



Type Approval Certificate PV-MQ-366/05

With reference to PV-MQ-279/02 of 21-November-2002 and PV-MQ-360/05 of 18-March-2005

Manufacturer	Photowatt International
Type designation	PW6-123 and PW6-110, see Remarks
Test samples received on	PW6-230 (11/10/04, 09/01/04, 24/06/03 and 25/02/03) PW 1650 (13/06/02)

The ESTI laboratory has subjected the Photowatt International PW6-230 and PW 1650 module types to qualification tests defined in the standard CEI / IEC 61215: *Crystalline silicon terrestrial photovoltaic (PV) modules - Design qualification and type approval*.

On the basis of technical data, a declaration supplied by Photowatt International and of the test results documented in Photovoltaic Module Test Reports:

PV-MQ-04-ET, PV-MQ-04-EP, PV-MQ-03-DS (PW6-230) and PV-MQ-02-CU (PW 1650)

It is declared that the PW6-123 and PW6-110 module types conform to the requirements of the CEI / IEC 61215.

Electrical performance rating is outside the scope of CEI / IEC 61215. This certificate is not a guarantee of module electrical performance.

This certificate may be used by the manufacturer for his own purposes. However, the Commission declines any legal responsibility which might arise from the use of such publications, papers or statements.

Remarks

1. Photowatt International manufacture the PW6-230 using the same materials and processes as the PW 1650 except the PW6-230 is larger than the PW 1650 having 72 cells (150 x 150mm) compared with the PW 1650 which has 72 cells (125 x 125mm).
2. The PW6-123 and PW6-110 modules are based on the PW6-230, but are approximately half-sized and incorporate 36 cells. They can be manufactured using the standard Photowatt J-box (tested in PV-MQ-03-DS) or a compact J-box with cables (as tested in PV-MQ-04-ET) together with encapsulated diodes (as tested in PV-MQ-04-EP).
3. The PW6-123 and PW6-110 module types are distinguished by their electrical characteristics, which are determined by the efficiency of the cells used.
4. Electrical insulation tests were executed at a test level of 4400V, exceeding the requirements of CEI / IEC 61215 for a declared maximum system voltage of 1000V (3000V).

T. Sample 26/05/2005



European Solar Test Installation
 EC JRC IES Ispra (TP.450)
 via E. Fermi, 1
 I-21020 Ispra (VA)

H. A. Ossenbrink
 26 MAG. 2005

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 Module Qualification Testing

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