

# TECHNICAL BULLETIN



## PVWATTS ESTIMATED PERFORMANCE DATA

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When using SolarWorld Americas Sunmodules in PVWatts, the default overall DC to AC derate factor of 0.77 should not be used. An overall DC to AC derate factor of 0.845 is appropriate. This value has been calculated using the PVWatt's DC to AC Derate Calculator. In the table below all the components' derate values have been carefully chosen within the PVWatts acceptable range of values. If further information is needed, please contact [technicalsupport@SolarWorldUSA.com](mailto:technicalsupport@SolarWorldUSA.com).

### Calculator for Overall DC to AC Derate Factor

Component Derate Factors	Component Derate Values	Range of Acceptable Values
PV module nameplate DC rating	1	0.80 - 1.05
Inverter	0.98	0.88 - 0.98
Mismatch	1.0	0.97 - 1.0
Connections	0.995	0.99 - 0.997
Wiring	0.97	0.97-0.99
Soiling	0.95	0.30 - 0.995
System availability	0.98	0.00 - 0.995
Shading	0.97	0.00 - 1.00
Age	1.00	0.70 - 1.00
Overall DC to AC derate factor	0.845	

### Explanation of Derate Factors

- PV module nameplate DC rating: 1.0** Sunmodule solar panels have nameplate rated power or higher. Factory flash data for each module is available upon request.
- Inverter 0.98** Confirm efficiency on inverter datasheet.
- Mismatch 1.0** There will not be mismatch losses with Sunmodule solar panels because they have nameplate rated power or higher. All other derate factors are PV Watts defaults.

Revision	Date	Description
1	2018.03.14	Updated Inverter Component Derate Values; Mismatch Derate and Range of Acceptable Values to 1.0; Wiring Derate Value to 0.97 and Range of Acceptable Values to 0.97 to 0.99; shading Derate Value to 0.97; deleted Sun-Tracking. Updated definitions of Inverters and Mismatch

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