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AMENDMENT 1
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Amendment 1

Photovoltaic devices –

Part 2:

Requirements for reference solar cells

IEC Standards
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International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
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FOREWORD

This amendment has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

The text of this amendment is based on the following documents:

FDIS	Report on voting
82/182/FDIS	82/191/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

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1 Scope

Delete "crystalline silicon" from the sentence.

3 Selection

Delete the first paragraph and replace by the following new paragraph:

At least three solar cells shall be selected for calibration as reference cells so that each solar cell can be compared with at least two other solar cells. Their short-circuit current shall vary linearly with irradiance, as defined in IEC 60904-10¹⁾, over the range of interest. Their spectral response shall be such that errors in performance measurement due to the spectral response mismatch between each of the reference cells and the test specimen are less than ± 1 %. The spectral mismatch error shall be calculated by the method described in IEC 60904-7²⁾.

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9.3 Single cell package

Add, after subclause 9.3.4, the following new subclause 9.3.5:

The protective window may embody a filter to match the spectral response of the reference cell to that of the test specimen, provided that the other requirements of clause 3 are met.

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10 Care of reference cells

Replace the sentence "The calibration shall be cross-checked at intervals of ... same irradiance" by the following new sentence: "The calibration of reference cells in frequent use shall be cross-checked against a stable reference cell at intervals of no more than one month by comparing their short-circuit currents under the same irradiance".

1) IEC 60904-10:1998, *Photovoltaic devices – Part 10: Methods of linearity measurement*.

2) IEC 60904-7:1995, *Photovoltaic devices – Part 7: Computation of spectral mismatch error introduced in the testing of a photovoltaic device*.