



ETAT DE FRIBOURG  
STAAT FREIBURG

## Portail cartographique du canton de Fribourg

### Légende

Adresses et bâtiments MO-RegBL  
(RegBAFR)

Adresses MO-RegBL (RegBAFR)

Statut du bâtiment

● Existant

Bâtiments MO-RegBL (RegBAFR)

Type

■ Bâtiment

▨ Couvert indépendant

### Parcellaire

Immeubles en vigueur

Type

□ Biens-fonds en vigueur

### Fond de carte

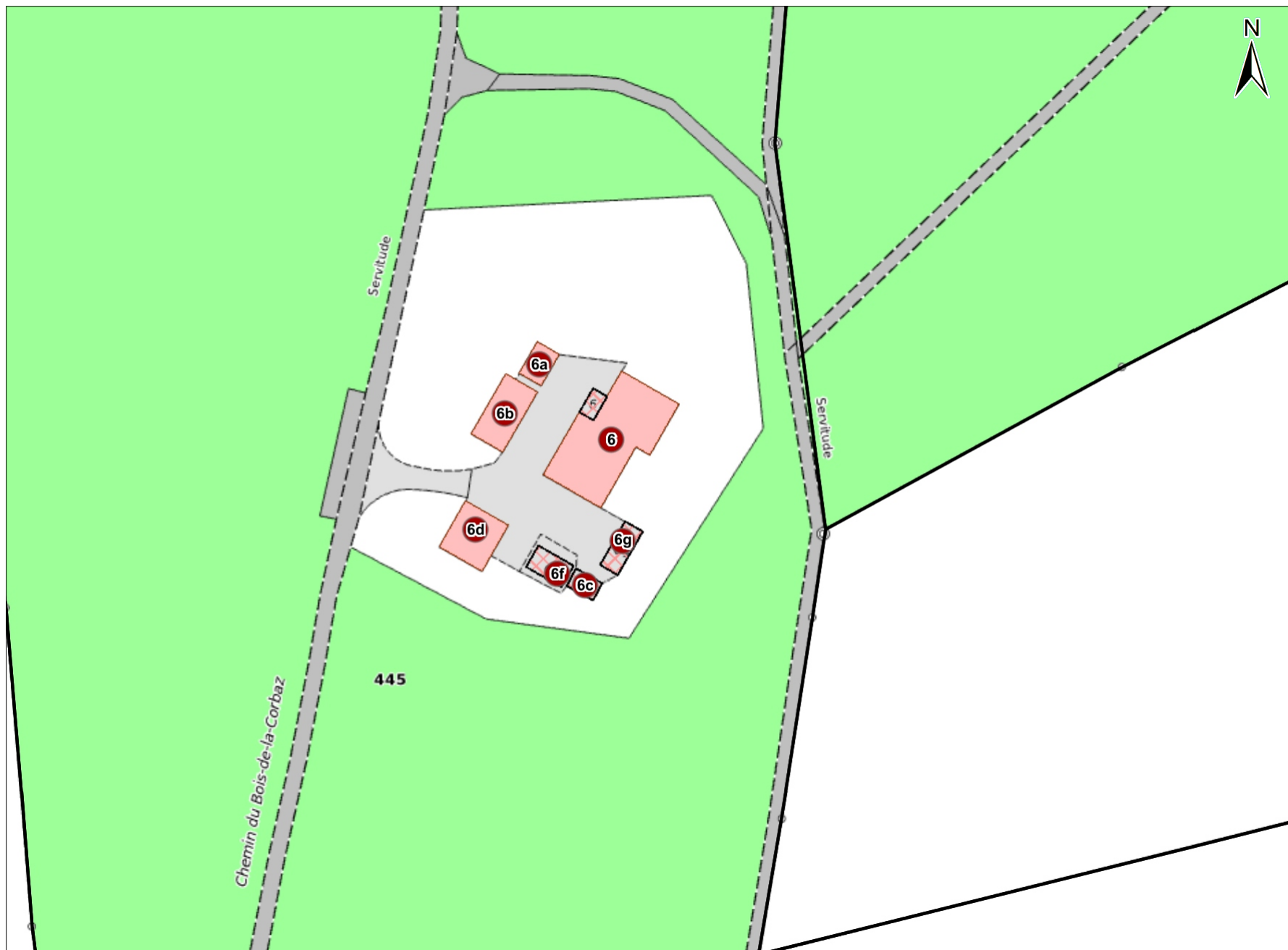
Plan du RF couleur



# Portail cartographique du canton de Fribourg

Description

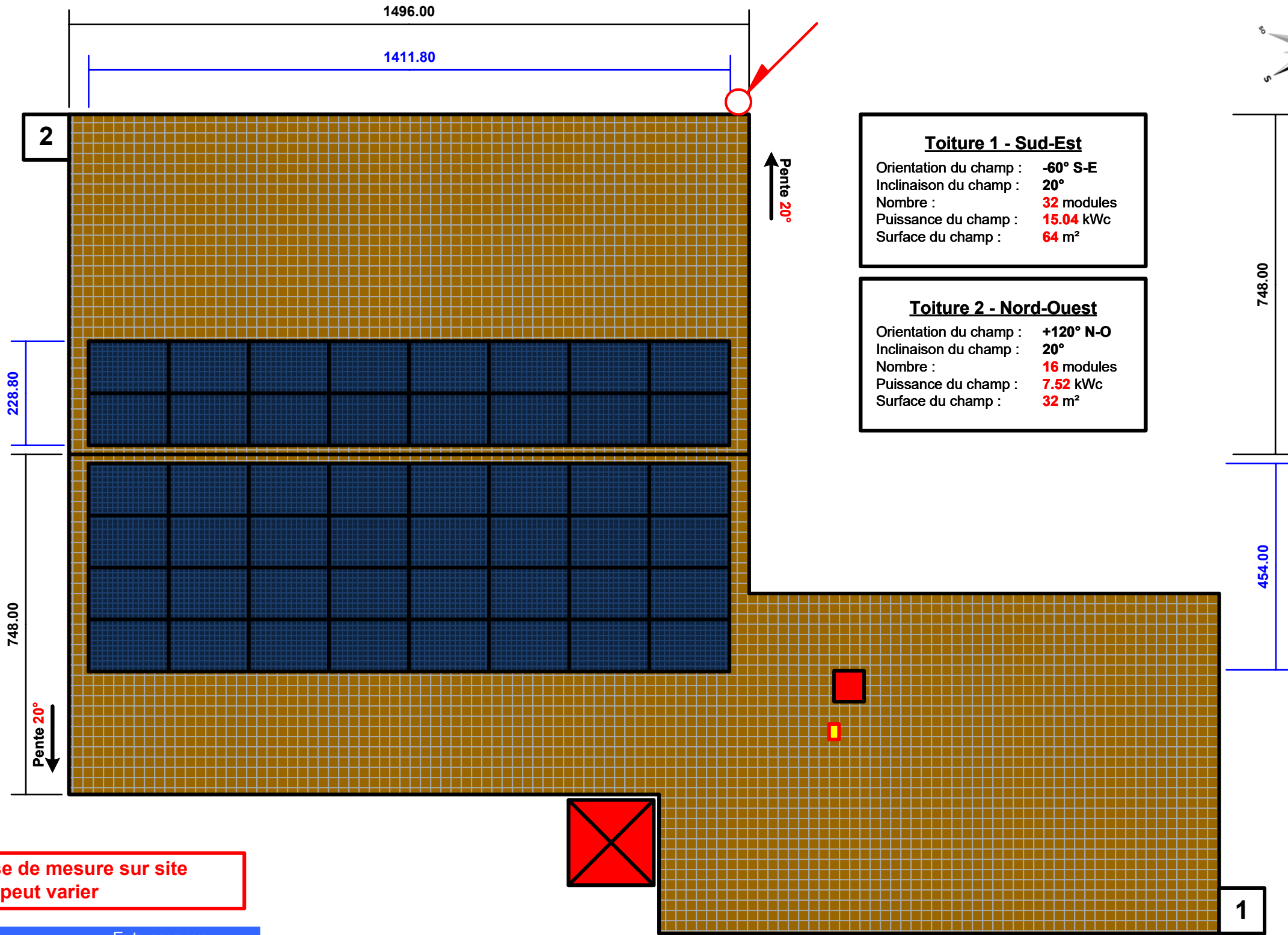
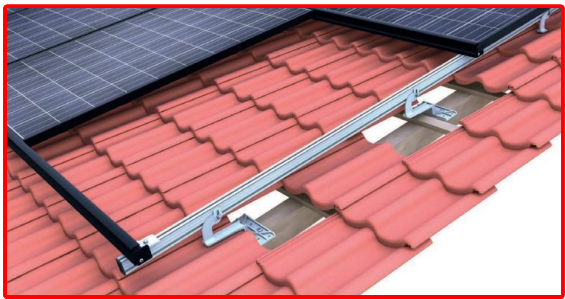
Imprimé le 09.07.2026



Informations dépourvues de foi publique

20 m

© swisstopo, Etat de Fribourg



#### Légendes :

- Panneaux solaires photovoltaïques - BF
- Toiture en tuiles
- Sortie - Divers
- Cheminée
- Tour d'accès
- Descente vers étage inférieur

Implantation à confirmer après prise de mesure sur site  
La quantité des modules peut varier

Description du Projet

Entrepreneur

Implantation solaire photovoltaïque

Cabane Forestière

Bourgeoisie De Fribourg

Chemin du Bois-de-la-Corbaz 6 - 1782 La Corbaz

LES PROS

du SOLAIRE

groupe

e

Matran

Tél. 026 429 29 29

Info.dti@groupe-e.ch

www.groupe-e.ch/fr

|                          |           |               |           |          |      |            |            |
|--------------------------|-----------|---------------|-----------|----------|------|------------|------------|
| Niveau :                 | TOITURES  | Etape :       | EXECUTION | Format : | A3   | Crée le :  | 08.07.2026 |
| Niméro OT :              | 210000790 | Dessiné par : | LAPA      | Visa :   | ELSH | Echelle :  | 1/100      |
| Emplacement du fichier : |           |               |           |          |      | Impré le : | 08.07.2026 |

H:\03\leg\07-Solaire\21 - Dossier clients\210 - Matran\Bourgeoisie fribourg - cabane forestière - La Corbaz\02 - Dossier d'exécution\Plans\

Modifications

| Indice | Description | Date | Nom |
|--------|-------------|------|-----|
| -      | -           | -    | -   |
| -      | -           | -    | -   |
| -      | -           | -    | -   |
| -      | -           | -    | -   |
| -      | -           | -    | -   |

#### Total :

#### Ajoutée - Mode paysage

Structure : **Novotegra**  
Type de module : Jinko Tiger Neo III JKM470N-48QL6-DV mono noir **470** Wc  
Nombre : **48** modules  
Dimension : 1762mm x 1134mm x 30mm  
Puissance du champ : **22.56** kWc  
Surface du champ : **96** m<sup>2</sup>

Vidéo - Structure



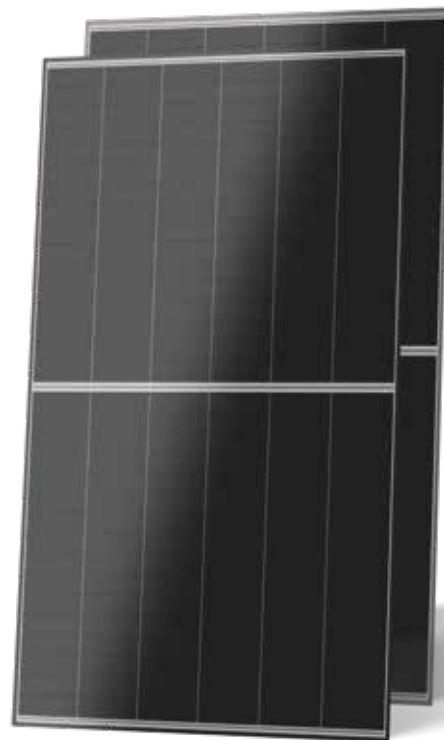
Échafaudage  
Protocole de réception



# 48QL6-DV

460-485 Watt

MONO-FACIAL MODULE  
WITH DUAL GLASS



## Higher Power on Front Side

Leading power class based on the enhanced N-type TOPCon platform, achieved through cutting-edge technology and an optimized layout that captures more sunlight.



## Optimized Heat resistance

Optimized temperature coefficient achieved via advanced graphical patterning, busbar and multi-cell technology.



## Proven Low Light Performance

Enhanced cell structure ensures superior module performance under low-light conditions.



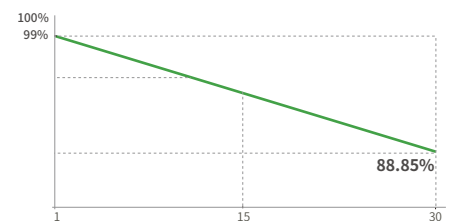
## Mechanical Load Enhanced

Certified to withstand:  
6000 Pa front side max static test load  
4000 Pa rear side max static test load



## Industry Leading Warranty

Advanced metallization and iterated module encapsulation deliver superior resistance to PID, LID / LeTID, and UV degradation.



|                                    |                                            |                                        |                                                     |
|------------------------------------|--------------------------------------------|----------------------------------------|-----------------------------------------------------|
| <b>15 Year</b><br>Product Warranty | <b>30 Year</b><br>Linear Power<br>Warranty | <b>1%</b><br>First-year<br>Degradation | <b>0.35%</b><br>Annual Degradation<br>Over 30 Years |
|------------------------------------|--------------------------------------------|----------------------------------------|-----------------------------------------------------|

- IEC61215:2021 / IEC61730:2023
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



POSITIVE QUALITY™  
Continuous Quality Assurance

**JKM460-485N-48QL6-DV-F2-EU**

# 48QL6-DV 460-485 Watt

## Mechanical Characteristics

|                                        |                                                                        |
|----------------------------------------|------------------------------------------------------------------------|
| Cell Type                              | N- type Mono-crystalline                                               |
| No. of cells                           | 192 (48×4)                                                             |
| Dimensions                             | 1762×1134×30 mm                                                        |
| Weight                                 | 24.4 kg                                                                |
| Front Glass                            | 2.0 mm, Anti-reflection Coating                                        |
| Back Glass                             | 2.0 mm, Heat Strengthened Glass                                        |
| Frame                                  | Anodized Aluminium Alloy                                               |
| Junction Box                           | IP68 Rated                                                             |
| Protection Class                       | Class II                                                               |
| IEC Fire Type                          | Class C                                                                |
| Connector Type                         | JK03M/JK03M2/Others*                                                   |
| Output Cables<br>(Including Connector) | ≥4.0 mm <sup>2</sup><br>(+): 600 mm , (-): 400 mm or Customized Length |

\* MC4-EVO2 available upon request and subject to availability

## Packaging Configuration

|                                             |                                                           |
|---------------------------------------------|-----------------------------------------------------------|
| Pallet Dimensions                           | 1792×1140×1249 mm                                         |
| Packing Detail<br>(Two pallets = One stack) | 37 pcs/pallets, 74 pcs/stack,<br>962 pcs/ 40'HQ Container |

## Specifications (STC)

|                                             |            |       |       |       |       |       |
|---------------------------------------------|------------|-------|-------|-------|-------|-------|
| Maximum Power - P <sub>max</sub> [Wp]       | 460        | 465   | 470   | 475   | 480   | 485   |
| Maximum Power Voltage - V <sub>mp</sub> [V] | 30.57      | 30.74 | 30.93 | 31.11 | 31.30 | 31.48 |
| Maximum Power Current - I <sub>mp</sub> [A] | 15.05      | 15.13 | 15.20 | 15.27 | 15.34 | 15.41 |
| Open-circuit Voltage - V <sub>oc</sub> [V]  | 35.67      | 35.92 | 36.17 | 36.42 | 36.67 | 36.92 |
| Short-circuit Current - I <sub>sc</sub> [A] | 15.72      | 15.77 | 15.82 | 15.86 | 15.90 | 15.95 |
| Module Efficiency STC [%]                   | 23.02      | 23.27 | 23.52 | 23.77 | 24.02 | 24.27 |
| Power Sorting                               | 0 ~ + 3 %  |       |       |       |       |       |
| Temperature Coefficient of P <sub>max</sub> | -0.26 %/°C |       |       |       |       |       |
| Temperature Coefficient of V <sub>oc</sub>  | -0.24 %/°C |       |       |       |       |       |
| Temperature Coefficient of I <sub>sc</sub>  | 0.046 %/°C |       |       |       |       |       |

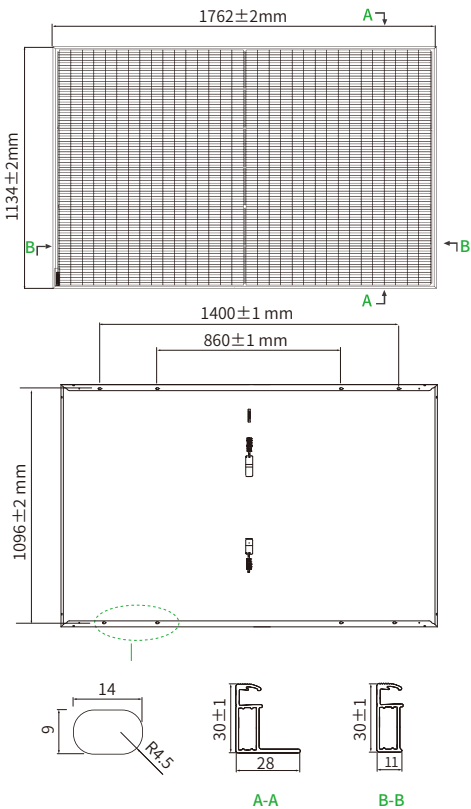
STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Application Conditions

|                               |                     |
|-------------------------------|---------------------|
| Level T <sub>98</sub> ≤ 70 °C | - 40 °C to + 70 °C* |
| Maximum System Voltage        | 1500 VDC (IEC)      |
| Maximum Series Fuse Rating    | 30 A                |

\*Short-term up to 85°C; higher operation requires IEC TS 63126 testing

## Engineering Drawings



\*Note: For specific dimensions and tolerance ranges, please refer to the corresponding detailed module drawings.

## Electrical Performance

