



Carefully read through these installation instructions before installing, operating or servicing PV system. Failure to follow these instructions may result in bodily injury or damage to property. Keep these instructions!

Working on a PV system (installation, setup, maintenance, repairs) must be carried out by qualified and authorized persons.

This installation instruction is for mono and poly modules:

Electrical Characteristics

Under standard conditions (irradiance 1000mW/cm², AM 1.5 spectrum, cell temperature 25 ° c (77 ° f)), power tolerance is ±3%, open circuit voltage and short circuit current tolerance is ±5%.

Warning:

Danger of death from electric shock!

• Solar modules generate electricity as soon as they are exposed to light. One module on its own is below the safety extra low volt level, but multiple modules connected in series (summing the voltage) or in parallel (summing the current) represent a danger. The following points must be observed when handling the solar modules to avoid the risk of fire, sparking and fatal electric shock.

- Do not insert electrically conducting parts into the plugs or sockets! Do not fit solar modules and wiring with wet plugs and sockets!
- Exercise utmost caution when carrying out work on wiring and safety equipment (use insulated tools, insulated gloves, ect.)!
- Do not use damaged modules! Do not dismantle modules! Do not mark on the rear of the module using sharp objects!
- Exercise utmost caution when working on wiring and the inverter. Be sure carefully to follow manufacture' s installation instructions!

Artificially concentrated sunlight shall not be directed on the module or panel.



Danger of death from arcing

Modules generate direct current when light shines on them. An arc may be produced when connections are separated. We therefore recommended covering modules with a lightproof cloth during installation. When breaking a connected string of modules (e.g. when disconnecting the DC line from the inverter under load), a lethally strong arc can occur:

- Never disconnect the solar generator from the inverter while the inverter is connected to the mains grid—remove the fuse from the AC side on the inverter first!
- Ensure cable connections in perfect condition (no splitting, soiling or other contamination)!

Unpacking the modules and storage

The utmost care is required when handling the modules. Be careful when unpacking, transporting, and storing the modules:

- Transport modules in an upright position.
- Carry modules with both hands. Do not use the connection socket as a handle.
- Ensure modules do not bow under their own weight.
- Do not place modules on top of each other.
- Do not subject to load, do not stand on them.
- Do not mark using sharp implements.
- Do not stand on the panel.
- Keep all electrical contacts clean and dry.

If it is necessary to store the modules temporarily, a dry, ventilated room should be used.

General safety information

Ensure that the module is used only in applications for which it is suitable (see “Installing the modules”). All work on a PV system (installation, setup, maintenance, repairs) must be carried out only by appropriately qualified and authorized persons.

The appropriate DIN standards, construction rules and safety instructions are to be followed for installation.

Installing the modules

When installing the modules, please pay attention to: the assembly is to be mounted over a fire resistant roof covering rated for the application.

• Keeping within the maximum permitted load

Keeping within the maximum permitted load The maximum mechanical load on the module must not exceed 5400pa. 2400pa mechanical load has been past in third laboratory. To avoid exceeding the maximum mechanical load, site-specific live loads such as wind and snow should be taken into account.

• Environmental conditions

The module is intended for use in temperate climatic conditions. The module is “non-explosion-protected equipment”. Hence it must not be installed in the proximity of highly inflammable gases and vapors (e.g. filling stations, gas containers, paint equipment).

The module must not be installed near to naked flames or flammable materials.

Do not expose modules to concentrated light sources.

It must not be immersed in water or constantly exposed to water (e.g. from fountains).

If there is exposure to salt (it is recommended that modules are installed at least 500m from the sea) and sulfur (sulfur sources, volcanoes), there is a risk of corrosion.

Maximum altitude for module installation can be no more than 2000m.

• Requirements of installation

Make sure the modules’ electrical performances in a system are the same. When connected in series, modules must all have the same amperage. When connected in parallel, the modules must all have the same voltage. Connect the quantity of modules that match the voltage specifications of the devices used in the system. The modules must not be connected together to create a voltage higher than the permitted system voltage.

To minimize risk in the event of an indirect lightning strike avoid forming loops when designing the system. Artificially concentrated sunlight shall not be directed on the module or panel.

Modules must not be fitted as overhead glazing. Ensure that the mounting system can also withstand the anticipated wind and snow loads.

Precipitation can run off through small openings on the back side of the module. Make sure that these openings are not masked after mounting.

• Optimum orientation and tilt

To achieve the maximum annual yield figure out what the optimum orientation and tilt of the PV modules is. If sunlight shines vertical onto the PV modules you have the best conditions to generate maximum power.

• Avoid overshadowing

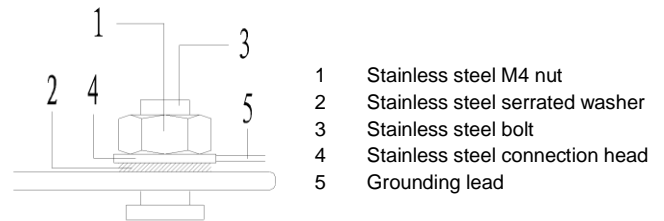
Even the slightest partial shading (e.g. from dirt deposits) will cause a reduction in yield. A module is considered “shadow-free” if it is unobscured across its entire surface for the whole year and even on the shortest day of the year unobstructed sunlight can reach the module.

• Reliable ventilation

Functioning ventilation prevents the build-up of heat, which would reduce performance.

• Earthing

Although the modules are certified to safety class II, we still recommend earthing them. The earth connection must be made by a qualified electrician. Connect module frames to each other using cables with cable lugs. Use the hole (ϕ 4.5mm) attached with a green label that are provided for this purpose. To create the conductive connection (frame is anodized), use a serrated washer or a self-tapping screw (ϕ 5mm). The earth connection should be made by a qualified electrician.



All the junctions on the conductive connection must be fixed. The fastness does not depend on soldering.

The metal containing iron in the conductive connection should be handled by some way, such as anodization, spray-painting, galvanization. Stainless steel does not need to be handled.

• Maximum number of modules in parallel and in series

When designing the system, we recommend that the maximum number of modules in parallel should be no more than one while the maximum number of modules in series no more than eighteen.

Recommended maximum series/parallel module configurations:

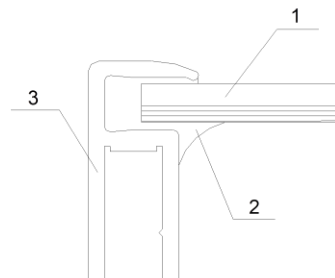
$$[V_{sys}/(1.25V_{oc})]/2$$

Bypass diodes

The junction box contains bypass diodes and is connected in parallel to the battery string in the module. When the hot spot occurs in the module, the diode will work, so that the main current will no longer flow through the hot spot cell, thus limiting the module heating and performance loss. Note that the bypass diode is not an over-current protection device.

Mounting

• Installation of Frame and Module



The depth is no less than 3mm when installing the module into the frame.

● Modules installed with clamp

Modules should be mounted using specialized clamps as shown in Figure 3.

A. Modules should be attached on a supporting structure rail by metal clamps. It is recommended to use the clamps under the following condition or approved by system installation:

Width: Clamp A 40mm Clamp B 40mm;

Thickness: No less than 3mm;

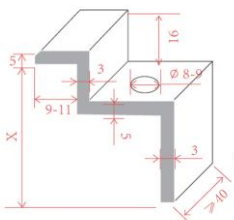
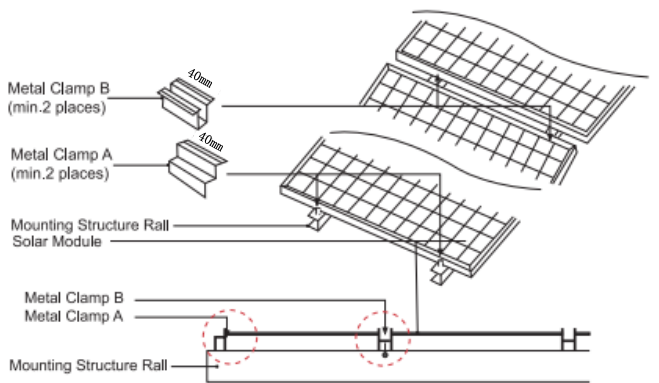
Material: Aluminum Alloy;

Bolt: M8;

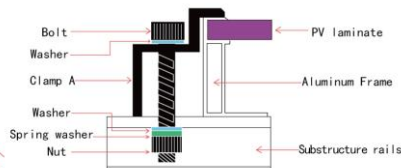
B. The torque range of screw tightening is between 18N.m to 24N.m

C. The Modules lamps must not contact the front glass or deform the frame in any way, the contact area of clamp with the front of frame must be smooth, otherwise maybe damage the frame bring about the modules broken.

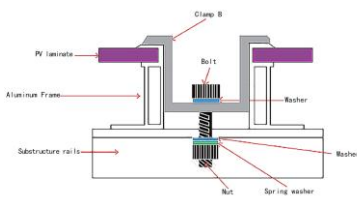
Avoid shading effects from the Modules clamps. Drainage holes on the Modules frame must not be closed or obscured by the clamps.



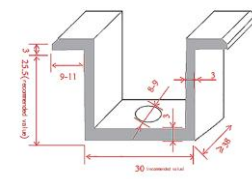
X= height of PV module



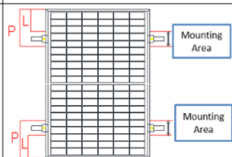
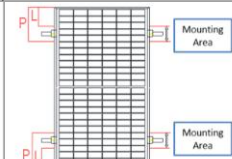
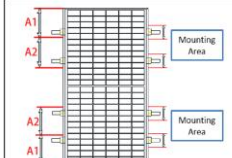
Clamp A



Clamp B



Fixture diagram (unit: mm)

| Module 组件 | Mechanical Load Pressure 载荷 | Safety factor 安全系数 | Mounting Direction 安装图 |
|--|-----------------------------|--------------------|--|
| 30/36/42/48/54· 60/108/120PC Backsheet-Glass 30/36/42/48· /54/60//108/1 20· | +3600 Pa /-1600Pa | 1.5 |  |
| | | | $L = (\text{Component length}/4 - 50)$ $P = (\text{Component length}/4 + 50)$ $A1 = A2 = 400\text{mm}$ |
| 66/72/132/144/P CS Backsheet-Glass s | +3600 Pa /-1600 Pa | 1.5 |  |
| 78/156pcs Backsheet-Glass 78/156片单玻 | +3600 Pa /-1600 Pa | 1.5 |  |

● Description of the installation position

The low/normal level of load condition is applicable to the installation in most of environmental conditions: the maximum static load on the back of the modules is 2400 Pa (i.e. wind load), and the maximum static load on the front of modules is 2400 Pa (i.e. wind and snow load).

The high level of load condition is applicable to be the installation in harsher environmental conditions such as storm, heavy snow, etc: the maximum static load on the back of modules is 2400 Pa (i.e. wind load), and the maximum static load on the front of modules is 5400 Pa (i.e. wind and snow load), depending on the pressure level that it would endure according to IEC standard.

For the dynamic loads, such as wind, the safety factor needs to be increased by 3 times. It means that the maximum dynamic load is 800 Pa when the wind speed is less than 130 km/h.



Wiring

For the wiring, pay attention to:

• Correct wiring scheme

When designing the system, avoid forming loops (to minimize risk in the event of an indirect lighting strike). Check that wiring is correct before starting up the generator. If the measured open circuit voltage (Voc) and short-circuit current (Isc) differ from the specifications, then there is a wiring fault.

• Correct connection of connectors

The connector is PV-GZX1500 made by GZX or PV-TS02 made by Tiansheng ,PV5 made by Friends, Suggestion:Connectors with different models mustn't connect together.. The area of the cable mating with the connector recommended to be 4~6 mm².The plug connector has its own polarity. Make sure that the connection is safe and tight. The plug connector should not receive outer stress. The connector should only be used to connect the circuit, but never be used to turn the circuit on and off..

• Use of suitable materials

Use cable extensions and plugs that are designed for outdoor applications. Ensure that they are in perfect electrical and mechanical condition. Use only cables having one conductor. Select the appropriate cable diameter to minimize voltage drop (to calculate the minimum cable diameter, the fuse, and to calculate controls, multiply the Isc and Uoc by a factor of 1.25). Under normal conditions, a photovoltaic module is likely to experience conditions that produce more current and/or voltage than reported at standard test conditions. Accordingly, the values of Isc and Voc marked on this module should be multiplied by a factor of 1.25 when determining component voltage ratings, conductor ampacities, fuse sizes, and size of controls connected to the PV output.

Maintenance and cleaning

Do not change the PV components optionally (diode, junction box, plug connectors).

Given a sufficient tilt (at least 15°), it is not generally necessary to clean the modules (rainfall will have a self-cleaning effect). In case of heavy soiling (which will result in output reductions), we recommend cleaning the modules using plenty of water (from a hose) with mild detergent and using a gentle cleaning implement(a sponge).**CAUTION: DON'T USE DETERGENTS CONSISTING OF ABRASIVE,ACETONE OR OTHER CORROSIVE ELEMENTS.**Do not clean the modules with cold water during the warmer hours of the day in order to avoid creating any thermal shock that maybe damage the module. Dirt must never be scraped or rubbed away when dry, as this will cause micro-scratched. We recommend the system is inspected at regular intervals.

Checklists:

- All fastenings are tight and secure and free of corrosion.
- All cable connections are secure, tight, clean and free of corrosion.
- Cables are not damaged in any way.
- Checking the earthing resistivity of metals.



| MECHANICAL DATA | | | TEMPERATURE RATINGS | | | | ELECTRICAL DATA (STC) | | | | | ELECTRICAL DATA (NMOT) | | | | |
|---------------------|--|-------------|---------------------|--------------------------------------|-------------------------|-------------------------------------|--------------------------|---------------------|---------------------|-------------------------|-------------------------|--------------------------|---------------------|---------------------|-------------------------|-------------------------|
| Parameter Type | Dimension (mm) | Weight (KG) | NMOT | Temp Coefficient of P _{MAX} | Temp Coefficient of Voc | Temp Coefficient of I _{sc} | P _{mpp} (W) ±3% | I _{mp} (A) | V _{mp} (V) | I _{sc} (A) ±5% | V _{oc} (V) ±5% | P _{mpp} (W) ±3% | I _{mp} (A) | V _{mp} (V) | I _{sc} (A) ±5% | V _{oc} (V) ±5% |
| IE156X156/M/72/380W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 380 | 9.55 | 39.80 | 10.12 | 48.45 | 286 | 7.57 | 37.80 | 8.11 | 46.95 |
| IE156X156/M/72/375W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 375 | 9.47 | 39.60 | 10.04 | 48.30 | 282 | 7.50 | 37.60 | 8.03 | 46.80 |
| IE156X156/M/72/370W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 370 | 9.39 | 39.40 | 9.92 | 48.09 | 278 | 7.43 | 37.40 | 7.94 | 46.65 |
| IE156X156/M/72/365W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 365 | 9.31 | 39.20 | 9.84 | 47.88 | 274 | 7.37 | 37.20 | 7.87 | 46.45 |
| IE156X156/M/72/360W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 360 | 9.24 | 39.00 | 9.76 | 47.67 | 270 | 7.30 | 37.00 | 7.80 | 46.20 |
| IE156X156/M/72/355W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 355 | 9.15 | 38.80 | 9.68 | 47.46 | 266 | 7.23 | 36.80 | 7.74 | 46.00 |
| IE156X156/M/72/350W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 350 | 9.07 | 38.60 | 9.60 | 47.25 | 262 | 7.16 | 36.60 | 7.68 | 45.80 |
| IE156X156/M/72/345W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 345 | 8.99 | 38.40 | 9.56 | 46.80 | 258 | 7.09 | 36.40 | 7.65 | 45.40 |
| IE156X156/M/72/340W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 340 | 8.90 | 38.20 | 9.49 | 46.60 | 254 | 7.02 | 36.20 | 7.59 | 45.20 |
| IE156X156/M/72/335W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 335 | 8.82 | 38.00 | 9.41 | 46.40 | 250 | 6.95 | 36.00 | 7.52 | 45.00 |
| IE156X156/M/72/330W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 330 | 8.73 | 37.80 | 9.33 | 46.20 | 246 | 6.88 | 35.80 | 7.46 | 44.80 |
| IE156X156/M/72/325W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 325 | 8.79 | 37.00 | 9.29 | 45.30 | 242 | 6.88 | 35.20 | 7.43 | 43.95 |
| IE156X156/M/72/320W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 320 | 8.68 | 36.90 | 9.18 | 45.20 | 238 | 6.79 | 35.05 | 7.34 | 43.85 |
| IE156X156/M/72/315W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 315 | 8.56 | 36.80 | 9.06 | 45.10 | 234 | 6.70 | 34.95 | 7.25 | 43.75 |
| IE156X156/M/72/310W | 1960*990*40/35/30 1960*992*40/35/30 | 21.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 310 | 8.45 | 36.69 | 8.95 | 44.99 | 230 | 6.60 | 34.85 | 7.16 | 43.65 |
| IE156X156/M/60/320W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 320 | 9.65 | 33.16 | 10.12 | 40.65 | 239 | 7.67 | 31.15 | 8.39 | 37.60 |
| IE156X156/M/60/315W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 315 | 9.56 | 32.96 | 10.03 | 40.45 | 235 | 7.59 | 30.96 | 8.32 | 37.35 |
| IE156X156/M/60/310W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 310 | 9.47 | 32.74 | 9.94 | 40.25 | 231 | 7.51 | 30.77 | 8.25 | 37.20 |
| IE156X156/M/60/305W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 305 | 9.38 | 32.51 | 9.85 | 40.05 | 227 | 7.43 | 30.55 | 8.18 | 37.05 |
| IE156X156/M/60/300W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 300 | 9.29 | 32.28 | 9.74 | 39.85 | 223 | 7.35 | 30.34 | 8.08 | 36.85 |
| IE156X156/M/60/295W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 295 | 9.20 | 32.05 | 9.65 | 39.65 | 219 | 7.27 | 30.12 | 8.01 | 36.65 |
| IE156X156/M/60/290W | 1640*990*35/30 1650*992*35/30 | 18 18.5 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 290 | 9.06 | 32.00 | 9.63 | 39.10 | 215 | 7.15 | 30.08 | 7.99 | 36.15 |
| IE156X156/M/60/285W | 1640*990*35/30 | 18 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 285 | 8.96 | 31.80 | 9.54 | 38.90 | 211 | 7.06 | 29.89 | 7.92 | 36.00 |



| | | | | | | | | | | | | | | | | |
|------------------------|--|--------------|-------------|-----------|-----------|-----------|-----|-------|-------|-------|-------|-----|------|-------|------|-------|
| IE156X156/M/30/135W | 848*990*35/30 | 9.8 | 41°C (±3°C) | -0.40%/°C | -0.30%/°C | +0.06%/°C | 135 | 8.77 | 15.39 | 9.18 | 18.95 | 101 | 7.07 | 14.31 | 7.34 | 17.87 |
| IE158X158/M/72/H/365W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 365 | 9.22 | 39.60 | 9.79 | 48.30 | 275 | 7.31 | 37.60 | 7.67 | 47.00 |
| IE158X158/M/72/H/370W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 370 | 9.27 | 39.90 | 9.83 | 48.50 | 279 | 7.36 | 37.90 | 7.75 | 47.20 |
| IE158X158/M/72/H/375W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 375 | 9.33 | 40.20 | 9.87 | 48.70 | 282 | 7.38 | 38.20 | 7.80 | 47.40 |
| IE158X158/M/72/H/380W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 380 | 9.38 | 40.50 | 9.95 | 48.90 | 286 | 7.43 | 38.50 | 7.87 | 47.60 |
| IE158X158/M/72/H/385W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 385 | 9.45 | 40.75 | 10.04 | 49.10 | 290 | 7.49 | 38.70 | 7.95 | 47.80 |
| IE158X158/M/72/H/390W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 390 | 9.51 | 41.00 | 10.12 | 49.30 | 294 | 7.55 | 38.95 | 8.03 | 48.00 |
| IE158X158/M/72/H/395W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 395 | 9.58 | 41.25 | 10.21 | 49.50 | 298 | 7.60 | 39.20 | 8.10 | 48.20 |
| IE158X158/M/72/H/400W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 400 | 9.64 | 41.50 | 10.30 | 49.70 | 302 | 7.66 | 39.40 | 8.18 | 48.40 |
| IE158X158/M/66/H/335W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 335 | 9.13 | 36.70 | 9.72 | 44.00 | 252 | 7.25 | 34.80 | 7.68 | 42.80 |
| IE158X158/M/66/H/340W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 340 | 9.21 | 36.90 | 9.81 | 44.30 | 256 | 7.31 | 35.00 | 7.75 | 43.10 |
| IE158X158/M/66/H/345W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 345 | 9.30 | 37.10 | 9.90 | 44.50 | 260 | 7.38 | 35.20 | 7.82 | 43.30 |
| IE158X158/M/66/H/350W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 350 | 9.38 | 37.30 | 9.99 | 44.75 | 264 | 7.45 | 35.40 | 7.89 | 43.55 |
| IE158X158/M/66/H/355W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 355 | 9.47 | 37.50 | 10.09 | 45.00 | 267 | 7.51 | 35.60 | 7.97 | 43.80 |
| IE158X158/M/66/H/360W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 360 | 9.55 | 37.70 | 10.17 | 45.25 | 271 | 7.57 | 35.80 | 8.03 | 44.05 |
| IE158X158/M/66/H/365W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 365 | 9.63 | 37.90 | 10.26 | 45.50 | 275 | 7.63 | 36.00 | 8.11 | 44.30 |
| IE158X158/M/60/H/305W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 305 | 9.30 | 32.80 | 9.85 | 40.30 | 227 | 7.37 | 30.80 | 8.10 | 37.20 |
| IE158X158/M/60/H/310W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 310 | 9.39 | 33.00 | 9.93 | 40.50 | 231 | 7.45 | 31.00 | 8.21 | 37.40 |
| IE158X158/M/60/H/315W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 315 | 9.49 | 33.20 | 10.02 | 40.70 | 234 | 7.50 | 31.20 | 8.32 | 37.60 |
| IE158X158/M/60/H/320W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 320 | 9.58 | 33.40 | 10.15 | 40.90 | 238 | 7.58 | 31.40 | 8.43 | 37.80 |
| IE158X158/M/60/H/325W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 325 | 9.68 | 33.60 | 10.20 | 41.10 | 242 | 7.66 | 31.60 | 8.54 | 38.00 |
| IE158X158/M/60/H/330W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 330 | 9.76 | 33.80 | 10.24 | 41.30 | 246 | 7.74 | 31.80 | 8.65 | 38.20 |
| IE158X158/M/60/H/335W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 335 | 9.94 | 34.00 | 10.36 | 41.50 | 252 | 7.82 | 32.00 | 8.76 | 38.40 |
| IE158X158/M/72/395W | 2008*1002*40/35/30 1979*1002*40/35/30 | 22.5 22.2 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 395 | 9.55 | 41.40 | 10.23 | 49.50 | 298 | 7.60 | 39.30 | 8.09 | 48.20 |
| IE158X158/M/72/390W | 2008*1002*40/35/30 1979*1002*40/35/30 | 22.5 22.2 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 390 | 9.49 | 41.10 | 10.12 | 49.30 | 294 | 7.54 | 39.10 | 8.02 | 48.00 |
| IE158X158/M/72/385W | 2008*1002*40/35/30 1979*1002*40/35/30 | 22.5 22.2 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 385 | 9.44 | 40.80 | 9.92 | 49.10 | 290 | 7.48 | 38.80 | 7.95 | 47.70 |
| IE158X158/M/72/380W | 2008*1002*40/35/30 1979*1002*40/35/30 | 22.5 22.2 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 380 | 9.39 | 40.50 | 9.75 | 48.90 | 286 | 7.42 | 38.60 | 7.88 | 47.50 |
| IE158X158/M/60/330W | 1684*1002*35/30 1665*1002*35/30 | 19.0 18.8 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 330 | 9.77 | 33.80 | 10.31 | 41.30 | 246 | 7.74 | 31.80 | 8.65 | 38.20 |
| IE158X158/M/60/325W | 1684*1002*35/30 1665*1002*35/30 | 19.0 18.8 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 325 | 9.68 | 33.60 | 10.20 | 41.10 | 242 | 7.66 | 31.60 | 8.54 | 38.00 |
| IE158X158/M/60/320W | 1684*1002*35/30 1665*1002*35/30 | 19.0 18.8 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 320 | 9.59 | 33.40 | 10.15 | 40.90 | 239 | 7.62 | 31.40 | 8.44 | 37.80 |
| IE158X158/M/60/315W | 1684*1002*35/30 1665*1002*35/30 | 19.0 18.8 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 315 | 9.49 | 33.20 | 10.04 | 40.70 | 235 | 7.56 | 31.20 | 8.33 | 37.60 |
| IE166X166/M/72/MH/460W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 460 | 11.02 | 41.80 | 11.61 | 50.40 | 345 | 8.98 | 38.50 | 9.41 | 47.30 |
| IE166X166/M/72/MH/455W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 455 | 10.95 | 41.60 | 11.54 | 50.20 | 342 | 8.91 | 38.40 | 9.36 | 47.10 |



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|------------------------|--|------|-------------|-----------|-----------|-----------|-----|-------|-------|-------|-------|-----|------|-------|------|-------|
| IE166X166/M/72/MH/450W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 450 | 10.88 | 41.40 | 11.47 | 50.00 | 338 | 8.84 | 38.30 | 9.31 | 46.90 |
| IE166X166/M/72/MH/445W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 445 | 10.81 | 41.20 | 11.40 | 49.80 | 334 | 8.75 | 38.20 | 9.25 | 46.70 |
| IE166X166/M/72/MH/440W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 440 | 10.74 | 41.00 | 11.33 | 49.60 | 330 | 8.66 | 38.10 | 9.19 | 46.50 |
| IE166X166/M/72/MH/435W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 435 | 10.67 | 40.80 | 11.26 | 49.40 | 326 | 8.61 | 37.90 | 9.13 | 46.30 |
| IE166X166/M/72/MH/430W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 430 | 10.60 | 40.60 | 11.19 | 49.20 | 322 | 8.56 | 37.70 | 9.08 | 46.10 |
| IE166X166/M/72/MH/425W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 425 | 10.52 | 40.40 | 11.11 | 49.00 | 318 | 8.50 | 37.50 | 9.02 | 45.90 |
| IE166X166/M/72/MH/420W | 2108*1048*40/35/30 | 24.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 420 | 10.45 | 40.20 | 11.04 | 48.80 | 315 | 8.44 | 37.30 | 8.95 | 45.70 |
| IE166X166/M/66/MH/420W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 420 | 10.74 | 39.18 | 11.44 | 45.60 | 315 | 8.51 | 37.06 | 9.09 | 43.36 |
| IE166X166/M/66/MH/415W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 415 | 10.67 | 38.98 | 11.35 | 45.40 | 311 | 8.46 | 36.86 | 9.02 | 43.16 |
| IE166X166/M/66/MH/410W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 410 | 10.58 | 38.78 | 11.26 | 45.20 | 308 | 8.39 | 36.76 | 8.95 | 42.96 |
| IE166X166/M/66/MH/405W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 405 | 10.49 | 38.58 | 11.17 | 45.00 | 304 | 8.32 | 36.56 | 8.88 | 42.76 |
| IE166X166/M/66/MH/400W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 400 | 10.40 | 38.38 | 11.08 | 44.80 | 300 | 8.25 | 36.36 | 8.81 | 42.56 |
| IE166X166/M/66/MH/395W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 395 | 10.33 | 38.18 | 10.99 | 44.60 | 296 | 8.18 | 36.16 | 8.74 | 42.36 |
| IE166X166/M/66/MH/390W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 390 | 10.26 | 37.98 | 10.90 | 44.40 | 292 | 8.11 | 35.96 | 8.67 | 42.16 |
| IE166X166/M/66/MH/385W | 1936*1048*35/30 | 21.3 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 385 | 10.19 | 37.78 | 10.81 | 44.20 | 288 | 8.04 | 35.76 | 8.60 | 41.96 |
| IE166X166/M/60/MH/385W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 385 | 11.11 | 34.70 | 11.64 | 41.90 | 289 | 8.98 | 32.20 | 9.25 | 39.30 |
| IE166X166/M/60/MH/380W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 380 | 11.04 | 34.50 | 11.55 | 41.70 | 285 | 8.91 | 32.00 | 9.23 | 39.10 |
| IE166X166/M/60/MH/375W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 375 | 10.95 | 34.30 | 11.46 | 41.50 | 281 | 8.84 | 31.80 | 9.21 | 38.90 |
| IE166X166/M/60/MH/370W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 370 | 10.86 | 34.10 | 11.37 | 41.30 | 277 | 8.77 | 31.60 | 9.19 | 38.70 |
| IE166X166/M/60/MH/365W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 365 | 10.77 | 33.90 | 11.28 | 41.10 | 274 | 8.71 | 31.50 | 9.17 | 38.50 |
| IE166X166/M/60/MH/360W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 360 | 10.69 | 33.70 | 11.20 | 40.90 | 270 | 8.64 | 31.30 | 9.09 | 38.40 |
| IE166X166/M/60/MH/355W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 355 | 10.60 | 33.50 | 11.10 | 40.70 | 266 | 8.57 | 31.10 | 9.03 | 38.20 |
| IE166X166/M/60/MH/350W | 1765*1048*35/30 | 20.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 350 | 10.52 | 33.30 | 11.02 | 40.50 | 263 | 8.50 | 30.90 | 8.95 | 38.00 |
| IE158X158/M/72/MH/420W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 420 | 10.10 | 41.58 | 10.68 | 49.55 | 316 | 7.77 | 40.80 | 8.35 | 48.10 |
| IE158X158/M/72/MH/415W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 415 | 10.06 | 41.25 | 10.64 | 49.35 | 312 | 7.73 | 40.50 | 8.31 | 47.90 |
| IE158X158/M/72/MH/410W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 410 | 10.02 | 40.92 | 10.60 | 49.15 | 309 | 7.69 | 40.20 | 8.27 | 47.70 |
| IE158X158/M/72/MH/405W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 405 | 9.98 | 40.58 | 10.56 | 48.95 | 305 | 7.65 | 39.90 | 8.23 | 47.50 |
| IE158X158/M/72/MH/400W | 2008*1002*40/35/*30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 400 | 9.94 | 40.24 | 10.52 | 48.75 | 302 | 7.61 | 39.60 | 8.19 | 47.30 |
| IE158X158/M/72/MH/395W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 395 | 9.90 | 39.90 | 10.48 | 48.55 | 298 | 7.57 | 39.30 | 8.16 | 47.10 |
| IE158X158/M/72/MH/390W | 2008*1002*40/35/30 | 22.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 390 | 9.86 | 39.55 | 10.44 | 48.35 | 294 | 7.53 | 39.10 | 8.13 | 46.90 |
| IE158X158/M/66/MH/385W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 385 | 9.92 | 38.80 | 10.37 | 46.00 | 288 | 7.87 | 36.60 | 8.42 | 43.90 |
| IE158X158/M/66/MH/380W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 380 | 9.86 | 38.55 | 10.33 | 45.80 | 285 | 7.84 | 36.35 | 8.37 | 43.70 |
| IE158X158/M/66/MH/375W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 375 | 9.79 | 38.30 | 10.28 | 45.60 | 282 | 7.81 | 36.10 | 8.32 | 43.50 |
| IE158X158/M/66/MH/370W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 370 | 9.73 | 38.05 | 10.22 | 45.40 | 279 | 7.77 | 35.90 | 8.27 | 43.30 |
| IE158X158/M/66/MH/365W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 365 | 9.66 | 37.80 | 10.17 | 45.20 | 275 | 7.71 | 35.65 | 8.22 | 43.10 |
| IE158X158/M/66/MH/360W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 360 | 9.59 | 37.55 | 10.13 | 45.00 | 271 | 7.66 | 35.40 | 8.17 | 42.90 |
| IE158X158/M/66/MH/355W | 1850*1002*40/35/30 1845*1002*40/35/30 | 21.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 355 | 9.52 | 37.30 | 10.08 | 44.80 | 267 | 7.59 | 35.20 | 8.12 | 42.70 |
| IE158X158/M/60/MH/350W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 350 | 10.12 | 34.60 | 10.70 | 41.50 | 265 | 8.23 | 32.20 | 8.69 | 39.10 |
| IE158X158/M/60/MH/345W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 345 | 10.03 | 34.40 | 10.65 | 41.30 | 261 | 8.16 | 32.00 | 8.62 | 38.90 |
| IE158X158/M/60/MH/340W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 340 | 9.94 | 34.20 | 10.60 | 41.10 | 257 | 8.08 | 31.80 | 8.55 | 38.70 |



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|------------------------|------------------------------------|------------------------|-------------|-----------|-----------|-----------|-----|-------|-------|-------|-------|-----|-------|-------|-------|-------|
| IE158X158/M/60/MH/335W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 335 | 9.85 | 34.00 | 10.50 | 40.80 | 253 | 8.01 | 31.60 | 8.46 | 38.40 |
| IE158X158/M/60/MH/330W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 330 | 9.76 | 33.80 | 10.40 | 40.60 | 249 | 7.93 | 31.40 | 8.39 | 38.20 |
| IE158X158/M/60/MH/325W | 1684*1002*35/30 | 19.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 325 | 9.67 | 33.60 | 10.30 | 40.40 | 245 | 7.84 | 31.25 | 8.31 | 38.00 |
| IE182X182/M/78/MH/560W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 560 | 12.86 | 43.60 | 13.57 | 52.50 | 412 | 10.12 | 40.70 | 10.96 | 49.00 |
| IE182X182/M/78/MH/565W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 565 | 12.91 | 43.80 | 13.63 | 52.70 | 416 | 10.17 | 40.90 | 11.00 | 49.20 |
| IE182X182/M/78/MH/570W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 570 | 12.96 | 44.00 | 13.69 | 52.90 | 420 | 10.22 | 41.10 | 11.04 | 49.40 |
| IE182X182/M/78/MH/575W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 575 | 13.01 | 44.20 | 13.75 | 53.10 | 424 | 10.27 | 41.30 | 11.08 | 49.60 |
| IE182X182/M/78/MH/580W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 580 | 13.07 | 44.40 | 13.81 | 53.30 | 428 | 10.32 | 41.40 | 11.13 | 49.80 |
| IE182X182/M/78/MH/585W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 585 | 13.12 | 44.60 | 13.87 | 53.50 | 431 | 10.36 | 41.60 | 11.18 | 50.00 |
| IE182X182/M/78/MH/590W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 590 | 13.17 | 44.80 | 13.94 | 53.70 | 435 | 10.41 | 41.80 | 11.23 | 50.20 |
| IE182X182/M/78/MH/595W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 595 | 13.22 | 45.00 | 14.01 | 53.90 | 438 | 10.45 | 42.00 | 11.28 | 50.40 |
| IE182X182/M/78/MH/600W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 600 | 13.27 | 45.20 | 14.08 | 54.10 | 442 | 10.50 | 42.20 | 11.33 | 50.60 |
| IE182X182/M/78/MH/605W | 2443*1134*35 2472*1134*35 | 31.0 31.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 605 | 13.32 | 45.40 | 14.15 | 54.30 | 446 | 10.54 | 42.39 | 11.38 | 50.80 |
| IE182X182/M/72/MH/515W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 515 | 12.82 | 40.20 | 13.61 | 48.40 | 384 | 10.28 | 37.40 | 10.96 | 45.30 |
| IE182X182/M/72/MH/520W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 520 | 12.88 | 40.40 | 13.66 | 48.60 | 388 | 10.32 | 37.60 | 11.01 | 45.50 |
| IE182X182/M/72/MH/525W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 525 | 12.94 | 40.60 | 13.71 | 48.80 | 392 | 10.36 | 37.80 | 11.05 | 45.70 |
| IE182X182/M/72/MH/530W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 530 | 13.00 | 40.80 | 13.76 | 49.00 | 395 | 10.40 | 38.00 | 11.09 | 45.90 |
| IE182X182/M/72/MH/535W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 535 | 13.05 | 41.00 | 13.81 | 49.20 | 399 | 10.44 | 38.20 | 11.13 | 46.10 |
| IE182X182/M/72/MH/540W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 540 | 13.11 | 41.20 | 13.87 | 49.40 | 402 | 10.49 | 38.40 | 11.18 | 46.30 |
| IE182X182/M/72/MH/545W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 545 | 13.17 | 41.40 | 13.93 | 49.60 | 406 | 10.54 | 38.60 | 11.23 | 46.40 |
| IE182X182/M/72/MH/550W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 550 | 13.23 | 41.60 | 13.99 | 49.80 | 410 | 10.58 | 38.80 | 11.28 | 46.60 |
| IE182X182/M/72/MH/555W | 2256*1134*35 2279*1134*35 | 28.5 29.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 555 | 13.29 | 41.80 | 14.05 | 50.00 | 414 | 10.62 | 39.00 | 11.33 | 46.80 |
| IE182X182/M/66/MH/475W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 475 | 12.92 | 36.80 | 13.58 | 44.30 | 350 | 10.26 | 34.20 | 10.92 | 41.30 |
| IE182X182/M/66/MH/480W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 480 | 12.98 | 37.00 | 13.63 | 44.50 | 354 | 10.29 | 34.40 | 10.97 | 41.50 |
| IE182X182/M/66/MH/485W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 485 | 13.04 | 37.20 | 13.68 | 44.70 | 357 | 10.32 | 34.60 | 11.02 | 41.70 |



| | | | | | | | | | | | | | | | | |
|--|------------------------------------|------------------------|-------------|-----------|-----------|-----------|---|-------|-------|-------|-------|-----|-------|-------|-------|-------|
| IE182X182/M/66/MH/490W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 490 | 13.10 | 37.40 | 13.73 | 44.90 | 360 | 10.35 | 34.80 | 11.07 | 41.90 |
| IE182X182/M/66/MH/495W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 495 | 13.16 | 37.60 | 13.78 | 45.10 | 364 | 10.40 | 35.00 | 11.12 | 42.10 |
| IE182X182/M/66/MH/500W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 500 | 13.22 | 37.80 | 13.83 | 45.30 | 368 | 10.45 | 35.20 | 11.17 | 42.30 |
| IE182X182/M/66/MH/505W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 505 | 13.28 | 38.00 | 13.89 | 45.50 | 372 | 10.51 | 35.40 | 11.22 | 42.50 |
| IE182X182/M/66/MH/510W | 2073*1134*35/30 2094*1134*35/30 | 26.0/25.5 26.5/26.0 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 510 | 13.34 | 38.20 | 13.94 | 45.70 | 375 | 10.53 | 35.60 | 11.27 | 42.70 |
| IE182X182/M/60/MH/430W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 430 | 12.72 | 33.80 | 13.48 | 40.60 | 316 | 10.02 | 31.54 | 10.58 | 37.88 |
| IE182X182/M/60/MH/435W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 435 | 12.78 | 34.00 | 13.53 | 40.80 | 320 | 10.08 | 31.74 | 10.63 | 38.08 |
| IE182X182/M/60/MH/440W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 440 | 12.84 | 34.20 | 13.58 | 41.00 | 324 | 10.14 | 31.94 | 10.68 | 38.28 |
| IE182X182/M/60/MH/445W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 445 | 12.90 | 34.50 | 13.63 | 41.20 | 328 | 10.21 | 32.14 | 10.73 | 38.48 |
| IE182X182/M/60/MH/450W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 450 | 12.96 | 34.70 | 13.68 | 41.40 | 331 | 10.24 | 32.34 | 10.78 | 38.68 |
| IE182X182/M/60/MH/455W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 455 | 13.02 | 34.90 | 13.73 | 41.60 | 335 | 10.30 | 32.54 | 10.83 | 38.88 |
| IE182X182/M/60/MH/460W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 460 | 13.08 | 35.20 | 13.78 | 41.80 | 339 | 10.35 | 32.74 | 10.88 | 39.08 |
| IE182X182/M/60/MH/465W | 1890*1134*35/30 1909*1134*35/30 | 23.5/23.0 24.0/23.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 465 | 13.14 | 35.40 | 13.83 | 42.00 | 343 | 10.40 | 32.94 | 10.93 | 39.28 |
| IE182X182/M/54/MH/390W | 1707*1134*35/30 1724*1134*35/30 | 21.5/21.0 22.0/21.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 390 | 12.82 | 30.42 | 13.50 | 36.54 | 287 | 10.11 | 28.38 | 10.60 | 34.09 |
| IE182X182/M/54/MH/395W | 1707*1134*35/30 1724*1134*35/30 | 21.5/21.0 22.0/21.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 395 | 12.88 | 30.62 | 13.55 | 36.74 | 291 | 10.18 | 28.58 | 10.65 | 34.29 |
| IE182X182/M/54/MH/400W | 1707*1134*35/30 1724*1134*35/30 | 21.5/21.0 22.0/21.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 400 | 12.94 | 30.92 | 13.60 | 36.94 | 295 | 10.25 | 28.78 | 10.70 | 34.49 |
| IE182X182/M/54/MH/405W | 1707*1134*35/30 1724*1134*35/30 | 21.5/21.0 22.0/21.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 405 | 13.00 | 31.12 | 13.65 | 37.14 | 298 | 10.28 | 28.98 | 10.75 | 34.69 |
| IE182X182/M/54/MH/410W | 1707*1134*35/30 1724*1134*35/30 | 21.5/21.0 22.0/21.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 410 | 13.06 | 31.32 | 13.70 | 37.34 | 302 | 10.35 | 29.18 | 10.80 | 34.89 |
| IE182X182/M/54/MH/415W | 1707*1134*35/30 1724*1134*35/30 | 21.5/21.0 22.0/21.5 | 41°C (±3°C) | -0.36%/°C | -0.28%/°C | +0.05%/°C | 415 | 13.12 | 31.62 | 13.75 | 37.54 | 306 | 10.40 | 29.38 | 11.00 | 35.09 |
| STC: Irradiance 1000W/m ² , Cell Temperature 25° C, Air Mass AM1.5. | | | | | | | NMOT: Irradiance at 800W/m ² , Ambient Temperature 20° C, Wind Speed 1m/s. | | | | | | | | | |

- Max.over-current protection rating(A): 15A /20A/25A
- Fire safety class : Class C
- Application Class A: General access, hazardous voltage, hazardous power applications

Modules qualified for safety through IEC61730-1 and this part of IEC61730 within this application class are considered to meet the requirement for safety class II. Whenever necessary to comply with local codes, use a listed fuse or circuit breaker, rated for the maximum series fuse rating of the module and the system voltage.

