

MASTER CONTRACT: 303133

REPORT: 80134350

PROJECT: 80134350



eArc[™] PV System

Installation Manual

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Purpose of this guide

- This guide contains information regarding the installation and safe handling of Sunman (Zhenjiang) Company Limited eArc PV system. Sunman (Zhenjiang) Company Limited referred to as “SUNMAN”.
- Installers must read and understand this guide prior to installation. For any questions, please contact SUNMAN’s Customer Service Department “or our local representatives” for more detailed information. Installers should follow all safety precautions described in this guide as well as local codes when installing eArc.
- Before installing a solar photovoltaic system, installers should familiarize themselves with its mechanical and electrical requirements. Keep this guide in a safe place for future reference (care and maintenance) and in case of sale or disposal of eArc.
- SUNMAN’s eArc are tested and certified for installations worldwide. Different regions may have different regulations for solar PV installations.

Features & Benefits

- Flexible layouts
- eArc™ PV system can be installed at any shape roofs, which has integrated appearance with buildings.
- Maximization installation quantity of eArc at any kinds of roof.
- Quick installation
- Ultra-thin and light-weight to save installation labor by a large margin.



Notices

This manual contains important installation instructions for the core hardware components required for eArc™ PV System PV arrays.

Copyright and Trademark Information

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Warranty Warnings

“WARRANTY VOID IF NON-SUNMAN-CERTIFIED HARDWARE IS ATTACHED TO eArc™ PV System.”

For Further Information

For additional technical support documentation, please visit the Support page of the SUNMAN website at www.sunman-energy.com

General safety

- eArc that fall under this application class may be used in system operation at more than 50V DC or 240W, where general contact access is anticipated. eArc are qualified for safety under IEC 61730-2 and within this application class are considered to meet the requirements for Safety Class II.
- eArc are qualified for Application Class A(IEC 61730-1).
- Installing solar photovoltaic systems requires specialized skills and knowledge. Installation should only be performed by qualified personnel.
- Installers should assume all risks of injury that might occur during installation, including, but not limited to, the risk of electric shock.
- One single eArc may generate more than 30V DC when exposed to direct sunlight. Contact with a DC voltage of 30V or more is potentially hazardous.
- Do not disconnect during load connection.
- Photovoltaic solar eArc convert light energy to direct current electrical energy. They are designed for outdoor use. eArc can be ground mounted, mounted on rooftops, vehicles or boats. The proper design of support structures lies within the responsibility of the system designers and installers.
- Do not use mirrors or other magnifiers to concentrate sunlight onto eArc.
- When installing the system, abide to all local, regional and national statutory regulations. Obtain a building permit if necessary.
- eArc electrical characteristics are within $\pm 10\%$ of the indicated values of I_{sc} , V_{oc} and P_{max} under standard test conditions (Irradiance of $1000W/m^2$, AM 1.5 spectrum, a cell temperature of $25^{\circ}C$ ($77^{\circ}F$)).
- Only use equipment, connectors, wiring and support frames suitable for solar electrical systems.
- “Always use fall protection equipment when working from heights of 6 feet (183cm) or above”. Follow Occupational Safety and Health Act (OSHA) or local governing safety regulations regarding fall protection. (UL only)

Handling safety

- Do not lift eArc by grasping eArc' junction box or electrical leads.
- Do not stand, step or walk on any side of eArc.
- Do not drop eArc or allow objects to fall on eArc.
- Do not place any heavy objects on eArc.
- Be cautious when placing eArc down onto a surface, particularly when placing it in a corner.
- Inappropriate transport and installation may break eArc and void the warranty.
- Do not attempt to disassemble eArc, and do not remove any attached nameplates or components

from eArc.

- Do not apply paint or adhesive to eArc' top surface.
- To avoid damage to the front cover and backsheet, do not scratch, “dent” or hit the front cover and backsheet.
- Do not drill holes in the ribs. This may compromise the frame strength, cause corrosion of the ribs and void the warranty.
- Do not scratch the anodized coating of the ribs (except for grounding connection). It may cause corrosion of the ribs or compromise the ribs strength.
- A panel with broken front plate or torn back sheet cannot be repaired and must not be used since contact with any panel surface or the ribs can cause an electric shock.
- Work only under dry conditions, and use only dry tools. Do not handle panels under wet conditions unless wearing appropriate protective equipment.
- When storing uninstalled panels outdoors for any period of time, always cover the panels and ensure that the front cover faces down “on a soft flat surface” to prevent water from collecting inside the panel and causing damage to exposed connectors.

Installation safety

- Never open electrical connections or unplug connectors while the circuit is under load.
- Contact with electrically charged parts of the panels, such as terminals, can result in burns, sparks and lethal shock whether or not the panel is connected.
- Do not touch eArc unnecessarily during installation. The front surface and the ribs may be hot; there is a risk of burns and electric shock.
- Do not work in the rain, snow or in windy conditions.
- Avoid exposing cables to direct sunlight in order to prevent insulation degradation.
- Keep children well away from the system while transporting and installing mechanical and electrical components.
- Completely cover eArc with an opaque material during installation to prevent electricity from being generated.
- Do not wear metallic rings, watchbands, earrings, nose rings, lip rings or other metallic objects while installing or troubleshooting photovoltaic systems.
- Use only insulated tools that are approved for working on electrical installation.
- Follow the safety regulations for all other system components, including wires and cables, connectors, charging regulators, inverters, storage batteries, rechargeable batteries, etc.
- Under normal conditions, a photovoltaic eArc is likely to experience conditions that produce more current and/or voltage than reported at standard test conditions. Accordingly, the values of I_{sc} and

Voc marked on this eArc should be multiplied by a factor of 1.25 when determining component voltage ratings, conductor current ratings, fuse sizes, and size of controls connected to the PV output.

- Only use same or connectable connectors to connect eArc to form a string, or connect to another device. Removing the connectors will void the warranty.

Fire safety

- Consult your local authority for guidelines and requirements for building or structural fire safety.
- Roof constructions and installations may affect the fire safety of a building; improper installation may create hazards in the event of a fire.
- Use components such as ground fault circuit breakers and fuses as required by local authority.
- Do not use panels near equipment or in places where flammable gases may be generated.
- eArc have been rated Fire Class C, and are suitable for mounting on to a Class A roof.

Production Identification

Each eArc has two labels providing the following information:

- Nameplate: describes the product type; rated power, rated current, rated voltage, open circuit voltage, short circuit current, all as measured under standard test conditions; weight, dimensions etc.; the maximum system voltage is 1500 volts.
- Barcode: each individual eArc has a unique serial number. The serial number has 18 digits. The 1th to 4th digits are the module type for internal use, and 5th to 8th digits are the year code, and the 9th and 10th digits are the month code, and the 11th and the 12th digits are the week code, and the 13th and 14th digits are the month code, and the 15th to 17th digits are order number, and the 18th to 21th digits are the sequence codes. For example, xxxx20210415xxxxxxxx means the module was made in the 15th week of 2021. Each module has only one bar code. It is permanently attached to the interior of eArc and is visible from the top front of eArc. This bar code is inserted prior to lamination.



Installation

Selecting the location

- Select a suitable location for installing eArc.
- The altitude of the installation location shall be less than or equal to 2000 meters.
- eArc should face south in northern latitudes and north in southern latitudes.
- For detailed information on the best installation angle, refer to standard solar photovoltaic

installation guides or consult a reputable solar installer or systems integrator.

- eArc should not be shaded at any time. If an eArc is shaded or even partially shaded, it will fail to perform at ideal conditions and result in lower power output.
- Do not use eArc near equipment or in locations where flammable gases may be generated or collected.

General installation

- eArc mounting structure must be made of durable, corrosion-resistant and UV-resistant material.
- Always observe the instructions and safety precautions included with eArc support frames.
- Do not drill additional mounting holes in the PV panel's ribs as this will void the warranty.
- Before installing eArc on a roof, always ensure the roof construction is suitable. In addition, any roof penetration required to mount eArc must be properly sealed to prevent leaks.
- Dust building up on the surface of eArc can impair with eArc performance. SUNMAN recommends installing eArc with a tilt angle of at least 10 degrees, making it easier for dust to be washed off by rain.
- Always keep the back sheet of the panel free from foreign objects, "plants and vegetation", or structural elements, which could come into contact with the panel, especially when the panel is under mechanical load.
- Ensure panels are not subject to wind or snow loads exceeding the maximum permissible loads, and are not subject to excessive forces due to the thermal expansion of the support structures: Refer to the following installation methods for more detailed information.
- The module is considered to be in compliance with this standard only when the module is either mounted in the manner specified by the mounting instructions, or when the mounting means has been evaluated with this PV module to UL 2703. A module with exposed conductive parts is considered to be in compliance with this standard only when it is either electrically grounded in accordance with the manufacturer's instructions and the requirements of the National Electrical Code, ANSI/NFPA 70 (2014-2017), or when the bonding means has been evaluated with this PV module to UL 2703.

eArc environmental condition

- All eArc modules are suitable for ambient temperatures of -40°C to +40°C. Satisfy wind/snow loads of 1600 Pa with a safety factor of 1.5 according to the following installation.

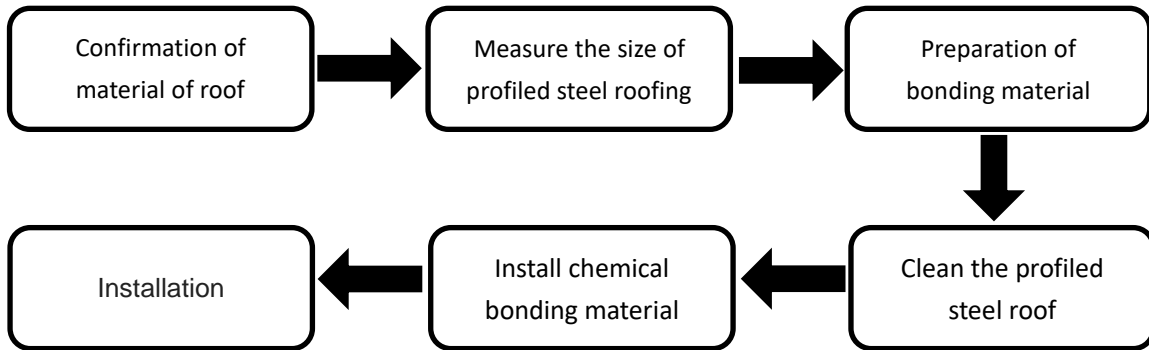
Quick-bonding Installation

► Overview

- The SMF/SMH Series use quick and easy installation methods which called "Quick-bonding" is very

suitable for profiled steel roof.

SMF系列:

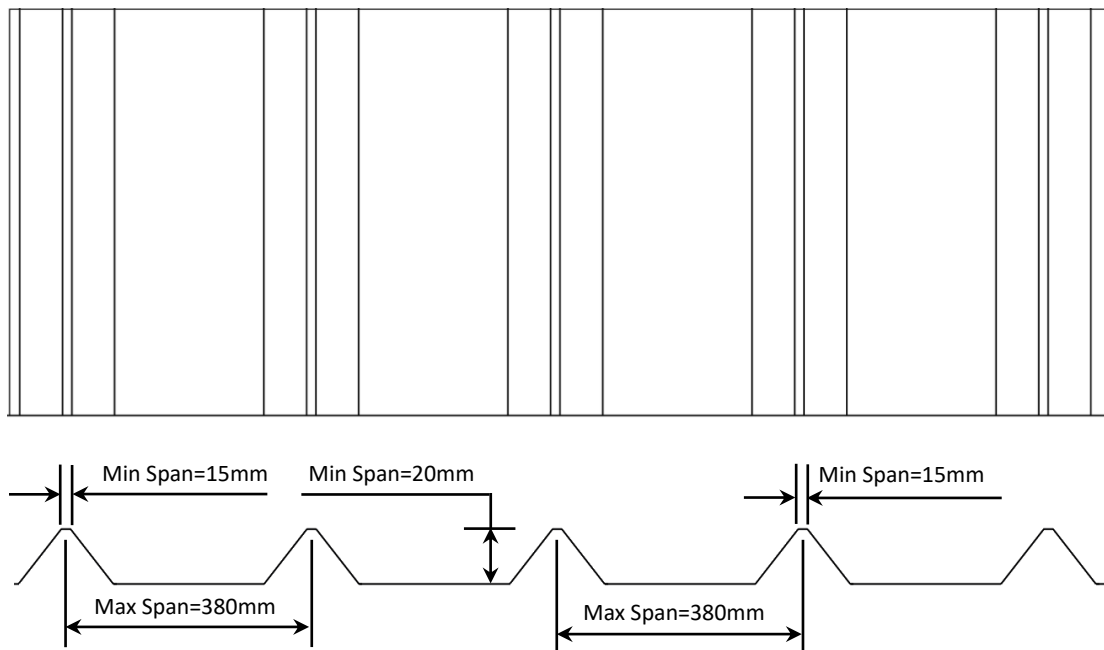


Step 1: Confirmation of material of profiled steel roof

- ◆ SMF Series to be bonded with bonding material on the zinc aluminum plate.

Step 2: Confirm profiled steel plate

- ◆ Size of profiled steel roof:



Step 3: Preparation of bonding material

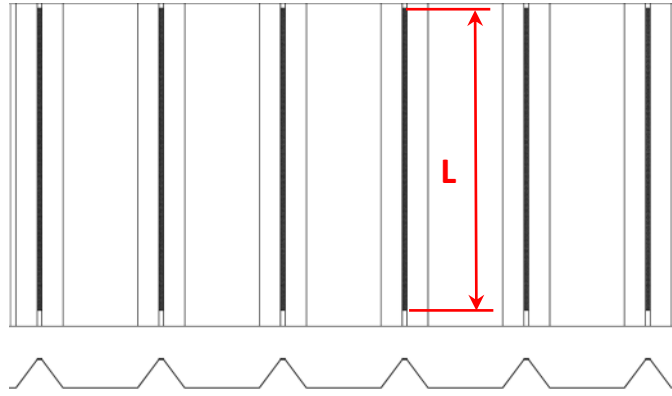
- ◆ The applicable adhesive material is 1527 type from Tonsan Adhesive Inc.

Step 4: Clean the profiled steel roof

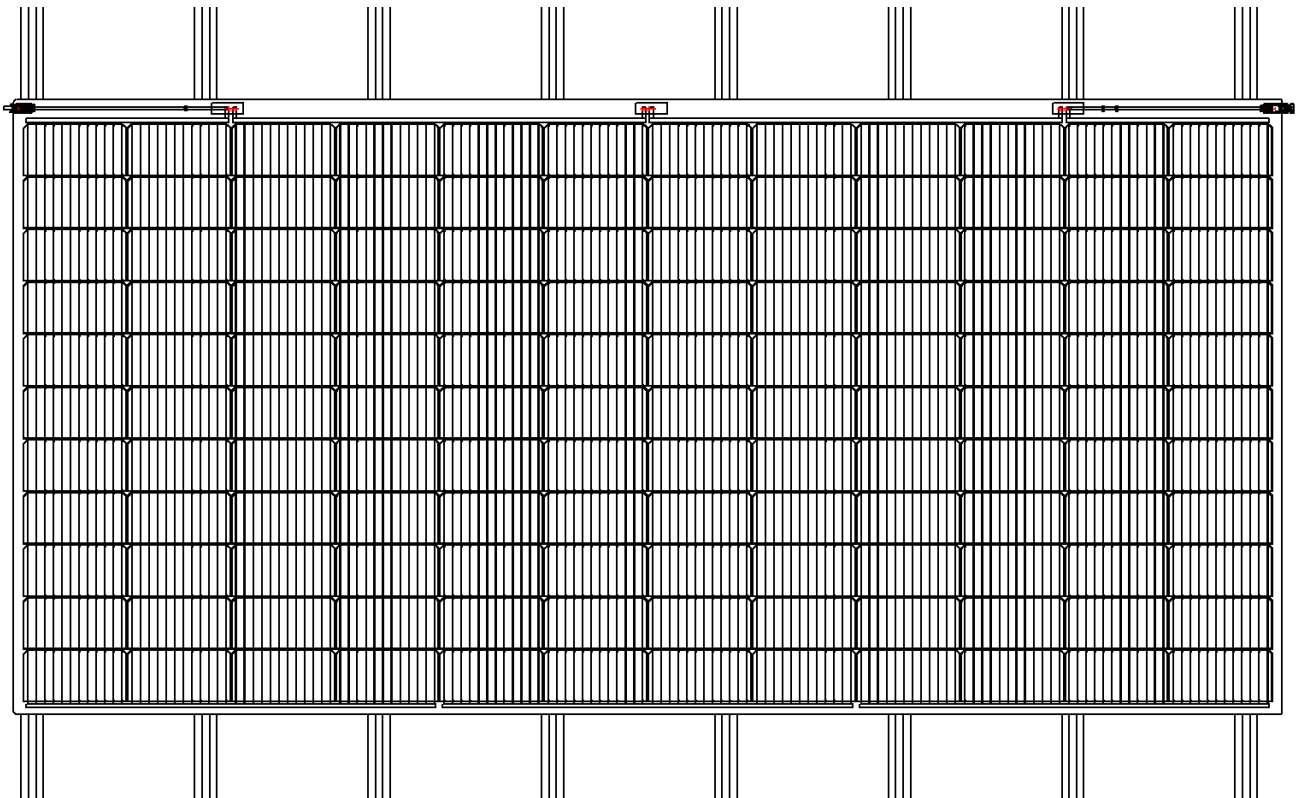
- ◆ Always keep the backsheet of eArc and rooftop clean before install.

Step 5: Install chemical bonding material

- ◆ The thickness of chemical bonding material should not less than 4 mm, width is not less than 10 mm. The length of the chemical bonding material shall not be less than the width of eArc.



◆ Installation structure:



SMH系列:

Step 1: Bonding HP plate

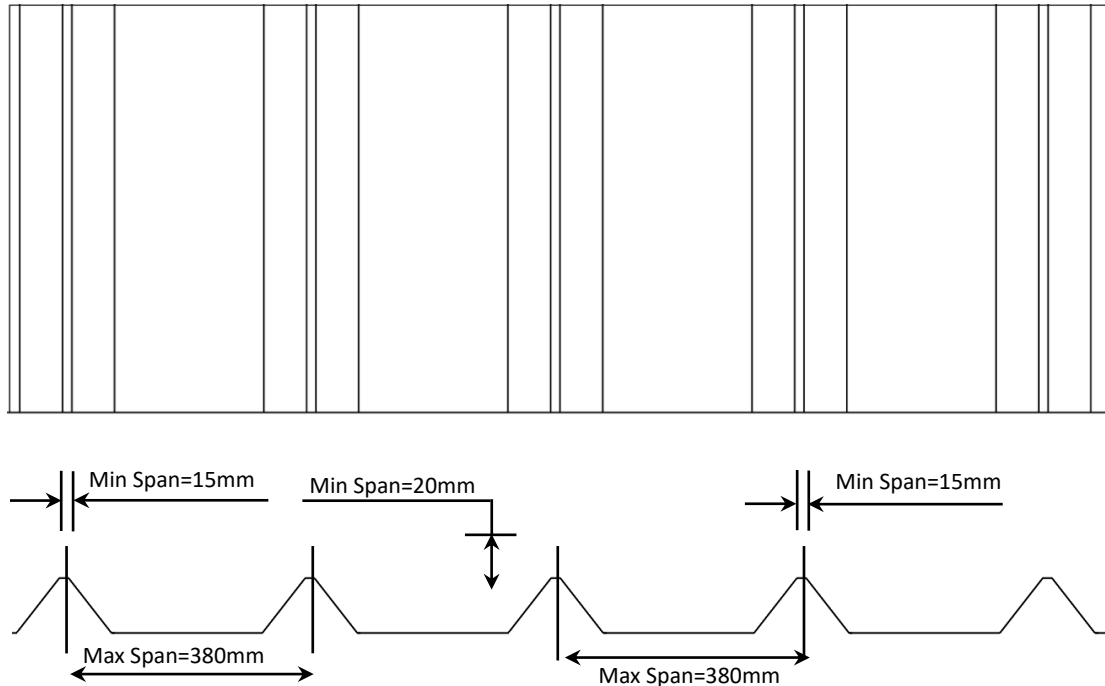
- ◆ Apply adhesive material on the backsheet of the PV module, make sure that all the backsheet with

sufficient adhesive material. Affix the HP plate to the backsheet, the exterior outline of PV module and the HP plate should align.

- ◆ The applicable adhesive material is 1527 type from Tonsan Adhesive Inc.
- ◆ The HP plate is HP-PP010-80gsm type from Guangzhou Kingfa Carbon Fiber Materials Development Co., Ltd. The HP material is made of polypropylene honeycomb core material and continuous glass fibers reinforced polypropylene UD tapes.

Step 2: Confirm profiled steel plate

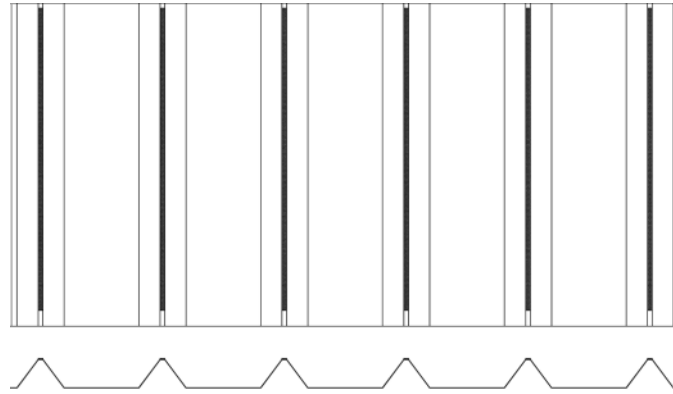
- ◆ Size of profiled steel roof:



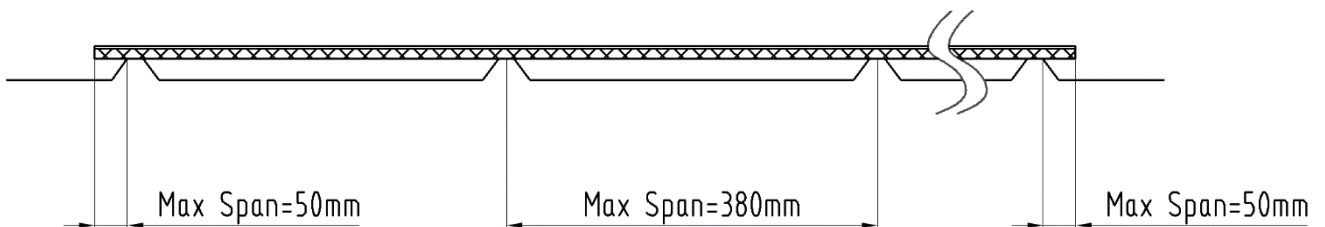
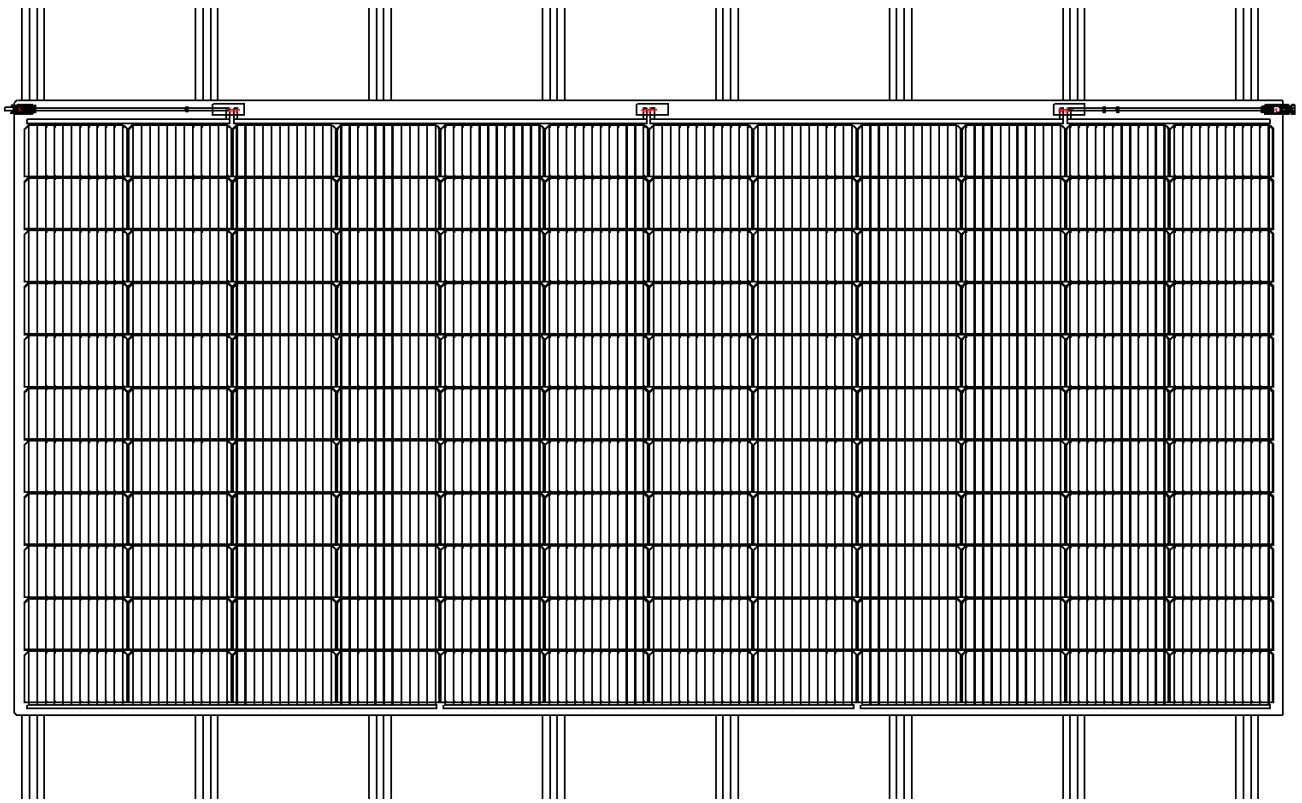
- ◆ The coating of zinc aluminum profiled steel plate is polyurethane baking varnish. The thickness of the profiled steel roof is not less than 0.4mm.

Step 3: bonding profiled steel plate

- ◆ Measure the size of profiled steel plate.
- ◆ Always keep the backsheet of PV module and the profiled steel plate clean before install. Apply adhesive material on the profiled steel plate, make sure that all the profiled steel plate with sufficient adhesive material. The thickness of bonding material should not be less than 4 mm, the width of bonding material should not be less than 10 mm. The length of the chemical bonding material shall not be less than the width of PV module.



- ◆ The applicable adhesive material is 1527 type from Tonsan Adhesive Inc.
- ◆ Installation structure:



►Note:

- The direction of module installation is that the short edge of the module is parallel to the ribs of the profiled steel roof (in the same direction as shown in the structure layout diagram).

- Please contact the local distributors if you are not sure whether your roof is suit for SMF/SMH Series or have any question about this installation method.
- Please contact the local distributors if you want to remove SMF/SMH Series from your roof.

Electrical installation

- Any hardware used must be compatible with the mounting structure material to avoid galvanic corrosion.
- It is not recommended to use eArc with different configurations in the same system.
- Excessive cables must be organized or fixed in an adequate way, e.g. attached to the mounting structure by using non-metallic cable ties.
- For applications requiring high operating voltage several eArc can be connected in series to form a string of eArc; the system voltage is then equal to the sum of the voltage of each eArc.
- For applications requiring high operating currents several strings of eArc can be connected in parallel; the system current is then equal to the sum of the current of each string of eArc.
- The maximum system voltage is 1500 volts DC.
- Please make sure no more than two strings in parallel if eArc without any fuse or blocking diode to be connected according to the maximum series fuse rating of eArc and local electrical installation code.
- There is no limitation on the number of eArc that can be connected in parallel (fuse for each string should be considered), the number of eArc is determined by system design parameters such as current or power output.
- To prevent the cables and the connectors from overheating, the cross section of the cables and the capacity of the connectors must be selected to suit the maximum system short circuit current. The recommended cable is PV wire(temperature rating is 90°C) with a cross section of at least 2.5mm².
- Please refer to local regulations to determine the system wires size, type and temperature.
- eArc are supplied with connectors to be used for system electrical connections.
- To ensure reliable electric connection and to prevent possible intrusion of humidity, connectors must be mated and locked together until a click can be heard.
- Long-term exposure to wet environments may cause connectors' poor connectivity, resulting in current leakage and poor conductivity. SUNMAN recommend proper connector/cable/wire management to prevent moisture intrusion. Depending on the amount of humidity, SUNMAN recommends periodic inspections of the installation system to maintain optimal eArc' performance.
- The DC current generated by photovoltaic systems can be converted into AC and fed into a public Grid. As local utilities' policies on connecting renewable energy systems to the Grids vary from region to region. Always seek the advice from a qualified system designer or integrator. Building permits, inspections and approvals by the local utility are to be expected.
- About bypass diode in the junction box, recommend bypass diode model is SB3040DY or TL2045.

Disclaimer of liability

- As the adherence to this manual and the conditions or methods of installation, operation, use and maintenance of photovoltaic (PV) products are beyond SUNMAN's control, SUNMAN does not accept responsibility and expressly disclaims liability for any loss, damage, or expense arising out of or in any way connected with such installation, operation, use or maintenance.
- No responsibility is assumed by SUNMAN for any infringement of patents or other rights of third parties, which may result from the use of the PV product. No license is granted by implication or otherwise under any patent or patent rights.
- The information in this manual is based on SUNMAN's best knowledge and experience and is believed to be reliable; But such information including product specification (without limitations) and suggestions do not constitute a warranty, express or implied. SUNMAN reserves the right to change the manual, eArc, the specifications, or product information sheets without prior notice.

Products Data

Model Series:

SMFXXXF-6X24UW (XXX = 415 W to 445 W),
SMFXXXF-12X12UW (XXX = 410 W to 450 W),
SMHXXXF-12X12UW (XXX = 410 W to 450 W),
SMHXXXF-12X12DW (XXX = 410 W to 450 W),
SMHXXXF-12X12UB (XXX = 410 W to 450 W),
SMHXXXF-12X12DB (XXX = 410 W to 450 W),
SMFXXXJ-5X24UW (XXX = 415 W to 455 W),
SMFXXXJ-6X20UW (XXX = 415 W to 455 W),
SMFXXXJ-6X24UW (XXX = 500 W to 540 W),
SMFXXXJ-10X12UW (XXX = 415 W to 455 W),
SMFXXXJ-12X08UW-e (XXX = 330 W to 360 W),
SMFXXXJ-12X10UW (XXX = 415 W to 455 W),
SMFXXXJ-12X11UW (XXX = 455 W to 495 W),
SMFXXXJ-12X12UW (XXX = 500 W to 540 W),
SMHXXXJ-12X12UW (XXX = 500 W to 540 W),
SMHXXXJ-12X11UW (XXX = 455 W to 495 W),
SMHXXXJ-12X10UW (XXX = 415 W to 455 W),

SMHXXXJ-12X12DW (XXX = 500 W to 540 W),
SMHXXXJ-12X12UB (XXX = 500 W to 540 W),
SMHXXXJ-12X12DB (XXX = 500 W to 540 W),
SMFXXXL-8X10UW (XXX = 365 W to 395 W),
SMFXXXL-8X11UW (XXX = 400 W to 440 W),
SMFXXXL-10X08UW (XXX = 365 W to 395 W),
SMFXXXL-10X09UW (XXX = 405 W to 445 W),
SMFXXXL-10X11UW (XXX = 500 W to 540 W),
SMFXXXL-12X07UW-e (XXX = 380 W to 420 W),

SMFXXXL-12X09UW (XXX = 490 W to 540 W),
 SMFXXXL-12X10UW (XXX = 545 W to 595 W),
 SMFXXXL-12X11UW (XXX = 595 W to 655 W),
 SMHXXXL-12X11UW (XXX = 595 W to 655 W),
 SMHXXXL-12X11DW (XXX = 595 W to 655 W),
 SMHXXXL-12X11UB (XXX = 595 W to 655 W),
 SMHXXXL-12X11DB (XXX = 595 W to 655 W),
 SMMXXXL-12X11UW (XXX = 595 W to 655 W).

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMF415F-6X24UW | 1500 | 49.20 | 41.13 | 10.59 | 10.09 | 415 | 20 |
| SMF420F-6X24UW | 1500 | 49.40 | 41.44 | 10.64 | 10.14 | 420 | 20 |
| SMF425F-6X24UW | 1500 | 49.60 | 41.71 | 10.69 | 10.19 | 425 | 20 |
| SMF430F-6X24UW | 1500 | 49.80 | 42.00 | 10.74 | 10.24 | 430 | 20 |
| SMF435F-6X24UW | 1500 | 50.00 | 42.29 | 10.79 | 10.29 | 435 | 20 |
| SMF440F-6X24UW | 1500 | 50.20 | 42.58 | 10.84 | 10.34 | 440 | 20 |
| SMF445F-6X24UW | 1500 | 50.40 | 42.87 | 10.89 | 10.39 | 445 | 20 |
| SMF410F-12X12UW | 1500 | 49.00 | 40.84 | 10.54 | 10.04 | 410 | 20 |
| SMF415F-12X12UW | 1500 | 49.20 | 41.13 | 10.59 | 10.09 | 415 | 20 |
| SMF420F-12X12UW | 1500 | 49.40 | 41.44 | 10.64 | 10.14 | 420 | 20 |
| SMF425F-12X12UW | 1500 | 49.60 | 41.71 | 10.69 | 10.19 | 425 | 20 |
| SMF430F-12X12UW | 1500 | 49.80 | 42.00 | 10.74 | 10.24 | 430 | 20 |
| SMF435F-12X12UW | 1500 | 50.00 | 42.29 | 10.79 | 10.29 | 435 | 20 |
| SMF440F-12X12UW | 1500 | 50.20 | 42.58 | 10.84 | 10.34 | 440 | 20 |
| SMF445F-12X12UW | 1500 | 50.40 | 42.87 | 10.89 | 10.39 | 445 | 20 |
| SMF450F-12X12UW | 1500 | 50.60 | 43.16 | 10.94 | 10.44 | 450 | 20 |
| SMF415J-5X24UW | 1500 | 40.48 | 34.18 | 13.36 | 12.16 | 415 | 25 |
| SMF420J-5X24UW | 1500 | 40.68 | 34.44 | 13.41 | 12.21 | 420 | 25 |
| SMF425J-5X24UW | 1500 | 40.88 | 34.70 | 13.46 | 12.26 | 425 | 25 |
| SMF430J-5X24UW | 1500 | 41.08 | 34.96 | 13.51 | 12.31 | 430 | 25 |
| SMF435J-5X24UW | 1500 | 41.28 | 35.22 | 13.56 | 12.36 | 435 | 25 |
| SMF440J-5X24UW | 1500 | 41.48 | 35.48 | 13.61 | 12.41 | 440 | 25 |
| SMF445J-5X24UW | 1500 | 41.68 | 35.74 | 13.66 | 12.46 | 445 | 25 |
| SMF450J-5X24UW | 1500 | 41.88 | 36.00 | 13.71 | 12.51 | 450 | 25 |
| SMF455J-5X24UW | 1500 | 42.08 | 36.26 | 13.76 | 12.56 | 455 | 25 |
| SMF415J-6X20UW | 1500 | 40.48 | 34.16 | 13.36 | 12.16 | 415 | 25 |
| SMF420J-6X20UW | 1500 | 40.68 | 34.41 | 13.41 | 12.21 | 420 | 25 |
| SMF425J-6X20UW | 1500 | 40.88 | 34.68 | 13.46 | 12.26 | 425 | 25 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-------------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMF430J-6X20UW | 1500 | 41.08 | 34.95 | 13.51 | 12.31 | 430 | 25 |
| SMF435J-6X20UW | 1500 | 41.28 | 35.22 | 13.56 | 12.36 | 435 | 25 |
| SMF440J-6X20UW | 1500 | 41.48 | 35.49 | 13.61 | 12.41 | 440 | 25 |
| SMF445J-6X20UW | 1500 | 41.68 | 35.76 | 13.66 | 12.46 | 445 | 25 |
| SMF450J-6X20UW | 1500 | 41.88 | 36.03 | 13.71 | 12.51 | 450 | 25 |
| SMF455J-6X20UW | 1500 | 42.08 | 36.28 | 13.76 | 12.56 | 455 | 25 |
| SMF500J-6X24UW | 1500 | 48.74 | 41.33 | 13.36 | 12.11 | 500 | 25 |
| SMF505J-6X24UW | 1500 | 48.94 | 41.55 | 13.41 | 12.16 | 505 | 25 |
| SMF510J-6X24UW | 1500 | 49.14 | 41.79 | 13.46 | 12.21 | 510 | 25 |
| SMF515J-6X24UW | 1500 | 49.34 | 42.02 | 13.51 | 12.26 | 515 | 25 |
| SMF520J-6X24UW | 1500 | 49.54 | 42.264 | 13.56 | 12.31 | 520 | 25 |
| SMF525J-6X24UW | 1500 | 49.74 | 42.51 | 13.61 | 12.36 | 525 | 25 |
| SMF530J-6X24UW | 1500 | 49.94 | 42.73 | 13.66 | 12.41 | 530 | 25 |
| SMF535J-6X24UW | 1500 | 50.14 | 42.96 | 13.71 | 12.46 | 535 | 25 |
| SMF540J-6X24UW | 1500 | 50.34 | 43.18 | 13.76 | 12.51 | 540 | 25 |
| SMF415J-10X12UW | 1500 | 40.48 | 34.16 | 13.36 | 12.16 | 415 | 25 |
| SMF420J-10X12UW | 1500 | 40.68 | 34.43 | 13.41 | 12.21 | 420 | 25 |
| SMF425J-10X12UW | 1500 | 40.88 | 34.69 | 13.46 | 12.26 | 425 | 25 |
| SMF430J-10X12UW | 1500 | 41.08 | 34.96 | 13.51 | 12.31 | 430 | 25 |
| SMF435J-10X12UW | 1500 | 41.28 | 35.22 | 13.56 | 12.36 | 435 | 25 |
| SMF440J-10X12UW | 1500 | 41.48 | 35.48 | 13.61 | 12.41 | 440 | 25 |
| SMF445J-10X12UW | 1500 | 41.68 | 35.74 | 13.66 | 12.46 | 445 | 25 |
| SMF450J-10X12UW | 1500 | 41.88 | 36.01 | 13.71 | 12.51 | 450 | 25 |
| SMF455J-10X12UW | 1500 | 42.08 | 36.25 | 13.76 | 12.56 | 455 | 25 |
| SMF330J-12X08UW-e | 1500 | 32.42 | 27.31 | 13.41 | 12.10 | 330 | 25 |
| SMF335J-12X08UW-e | 1500 | 32.62 | 27.61 | 13.46 | 12.15 | 335 | 25 |
| SMF340J-12X08UW-e | 1500 | 32.82 | 27.91 | 13.51 | 12.20 | 340 | 25 |
| SMF345J-12X08UW-e | 1500 | 33.02 | 28.17 | 13.56 | 12.25 | 345 | 25 |
| SMF350J-12X08UW-e | 1500 | 33.22 | 28.49 | 13.61 | 12.30 | 350 | 25 |
| SMF355J-12X08UW-e | 1500 | 33.42 | 28.79 | 13.66 | 12.35 | 355 | 25 |
| SMF360J-12X08UW-e | 1500 | 33.62 | 29.04 | 13.71 | 12.40 | 360 | 25 |
| SMF415J-12X10UW | 1500 | 40.48 | 34.15 | 13.36 | 12.16 | 415 | 25 |
| SMF420J-12X10UW | 1500 | 40.68 | 34.41 | 13.41 | 12.21 | 420 | 25 |
| SMF425J-12X10UW | 1500 | 40.88 | 34.71 | 13.46 | 12.26 | 425 | 25 |
| SMF430J-12X10UW | 1500 | 41.08 | 34.97 | 13.51 | 12.31 | 430 | 25 |
| SMF435J-12X10UW | 1500 | 41.28 | 35.22 | 13.56 | 12.36 | 435 | 25 |
| SMF440J-12X10UW | 1500 | 41.48 | 35.51 | 13.61 | 12.41 | 440 | 25 |
| SMF445J-12X10UW | 1500 | 41.68 | 35.76 | 13.66 | 12.46 | 445 | 25 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMF450J-12X10UW | 1500 | 41.88 | 36.02 | 13.71 | 12.51 | 450 | 25 |
| SMF455J-12X10UW | 1500 | 42.08 | 36.26 | 13.76 | 12.56 | 455 | 25 |
| SMF455J-12X11UW | 1500 | 44.61 | 37.75 | 13.36 | 12.07 | 455 | 25 |
| SMF460J-12X11UW | 1500 | 44.81 | 38.01 | 13.41 | 12.12 | 460 | 25 |
| SMF465J-12X11UW | 1500 | 45.01 | 38.25 | 13.46 | 12.17 | 465 | 25 |
| SMF470J-12X11UW | 1500 | 45.21 | 38.51 | 13.51 | 12.22 | 470 | 25 |
| SMF475J-12X11UW | 1500 | 45.41 | 38.74 | 13.56 | 12.27 | 475 | 25 |
| SMF480J-12X11UW | 1500 | 45.61 | 38.99 | 13.61 | 12.32 | 480 | 25 |
| SMF485J-12X11UW | 1500 | 45.81 | 39.25 | 13.66 | 12.37 | 485 | 25 |
| SMF490J-12X11UW | 1500 | 46.01 | 39.51 | 13.71 | 12.42 | 490 | 25 |
| SMF495J-12X11UW | 1500 | 46.21 | 39.75 | 13.76 | 12.47 | 495 | 25 |
| SMF500J-12X12UW | 1500 | 48.74 | 41.35 | 13.36 | 12.11 | 500 | 25 |
| SMF505J-12X12UW | 1500 | 48.94 | 41.58 | 13.41 | 12.16 | 505 | 25 |
| SMF510J-12X12UW | 1500 | 49.14 | 41.81 | 13.46 | 12.21 | 510 | 25 |
| SMF515J-12X12UW | 1500 | 49.34 | 42.06 | 13.51 | 12.26 | 515 | 25 |
| SMF520J-12X12UW | 1500 | 49.54 | 42.26 | 13.56 | 12.31 | 520 | 25 |
| SMF525J-12X12UW | 1500 | 49.74 | 42.54 | 13.61 | 12.36 | 525 | 25 |
| SMF530J-12X12UW | 1500 | 49.94 | 42.76 | 13.66 | 12.41 | 530 | 25 |
| SMF535J-12X12UW | 1500 | 50.14 | 42.98 | 13.71 | 12.46 | 535 | 25 |
| SMF540J-12X12UW | 1500 | 50.34 | 43.21 | 13.76 | 12.51 | 540 | 25 |
| SMF365L-8X10UW | 1500 | 26.88 | 23.18 | 17.98 | 15.77 | 365 | 30 |
| SMF370L-8X10UW | 1500 | 27.08 | 23.27 | 18.03 | 15.92 | 370 | 30 |
| SMF375L-8X10UW | 1500 | 27.28 | 23.36 | 18.08 | 16.07 | 375 | 30 |
| SMF380L-8X10UW | 1500 | 27.48 | 23.44 | 18.13 | 16.22 | 380 | 30 |
| SMF385L-8X10UW | 1500 | 27.68 | 23.54 | 18.18 | 16.37 | 385 | 30 |
| SMF390L-8X10UW | 1500 | 27.88 | 23.64 | 18.23 | 16.52 | 390 | 30 |
| SMF395L-8X10UW | 1500 | 28.08 | 23.72 | 18.28 | 16.67 | 395 | 30 |
| SMF400L-8X11UW | 1500 | 29.43 | 24.89 | 17.93 | 16.09 | 400 | 30 |
| SMF405L-8X11UW | 1500 | 29.63 | 25.13 | 17.98 | 16.14 | 405 | 30 |
| SMF410L-8X11UW | 1500 | 29.83 | 25.36 | 18.03 | 16.19 | 410 | 30 |
| SMF415L-8X11UW | 1500 | 30.03 | 25.58 | 18.08 | 16.24 | 415 | 30 |
| SMF420L-8X11UW | 1500 | 30.23 | 25.79 | 18.13 | 16.29 | 420 | 30 |
| SMF425L-8X11UW | 1500 | 30.43 | 26.04 | 18.18 | 16.34 | 425 | 30 |
| SMF430L-8X11UW | 1500 | 30.63 | 26.26 | 18.23 | 16.39 | 430 | 30 |
| SMF435L-8X11UW | 1500 | 30.83 | 26.49 | 18.28 | 16.44 | 435 | 30 |
| SMF440L-8X11UW | 1500 | 31.03 | 26.71 | 18.33 | 16.49 | 440 | 30 |
| SMF365L-10X08UW | 1500 | 26.88 | 22.75 | 17.98 | 16.07 | 365 | 30 |
| SMF370L-10X08UW | 1500 | 27.08 | 22.99 | 18.03 | 16.12 | 370 | 30 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-------------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMF375L-10X08UW | 1500 | 27.28 | 23.22 | 18.08 | 16.17 | 375 | 30 |
| SMF380L-10X08UW | 1500 | 27.48 | 23.44 | 18.13 | 16.22 | 380 | 30 |
| SMF385L-10X08UW | 1500 | 27.68 | 23.69 | 18.18 | 16.27 | 385 | 30 |
| SMF390L-10X08UW | 1500 | 27.88 | 23.93 | 18.23 | 16.32 | 390 | 30 |
| SMF395L-10X08UW | 1500 | 28.08 | 24.16 | 18.28 | 16.37 | 395 | 30 |
| SMF405L-10X09UW | 1500 | 30.12 | 25.47 | 17.93 | 15.92 | 405 | 30 |
| SMF410L-10X09UW | 1500 | 30.32 | 25.71 | 17.98 | 15.97 | 410 | 30 |
| SMF415L-10X09UW | 1500 | 30.52 | 25.93 | 18.03 | 16.02 | 415 | 30 |
| SMF420L-10X09UW | 1500 | 30.72 | 26.17 | 18.08 | 16.07 | 420 | 30 |
| SMF425L-10X09UW | 1500 | 30.92 | 26.37 | 18.13 | 16.12 | 425 | 30 |
| SMF430L-10X09UW | 1500 | 31.12 | 26.61 | 18.18 | 16.17 | 430 | 30 |
| SMF435L-10X09UW | 1500 | 31.32 | 26.84 | 18.23 | 16.22 | 435 | 30 |
| SMF440L-10X09UW | 1500 | 31.52 | 27.06 | 18.28 | 16.27 | 440 | 30 |
| SMF445L-10X09UW | 1500 | 31.72 | 27.30 | 18.33 | 16.32 | 445 | 30 |
| SMF500L-10X11UW | 1500 | 36.99 | 31.38 | 17.93 | 15.95 | 500 | 30 |
| SMF505L-10X11UW | 1500 | 37.19 | 31.59 | 17.98 | 16.00 | 505 | 30 |
| SMF510L-10X11UW | 1500 | 37.39 | 31.81 | 18.03 | 16.05 | 510 | 30 |
| SMF515L-10X11UW | 1500 | 37.59 | 32.03 | 18.08 | 16.10 | 515 | 30 |
| SMF520L-10X11UW | 1500 | 37.79 | 32.23 | 18.13 | 16.15 | 520 | 30 |
| SMF525L-10X11UW | 1500 | 37.99 | 32.43 | 18.18 | 16.20 | 525 | 30 |
| SMF530L-10X11UW | 1500 | 38.19 | 32.63 | 18.23 | 16.25 | 530 | 30 |
| SMF535L-10X11UW | 1500 | 38.39 | 32.83 | 18.28 | 16.30 | 535 | 30 |
| SMF540L-10X11UW | 1500 | 38.59 | 33.03 | 18.33 | 16.35 | 540 | 30 |
| SMF380L-12X07UW-e | 1500 | 28.05 | 23.67 | 17.93 | 16.06 | 380 | 30 |
| SMF385L-12X07UW-e | 1500 | 28.25 | 23.91 | 17.98 | 16.11 | 385 | 30 |
| SMF390L-12X07UW-e | 1500 | 28.45 | 24.14 | 18.03 | 16.16 | 390 | 30 |
| SMF395L-12X07UW-e | 1500 | 28.65 | 24.39 | 18.08 | 16.21 | 395 | 30 |
| SMF400L-12X07UW-e | 1500 | 28.85 | 24.61 | 18.13 | 16.26 | 400 | 30 |
| SMF405L-12X07UW-e | 1500 | 29.05 | 24.85 | 18.18 | 16.31 | 405 | 30 |
| SMF410L-12X07UW-e | 1500 | 29.25 | 25.09 | 18.23 | 16.36 | 410 | 30 |
| SMF415L-12X07UW-e | 1500 | 29.45 | 25.31 | 18.28 | 16.41 | 415 | 30 |
| SMF420L-12X07UW-e | 1500 | 29.65 | 25.53 | 18.33 | 16.46 | 420 | 30 |
| SMF490L-12X09UW | 1500 | 36.10 | 30.61 | 17.88 | 16.03 | 490 | 30 |
| SMF495L-12X09UW | 1500 | 36.30 | 30.83 | 17.93 | 16.08 | 495 | 30 |
| SMF500L-12X09UW | 1500 | 36.50 | 31.04 | 17.98 | 16.13 | 500 | 30 |
| SMF505L-12X09UW | 1500 | 36.70 | 31.24 | 18.03 | 16.18 | 505 | 30 |
| SMF510L-12X09UW | 1500 | 36.90 | 31.44 | 18.08 | 16.23 | 510 | 30 |
| SMF515L-12X09UW | 1500 | 37.10 | 31.64 | 18.13 | 16.28 | 515 | 30 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMF520L-12X09UW | 1500 | 37.30 | 31.84 | 18.18 | 16.33 | 520 | 30 |
| SMF525L-12X09UW | 1500 | 37.50 | 32.08 | 18.23 | 16.38 | 525 | 30 |
| SMF530L-12X09UW | 1500 | 37.70 | 32.27 | 18.28 | 16.43 | 530 | 30 |
| SMF535L-12X09UW | 1500 | 37.90 | 32.47 | 18.33 | 16.48 | 535 | 30 |
| SMF540L-12X09UW | 1500 | 38.10 | 32.67 | 18.38 | 16.53 | 540 | 30 |
| SMF545L-12X10UW | 1500 | 40.22 | 34.16 | 17.88 | 15.97 | 545 | 30 |
| SMF550L-12X10UW | 1500 | 40.42 | 34.36 | 17.93 | 16.02 | 550 | 30 |
| SMF555L-12X10UW | 1500 | 40.62 | 34.56 | 17.98 | 16.07 | 555 | 30 |
| SMF560L-12X10UW | 1500 | 40.82 | 34.76 | 18.03 | 16.12 | 560 | 30 |
| SMF565L-12X10UW | 1500 | 41.02 | 34.96 | 18.08 | 16.17 | 565 | 30 |
| SMF570L-12X10UW | 1500 | 41.22 | 35.16 | 18.13 | 16.22 | 570 | 30 |
| SMF575L-12X10UW | 1500 | 41.42 | 35.36 | 18.18 | 16.27 | 575 | 30 |
| SMF580L-12X10UW | 1500 | 41.62 | 35.56 | 18.23 | 16.32 | 580 | 30 |
| SMF585L-12X10UW | 1500 | 41.82 | 35.76 | 18.28 | 16.37 | 585 | 30 |
| SMF590L-12X10UW | 1500 | 42.02 | 35.96 | 18.33 | 16.42 | 590 | 30 |
| SMF595L-12X10UW | 1500 | 42.22 | 36.16 | 18.38 | 16.47 | 595 | 30 |
| SMF595L-12X11UW | 1500 | 45.29 | 37.49 | 17.77 | 15.88 | 595 | 30 |
| SMF600L-12X11UW | 1500 | 45.24 | 37.72 | 17.88 | 15.91 | 600 | 30 |
| SMF605L-12X11UW | 1500 | 45.26 | 37.93 | 17.93 | 15.96 | 605 | 30 |
| SMF610L-12X11UW | 1500 | 45.28 | 38.11 | 17.98 | 16.01 | 610 | 30 |
| SMF615L-12X11UW | 1500 | 45.30 | 38.31 | 18.03 | 16.06 | 615 | 30 |
| SMF620L-12X11UW | 1500 | 45.32 | 38.51 | 18.08 | 16.11 | 620 | 30 |
| SMF625L-12X11UW | 1500 | 45.34 | 38.69 | 18.13 | 16.16 | 625 | 30 |
| SMF630L-12X11UW | 1500 | 45.36 | 38.88 | 18.18 | 16.21 | 630 | 30 |
| SMF635L-12X11UW | 1500 | 45.38 | 39.07 | 18.23 | 16.26 | 635 | 30 |
| SMF640L-12X11UW | 1500 | 45.40 | 39.24 | 18.28 | 16.31 | 640 | 30 |
| SMF645L-12X11UW | 1500 | 45.42 | 39.44 | 18.33 | 16.36 | 645 | 30 |
| SMF650L-12X11UW | 1500 | 45.44 | 39.61 | 18.38 | 16.41 | 650 | 30 |
| SMF655L-12X11UW | 1500 | 45.46 | 39.81 | 18.43 | 16.46 | 655 | 30 |
| SMH595L-12X11UW | 1500 | 44.14 | 37.48 | 17.77 | 15.85 | 595 | 30 |
| SMH600L-12X11UW | 1500 | 44.34 | 37.68 | 17.83 | 15.91 | 600 | 30 |
| SMH605L-12X11UW | 1500 | 44.54 | 37.88 | 17.89 | 15.97 | 605 | 30 |
| SMH610L-12X11UW | 1500 | 44.74 | 38.08 | 17.95 | 16.03 | 610 | 30 |
| SMH615L-12X11UW | 1500 | 44.94 | 38.28 | 18.01 | 16.09 | 615 | 30 |
| SMH620L-12X11UW | 1500 | 45.14 | 38.48 | 18.07 | 16.15 | 620 | 30 |
| SMH625L-12X11UW | 1500 | 45.34 | 38.68 | 18.13 | 16.21 | 625 | 30 |
| SMH630L-12X11UW | 1500 | 45.54 | 38.88 | 18.19 | 16.27 | 630 | 30 |
| SMH635L-12X11UW | 1500 | 45.74 | 39.08 | 18.25 | 16.33 | 635 | 30 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMH640L-12X11UW | 1500 | 45.94 | 39.28 | 18.31 | 16.39 | 640 | 30 |
| SMH645L-12X11UW | 1500 | 46.14 | 39.48 | 18.37 | 16.40 | 645 | 30 |
| SMH650L-12X11UW | 1500 | 46.34 | 39.68 | 18.43 | 16.45 | 650 | 30 |
| SMH655L-12X11UW | 1500 | 46.54 | 39.88 | 18.49 | 16.49 | 655 | 30 |
| SMH595L-12X11DW | 1500 | 44.14 | 37.48 | 17.77 | 15.85 | 595 | 30 |
| SMH600L-12X11DW | 1500 | 44.34 | 37.68 | 17.83 | 15.91 | 600 | 30 |
| SMH605L-12X11DW | 1500 | 44.54 | 37.88 | 17.89 | 15.97 | 605 | 30 |
| SMH610L-12X11DW | 1500 | 44.74 | 38.08 | 17.95 | 16.03 | 610 | 30 |
| SMH615L-12X11DW | 1500 | 44.94 | 38.28 | 18.01 | 16.09 | 615 | 30 |
| SMH620L-12X11DW | 1500 | 45.14 | 38.48 | 18.07 | 16.15 | 620 | 30 |
| SMH625L-12X11DW | 1500 | 45.34 | 38.68 | 18.13 | 16.21 | 625 | 30 |
| SMH630L-12X11DW | 1500 | 45.54 | 38.88 | 18.19 | 16.27 | 630 | 30 |
| SMH635L-12X11DW | 1500 | 45.74 | 39.08 | 18.25 | 16.33 | 635 | 30 |
| SMH640L-12X11DW | 1500 | 45.94 | 39.28 | 18.31 | 16.39 | 640 | 30 |
| SMH645L-12X11DW | 1500 | 46.14 | 39.48 | 18.37 | 16.40 | 645 | 30 |
| SMH650L-12X11DW | 1500 | 46.34 | 39.68 | 18.43 | 16.45 | 650 | 30 |
| SMH655L-12X11DW | 1500 | 46.54 | 39.88 | 18.49 | 16.49 | 655 | 30 |
| SMH595L-12X11UB | 1500 | 44.14 | 37.48 | 17.77 | 15.85 | 595 | 30 |
| SMH600L-12X11UB | 1500 | 44.34 | 37.68 | 17.83 | 15.91 | 600 | 30 |
| SMH605L-12X11UB | 1500 | 44.54 | 37.88 | 17.89 | 15.97 | 605 | 30 |
| SMH610L-12X11UB | 1500 | 44.74 | 38.08 | 17.95 | 16.03 | 610 | 30 |
| SMH615L-12X11UB | 1500 | 44.94 | 38.28 | 18.01 | 16.09 | 615 | 30 |
| SMH620L-12X11UB | 1500 | 45.14 | 38.48 | 18.07 | 16.15 | 620 | 30 |
| SMH625L-12X11UB | 1500 | 45.34 | 38.68 | 18.13 | 16.21 | 625 | 30 |
| SMH630L-12X11UB | 1500 | 45.54 | 38.88 | 18.19 | 16.27 | 630 | 30 |
| SMH635L-12X11UB | 1500 | 45.74 | 39.08 | 18.25 | 16.33 | 635 | 30 |
| SMH640L-12X11UB | 1500 | 45.94 | 39.28 | 18.31 | 16.39 | 640 | 30 |
| SMH645L-12X11UB | 1500 | 46.14 | 39.48 | 18.37 | 16.40 | 645 | 30 |
| SMH650L-12X11UB | 1500 | 46.34 | 39.68 | 18.43 | 16.45 | 650 | 30 |
| SMH655L-12X11UB | 1500 | 46.54 | 39.88 | 18.49 | 16.49 | 655 | 30 |
| SMH595L-12X11DB | 1500 | 44.14 | 37.48 | 17.77 | 15.85 | 595 | 30 |
| SMH600L-12X11DB | 1500 | 44.34 | 37.68 | 17.83 | 15.91 | 600 | 30 |
| SMH605L-12X11DB | 1500 | 44.54 | 37.88 | 17.89 | 15.97 | 605 | 30 |
| SMH610L-12X11DB | 1500 | 44.74 | 38.08 | 17.95 | 16.03 | 610 | 30 |
| SMH615L-12X11DB | 1500 | 44.94 | 38.28 | 18.01 | 16.09 | 615 | 30 |
| SMH620L-12X11DB | 1500 | 45.14 | 38.48 | 18.07 | 16.15 | 620 | 30 |
| SMH625L-12X11DB | 1500 | 45.34 | 38.68 | 18.13 | 16.21 | 625 | 30 |
| SMH630L-12X11DB | 1500 | 45.54 | 38.88 | 18.19 | 16.27 | 630 | 30 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMH635L-12X11DB | 1500 | 45.74 | 39.08 | 18.25 | 16.33 | 635 | 30 |
| SMH640L-12X11DB | 1500 | 45.94 | 39.28 | 18.31 | 16.39 | 640 | 30 |
| SMH645L-12X11DB | 1500 | 46.14 | 39.48 | 18.37 | 16.40 | 645 | 30 |
| SMH650L-12X11DB | 1500 | 46.34 | 39.68 | 18.43 | 16.45 | 650 | 30 |
| SMH655L-12X11DB | 1500 | 46.54 | 39.88 | 18.49 | 16.49 | 655 | 30 |
| SMM595L-12X11UW | 1500 | 44.14 | 37.48 | 17.77 | 15.85 | 595 | 30 |
| SMM600L-12X11UW | 1500 | 44.34 | 37.68 | 17.83 | 15.91 | 600 | 30 |
| SMM605L-12X11UW | 1500 | 44.54 | 37.88 | 17.89 | 15.97 | 605 | 30 |
| SMM610L-12X11UW | 1500 | 44.74 | 38.08 | 17.95 | 16.03 | 610 | 30 |
| SMM615L-12X11UW | 1500 | 44.94 | 38.28 | 18.01 | 16.09 | 615 | 30 |
| SMM620L-12X11UW | 1500 | 45.14 | 38.48 | 18.07 | 16.15 | 620 | 30 |
| SMM625L-12X11UW | 1500 | 45.34 | 38.68 | 18.13 | 16.21 | 625 | 30 |
| SMM630L-12X11UW | 1500 | 45.54 | 38.88 | 18.19 | 16.27 | 630 | 30 |
| SMM635L-12X11UW | 1500 | 45.74 | 39.08 | 18.25 | 16.33 | 635 | 30 |
| SMM640L-12X11UW | 1500 | 45.94 | 39.28 | 18.31 | 16.39 | 640 | 30 |
| SMM645L-12X11UW | 1500 | 46.14 | 39.48 | 18.37 | 16.40 | 645 | 30 |
| SMM650L-12X11UW | 1500 | 46.34 | 39.68 | 18.43 | 16.45 | 650 | 30 |
| SMM655L-12X11UW | 1500 | 46.54 | 39.88 | 18.49 | 16.49 | 655 | 30 |
| SMH500J-12X12UW | 1500 | 48.70 | 41.30 | 13.32 | 12.07 | 500 | 25 |
| SMH505J-12X12UW | 1500 | 48.90 | 41.54 | 13.38 | 12.13 | 505 | 25 |
| SMH510J-12X12UW | 1500 | 49.10 | 41.78 | 13.44 | 12.19 | 510 | 25 |
| SMH515J-12X12UW | 1500 | 49.30 | 42.02 | 13.5 | 12.25 | 515 | 25 |
| SMH520J-12X12UW | 1500 | 49.50 | 42.26 | 13.56 | 12.31 | 520 | 25 |
| SMH525J-12X12UW | 1500 | 49.70 | 42.50 | 13.62 | 12.37 | 525 | 25 |
| SMH530J-12X12UW | 1500 | 49.86 | 42.74 | 13.68 | 12.43 | 530 | 25 |
| SMH535J-12X12UW | 1500 | 50.10 | 42.98 | 13.74 | 12.49 | 535 | 25 |
| SMH540J-12X12UW | 1500 | 50.30 | 43.22 | 13.80 | 12.55 | 540 | 25 |
| SMH455J-12X11UW | 1500 | 44.61 | 37.75 | 13.36 | 12.07 | 455 | 25 |
| SMH460J-12X11UW | 1500 | 44.81 | 38.01 | 13.41 | 12.12 | 460 | 25 |
| SMH465J-12X11UW | 1500 | 45.01 | 38.25 | 13.46 | 12.17 | 465 | 25 |
| SMH470J-12X11UW | 1500 | 45.21 | 38.51 | 13.51 | 12.22 | 470 | 25 |
| SMH475J-12X11UW | 1500 | 45.41 | 38.74 | 13.56 | 12.27 | 475 | 25 |
| SMH480J-12X11UW | 1500 | 45.61 | 38.99 | 13.61 | 12.32 | 480 | 25 |
| SMH485J-12X11UW | 1500 | 45.81 | 39.25 | 13.66 | 12.37 | 485 | 25 |
| SMH490J-12X11UW | 1500 | 46.01 | 39.51 | 13.71 | 12.42 | 490 | 25 |
| SMH495J-12X11UW | 1500 | 46.21 | 39.75 | 13.76 | 12.47 | 495 | 25 |
| SMH415J-12X10UW | 1500 | 40.48 | 34.15 | 13.36 | 12.16 | 415 | 25 |
| SMH420J-12X10UW | 1500 | 40.68 | 34.41 | 13.41 | 12.21 | 420 | 25 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMH425J-12X10UW | 1500 | 40.88 | 34.71 | 13.46 | 12.26 | 425 | 25 |
| SMH430J-12X10UW | 1500 | 41.08 | 34.97 | 13.51 | 12.31 | 430 | 25 |
| SMH435J-12X10UW | 1500 | 41.28 | 35.22 | 13.56 | 12.36 | 435 | 25 |
| SMH440J-12X10UW | 1500 | 41.48 | 35.51 | 13.61 | 12.41 | 440 | 25 |
| SMH445J-12X10UW | 1500 | 41.68 | 35.76 | 13.66 | 12.46 | 445 | 25 |
| SMH450J-12X10UW | 1500 | 41.88 | 36.02 | 13.71 | 12.51 | 450 | 25 |
| SMH455J-12X10UW | 1500 | 42.08 | 36.26 | 13.76 | 12.56 | 455 | 25 |
| SMH500J-12X12DW | 1500 | 48.70 | 41.30 | 13.32 | 12.07 | 500 | 25 |
| SMH505J-12X12DW | 1500 | 48.90 | 41.54 | 13.38 | 12.13 | 505 | 25 |
| SMH510J-12X12DW | 1500 | 49.10 | 41.78 | 13.44 | 12.19 | 510 | 25 |
| SMH515J-12X12DW | 1500 | 49.30 | 42.02 | 13.50 | 12.25 | 515 | 25 |
| SMH520J-12X12DW | 1500 | 49.50 | 42.26 | 13.56 | 12.31 | 520 | 25 |
| SMH525J-12X12DW | 1500 | 49.70 | 42.50 | 13.62 | 12.37 | 525 | 25 |
| SMH530J-12X12DW | 1500 | 49.86 | 42.74 | 13.68 | 12.43 | 530 | 25 |
| SMH535J-12X12DW | 1500 | 50.10 | 42.98 | 13.74 | 12.49 | 535 | 25 |
| SMH540J-12X12DW | 1500 | 50.30 | 43.22 | 13.80 | 12.55 | 540 | 25 |
| SMH500J-12X12UB | 1500 | 48.70 | 41.30 | 13.32 | 12.07 | 500 | 25 |
| SMH505J-12X12UB | 1500 | 48.90 | 41.54 | 13.38 | 12.13 | 505 | 25 |
| SMH510J-12X12UB | 1500 | 49.10 | 41.78 | 13.44 | 12.19 | 510 | 25 |
| SMH515J-12X12UB | 1500 | 49.30 | 42.02 | 13.5 | 12.25 | 515 | 25 |
| SMH520J-12X12UB | 1500 | 49.50 | 42.26 | 13.56 | 12.31 | 520 | 25 |
| SMH525J-12X12UB | 1500 | 49.70 | 42.50 | 13.62 | 12.37 | 525 | 25 |
| SMH530J-12X12UB | 1500 | 49.86 | 42.74 | 13.68 | 12.43 | 530 | 25 |
| SMH535J-12X12UB | 1500 | 50.10 | 42.98 | 13.74 | 12.49 | 535 | 25 |
| SMH540J-12X12UB | 1500 | 50.30 | 43.22 | 13.80 | 12.55 | 540 | 25 |
| SMH500J-12X12DB | 1500 | 48.70 | 41.30 | 13.32 | 12.07 | 500 | 25 |
| SMH505J-12X12DB | 1500 | 48.90 | 41.54 | 13.38 | 12.13 | 505 | 25 |
| SMH510J-12X12DB | 1500 | 49.10 | 41.78 | 13.44 | 12.19 | 510 | 25 |
| SMH515J-12X12DB | 1500 | 49.30 | 42.02 | 13.50 | 12.25 | 515 | 25 |
| SMH520J-12X12DB | 1500 | 49.50 | 42.26 | 13.56 | 12.31 | 520 | 25 |
| SMH525J-12X12DB | 1500 | 49.70 | 42.50 | 13.62 | 12.37 | 525 | 25 |
| SMH530J-12X12DB | 1500 | 49.86 | 42.74 | 13.68 | 12.43 | 530 | 25 |
| SMH535J-12X12DB | 1500 | 50.10 | 42.98 | 13.74 | 12.49 | 535 | 25 |
| SMH540J-12X12DB | 1500 | 50.30 | 43.22 | 13.80 | 12.55 | 540 | 25 |
| SMH410F-12X12UW | 1500 | 49.00 | 41.20 | 10.54 | 10.03 | 410 | 20 |
| SMH415F-12X12UW | 1500 | 49.20 | 41.40 | 10.59 | 10.09 | 415 | 20 |
| SMH420F-12X12UW | 1500 | 49.40 | 41.60 | 10.64 | 10.16 | 420 | 20 |
| SMH425F-12X12UW | 1500 | 49.60 | 41.80 | 10.69 | 10.23 | 425 | 20 |

| Model Type | Maximum DC System Voltage (V) | Open Circuit Voltage (V) | Maximum power voltage (V) | Short Circuit Current (A) | Maximum power current (A) | Maximum Power (Watts) | Maximum overcurrent protection rating (A) |
|-----------------|-------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-----------------------|---|
| SMH430F-12X12UW | 1500 | 49.80 | 42.00 | 10.74 | 10.29 | 430 | 20 |
| SMH435F-12X12UW | 1500 | 50.00 | 42.20 | 10.79 | 10.34 | 435 | 20 |
| SMH440F-12X12UW | 1500 | 50.20 | 42.40 | 10.84 | 10.39 | 440 | 20 |
| SMH445F-12X12UW | 1500 | 50.40 | 42.60 | 10.89 | 10.44 | 445 | 20 |
| SMH450F-12X12UW | 1500 | 50.60 | 42.80 | 10.94 | 10.49 | 450 | 20 |
| SMH410F-12X12DW | 1500 | 49.00 | 41.20 | 10.54 | 10.03 | 410 | 20 |
| SMH415F-12X12DW | 1500 | 49.20 | 41.40 | 10.59 | 10.09 | 415 | 20 |
| SMH420F-12X12DW | 1500 | 49.40 | 41.60 | 10.64 | 10.16 | 420 | 20 |
| SMH425F-12X12DW | 1500 | 49.60 | 41.80 | 10.69 | 10.23 | 425 | 20 |
| SMH430F-12X12DW | 1500 | 49.80 | 42.00 | 10.74 | 10.29 | 430 | 20 |
| SMH435F-12X12DW | 1500 | 50.00 | 42.20 | 10.79 | 10.34 | 435 | 20 |
| SMH440F-12X12DW | 1500 | 50.20 | 42.40 | 10.84 | 10.39 | 440 | 20 |
| SMH445F-12X12DW | 1500 | 50.40 | 42.60 | 10.89 | 10.44 | 445 | 20 |
| SMH450F-12X12DW | 1500 | 50.60 | 42.80 | 10.94 | 10.49 | 450 | 20 |
| SMH410F-12X12UB | 1500 | 49.00 | 41.20 | 10.54 | 10.03 | 410 | 20 |
| SMH415F-12X12UB | 1500 | 49.20 | 41.40 | 10.59 | 10.09 | 415 | 20 |
| SMH420F-12X12UB | 1500 | 49.40 | 41.60 | 10.64 | 10.16 | 420 | 20 |
| SMH425F-12X12UB | 1500 | 49.60 | 41.80 | 10.69 | 10.23 | 425 | 20 |
| SMH430F-12X12UB | 1500 | 49.80 | 42.00 | 10.74 | 10.29 | 430 | 20 |
| SMH435F-12X12UB | 1500 | 50.00 | 42.20 | 10.79 | 10.34 | 435 | 20 |
| SMH440F-12X12UB | 1500 | 50.20 | 42.40 | 10.84 | 10.39 | 440 | 20 |
| SMH445F-12X12UB | 1500 | 50.40 | 42.60 | 10.89 | 10.44 | 445 | 20 |
| SMH450F-12X12UB | 1500 | 50.60 | 42.80 | 10.94 | 10.49 | 450 | 20 |
| SMH410F-12X12DB | 1500 | 49.00 | 41.20 | 10.54 | 10.03 | 410 | 20 |
| SMH415F-12X12DB | 1500 | 49.20 | 41.40 | 10.59 | 10.09 | 415 | 20 |
| SMH420F-12X12DB | 1500 | 49.40 | 41.60 | 10.64 | 10.16 | 420 | 20 |
| SMH425F-12X12DB | 1500 | 49.60 | 41.80 | 10.69 | 10.23 | 425 | 20 |
| SMH430F-12X12DB | 1500 | 49.80 | 42.00 | 10.74 | 10.29 | 430 | 20 |
| SMH435F-12X12DB | 1500 | 50.00 | 42.20 | 10.79 | 10.34 | 435 | 20 |
| SMH440F-12X12DB | 1500 | 50.20 | 42.40 | 10.84 | 10.39 | 440 | 20 |
| SMH445F-12X12DB | 1500 | 50.40 | 42.60 | 10.89 | 10.44 | 445 | 20 |
| SMH450F-12X12DB | 1500 | 50.60 | 42.80 | 10.94 | 10.49 | 450 | 20 |