

BUREAU OF INDIAN STANDARDS
DRAFT FOR COMMENTS ONLY

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Draft Indian Standard

Photovoltaic Devices
**Part 4: Photovoltaic Reference Devices – Procedures for Establishing
Calibration Traceability**

(First Revision)

(ICS 27.160)

Solar Photovoltaic Energy
Systems Sectional Committee, ETD 28

Last date for comments-29 06 2024

NATIONAL FOREWORD

This Draft Indian Standard (Part 4) (First Revision) which is Identical with IEC 60904-4: 2019 ‘Photovoltaic Devices – Part 4: Photovoltaic Reference Devices – Procedures for establishing calibration traceability’ issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Solar Photovoltaic Energy Systems Sectional Committee and approval of the Electrotechnical Division Council.

This Standards was first Published in 2014 based on IEC 60904-4: 2009. The first revision of this standard has been undertaken to align it with the latest version of IEC 60904-4: 2019.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
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IEC 60904-1, Photovoltaic devices – Part 1: Measurement of photovoltaic current-voltage characteristics	IS 12762 (Part 1) : 2010 / IEC 60904 -1 Photovoltaic devices: Part 1 measurement of photovoltaic current - Voltage characteristics (First Revision)	Identical
IEC 60904-2, Photovoltaic devices – Part 2: Requirements for photovoltaic reference devices	IS 12762 (Part 2) : 2018 / IEC 60904-2 : 2015 Photovoltaic devices: Part 2 Requirements for photovoltaic reference devices (Second Revision)	Identical
IEC 60904-3, Photovoltaic devices – Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data	IS 12762 (Part 3) : 2020 / IEC 60904-3 : 2016 Photovoltaic Devices Part 3 Measurement Principles for Terrestrial Photovoltaic PV Solar Devices with Reference Spectral Irradiance Data (Third Revision)	Identical
IEC TS 61836, Solar photovoltaic energy systems – Terms, definitions and symbols	IS 12834 : 2023 / IEC TS 61836 : 2016 Solar Photovoltaic Energy Systems — Terms, Definitions and Symbols (<i>Second Revision</i>)	Identical

The technical committee has reviewed the provision of the following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO/IEC Guide 98-3: 2008	Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM: 1995)

Only English language text has been retained while adopting it in this Indian Standard, and as such the page numbers given here are not the same as in the International Standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS 2:2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

NOTE — The technical content of their document has not been enclosed as there are identical with the corresponding IEC standards for details, please refer the corresponding IEC 60904-4: 2019 or kindly contact:

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