Why is I-V curve tracing important?

A fully illuminated PV module will produce a characteristic I-V curve. Any deviation from this curve may indicate a problem with the module. Measuring the I-V curve of a PV module is the only way to accurately determine the maximum power (Pmax) that the module can produce. Pmax is the point on the I-V curve where the product of current (I) and voltage (V) is at its highest. Measuring Pmax is the only way to verify the module's performance and ensure it is operating as expected. Comparing the measured values of Pmax, Voc, Isc, and FF to the module's rated values can help identify any issues or discrepancies. Additionally, the I-V curve data can be used to diagnose problems such as shading, soiling, or damage to the module. Regular I-V curve tracing can help maximize the energy output of a PV system and ensure its long-term reliability. It is important to perform I-V curve tracing under standard test conditions (STC) to obtain accurate measurements that can be used for a direct comparison with the rating plate figures.

If you require more help, please contact us at https://www.seaward.com/gb/enquiry/.

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