifaciality coef 70% ± 10%

-40°C to +85°C Temperature Maximum system voltage 1500 VDC Maximum reverse current 25 A NMOT 42 +/- 3°C Application class Class II

Nominal power	410 W
Output power tolerance	+/-5W
Module minimum guaranteed efficiency	21 %
Rated voltage (V <sub>mpp</sub> )	31,09 V
Rated current (I <sub>mpp</sub> )	13,20 A
Open circuit voltage (V <sub>oc</sub> )	37,33 V
Short-circuit current (I <sub>sc</sub> )	14,06 A

\* STC conditions (AM 1.5 - 1000 W / m<sup>2</sup> - 25 ° C) Measurement tolerance: +/- 3%

Voltage temperature coefficient ( $\mu V_{oc}$ )	-0,269 %/K
Current temperature coefficient ( $\mu I_{sc}$ )	0,063 %/K
Power temperature coefficient ( $\mu P_{mpp}$ )	-0,335 %/K

