Expected Temperature Range in Australia

Enphase confirms that the “expected temperature range, record low” limit can be increased to +10 °C on the solar module compatibility calculator, without voiding the manufacturer’s warranty conditions, provided that:

- The installed Micro Inverter is an IQ Series
- The installation is installed in Australia and is less than 1,000 m above sea level
- The PV modules are not installed on a dynamic PV tracking system

After analysing Australian BOM data and system performance, including the maximum levels of open circuit voltage (Voc), Enphase Energy has determined that a PV cell temperature of less than +10 °C and insolation of 1,000 W/m² will not occur simultaneously, when considering the above conditions.

Lower insolation values decrease module temperature, resulting in an increased MPP voltage but a decreased Voc. A PV module manufacture’s datasheet includes test results at Standard Test Conditions (STC). STC are conducted at 1,000 W/m² and 25 °C cell temperature (this is usually achieved with an air temperature of 0 to 2 °C), we can therefore assume a lower Voc will be more realistic than the provided STC value, even when taking into account the provided temperatures coefficients.