
Nameplate, Datasheet and Sampling Requirements for PV Modules

Christopher Flueckiger
Principal Engineer Renewable Energy
UL LLC



Why a new “Nameplate” Standard?

Rating requirements under UL 1703:

20.1 The short-circuit current (I_{SC}), rated current (I_r) maximum power (P_{max}), and open-circuit voltage (V_{OC}) shall be within ± 10 percent of the rated value - See [43.1](#) and [44.1\(c\)](#) - under conditions of:

- a) Standard test conditions (STC) and
- b) For I_r and P_{max} , also at normal operating cell temperature (NOCT).

Why a new “Nameplate” Standard?

Requirements under IEC/UL 61215:

Pass/fail for compliance:

- 6 a) the degradation of maximum output power does not exceed the prescribed limit after each test nor 8 % after each test sequence

Reported values:

- Measurement of temperature Coefficients
- Measurement of NOCT
- Performance at STC and NOCT
- Performance at low irradiance

Nameplate Standard Scope

- 1.1 This outline identifies the required information on the production and measurement tolerances of nameplate rating of flat plate photovoltaic (PV) modules.
-
- 1.2 This outline identifies five rating conditions under which the performance parameters of PV modules shall be reported.
-
- 1.3 This outline identifies a statistical method to determine the number of samples required for the power rating measurements.

Nameplate Standard Scope

- 1.7 This outline requires that the nameplate on the PV module carry the minimum required information identified in this outline.
- 1.8 This outline requires that the datasheet supplied by PV module manufacturers carry the minimum required information identified in this outline.



Publication Status

- Will be published as an Outline of Investigation this month
- Immediately upon publication, will be proposed to UL 1703 STP



Thank You!

