
Draft Jamaican Standard

Specification

for

Photovoltaic devices –

Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data



BUREAU OF STANDARDS JAMAICA

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Draft Jamaican Standard

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DJS IEC 60904-3: 2023

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Jamaican Standards establish requirements in relation to commodities, processes and practices, but not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

Amendments

No.	Date of Issue	Remarks	Entered by and date

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National Foreword

This standard is an adoption and is identical to **ISO IEC 60904-3: 2019** Photovoltaic devices- Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data published by International Electrotechnical Commission (IEC).

Scope of the Standard

This part of IEC 60904 applies to the following photovoltaic devices for terrestrial applications:

- Solar cells with or without a protective;
- Sub-assemblies of solar cells;
- Modules; and
- Systems.

NOTE The term “test specimen” is used to denote any of these devices.

The principles contained in this document cover testing in both natural and simulated sunlight.

Photovoltaic conversion is spectrally selective due to the nature of the semiconductor materials used in PV solar cells and modules. To compare the relative performance of different PV devices and materials a reference standard solar spectral distribution is necessary. This document includes such a reference solar spectral irradiance distribution.

This document also describes basic measurement principles for determining the electrical output of PV devices. The principles given in this document are designed to relate the performance rating of PV devices to a common reference terrestrial solar spectral irradiance distribution.

The reference terrestrial solar spectral irradiance distribution is given in this document in order to classify solar simulators according to the spectral performance requirements contained in IEC 60904-9.

Where the words ‘International Standard’ appear, referring to this standard, they should be read as ‘Jamaican Standard’.

Where reference is made to informative and normative annexes the following definitions should be noted:

- Informative Annex – gives additional information intended to assist in the understanding or use of the document. They do not contain requirements.
- Normative Annex – gives provisions additional to those in the body of a document. They contain requirements.

Users should note that all standards undergo revision from time to time and that any reference made herein to any standard implies its latest edition, unless otherwise stated.

This standard is voluntary.

Acknowledgement

Acknowledgement is made to the International Electrotechnical Commission (IEC) for permission to adopt **IEC 60904-3: 2019**.