

BUREAU OF INDIAN STANDARDS
DRAFT FOR COMMENTS ONLY

(Not to be reproduced without the permission of BIS or used as a standard)

Draft Indian Standard

Photovoltaic Devices
Part 2: Requirements for Photovoltaic Reference Devices

(Third 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 2) (Third Revision) which is identical with IEC 60904-2: 2023 'Photovoltaic Devices Part 2: Requirements for Photovoltaic Reference Devices' 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 Standard was originally published in 1993 and subsequently revised in 2013 and 2017. The Second revision was based on IEC 60904-2: 2015. The Third revision of this standard has been undertaken to align with the latest version of IEC 60904-2: 2023.

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>
-------------------------------	--------------------------------------	------------------------------

IEC 60891, Photovoltaic devices – Procedures for temperature and irradiance corrections to measured I-V characteristics	IS 12763 : 2013/ IEC 60891 : 2009 Photovoltaic devices - Procedures for temperature and irradiance corrections to measured I - V characteristics (<i>first revision</i>)	Identical
IEC 60904-1, Photovoltaic devices – Part 1: Measurement of photovoltaic current-voltage characteristics	IS 12762 (Part 1) : 2010 / IEC 60904-1: 2006 Photovoltaic devices: Part 1 measurement of photovoltaic current - Voltage characteristics (<i>first revision</i>)	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 (<i>third revision</i>)	Identical
IEC 60904-4, Photovoltaic devices – Part 4: Photovoltaic reference devices – Procedures for establishing calibration traceability	IS 12762 (Part 4) : 2014 / IEC 60904-4 : 2009 Photovoltaic devices: Part 4 reference solar devices - Procedures for establishing calibration traceability	Identical
IEC 60904-5, Photovoltaic devices – Part 5: Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method	IS 12762 (Part 5) : 2014/ IEC 60904-5 : 2011 Photovoltaic devices: Part 5 determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open - Circuit voltage method (<i>first revision</i>)	Identical
IEC 60904-7, Photovoltaic devices – Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices	IS 12762 (Part 7) : 2023 / IEC 60904-7 : 2019 Photovoltaic Devices Part 7: Computation of the Spectral Mismatch Correction For Measurements of Photovoltaic Devices (<i>first revision</i>)	Identical
IEC 60904-8, Photovoltaic devices – Part 8: Measurement of spectral responsivity of a photovoltaic (PV) device	IS 12762 (Part 8) : 2018 / IEC 60904-8 : 2014 Photovoltaic devices: Part 8 measurement of spectral responsivity of a photovoltaic (PV) device (<i>first revision</i>)	Identical
IEC 60904-9, Photovoltaic devices – Part 9: Classification of solar simulator characteristics	IS 12762 (Part 9) : 2023 / IEC 60904-9 : 2020 Photovoltaic Devices Part 9: Classification of Solar Simulator Characteristics Part 9: Solar Simulator Performance Requirements (First Revision)	Identical
IEC 60904-10, Photovoltaic devices – Part 10: Methods of linear dependence and linearity measurements	IS 12762 (Part 10) : 2023 / IEC 60904-10 : 2020 Photovoltaic Devices Part 10: Methods of Linear Dependence and Linearity Measurements (Second Revision)	Identical
IEC TS 61836, Solar photovoltaic energy systems –	IS 12834 : 2023 / IEC TS 61836 : 2016 Solar Photovoltaic Energy Systems Terms	Identical

Terms, definitions and symbols	Definitions and Symbols (<i>second revision</i>)	
--------------------------------	--	--

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 60904-2: 2023 or kindly contact:

Head
Electrotechnical Department
Bureau of Indian Standards
9, Bahadur Shah Zafar Marg,
New Delhi-110002
Email: eetd@bis.gov.in
Telephone: 011-23231192 / 8284