

100W solar irradiation area





Overview

What irradiance should a solar panel be placed in?

Understanding solar irradiance is pivotal when determining the best placement for photovoltaic (PV) panels. The amount of solar energy a panel can generate is directly proportional to the solar irradiance it receives. Therefore, panels are best placed in areas with high solar irradiance.

What is solar irradiance?

Solar energy is the way of the future, providing a renewable source of power for households and businesses worldwide. At the heart of this energy revolution is a critical concept known as solar irradiance. But what exactly is solar irradiance, and how does it impact the placement and effectiveness of solar panels?

Let's break it down.

How is solar irradiance measured?

The sun is an excellent source of radiant energy. The amount of solar energy per unit area arriving on a surface at a particular angle is called irradiance which is measured in watts per square metre, W/m^2 , or kilowatts per square metre, kW/m^2 where 1000 watts equals 1.0 kilowatts.

How much solar irradiance is a day?

Again according to NASA, the worldwide daily average value of solar irradiance across the whole planet over one day is approximately equal to 5.0 kWh/m^2 or 5 peak sun hours (PSH). Photovoltaic (PV) panels convert solar irradiance into electricity.



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