

Characteristic parameters of stand-alone photovoltaic (PV) systems

The European Standard EN 61194 : 1995 has the status of a
British Standard

ICS 31.260

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee EPL/47, Semiconductors, to Subcommittee EPL/47/3, Performance of opto-electronic semiconductor devices and liquid crystal displays, upon which the following bodies were represented:

- British Telecommunications plc
- Federation of the Electronics Industry
- Ministry of Defence
- National Supervising Inspectorate (BSI - Product Certification)
- United Kingdom Optical Sensors Collaborative Association

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board, was published under the authority of the Standards Board and comes into effect on 15 August 1996

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The following BSI references relate to the work on this standard:
Committee reference EPL/47/3
Draft announced in *BSI News Update*, July 1996

ISBN 0 580 26038 0

Amendments issued since publication

Amd. No.	Date	Text affected

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National foreword

This British Standard has been prepared by Subcommittee EPL/47/3 and is the English language version of EN 61194 : 1995, *Characteristic parameters of stand-alone photovoltaic (PV) systems*, published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived by CENELEC from IEC 1194 : 1992, published by the International Electrotechnical Commission (IEC).

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by a side line in the margin. Parts of the original IEC text that have been modified by CENELEC have been quoted in the national annex NA.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

ICS 31.260

Descriptors: Solar energy, stand-alone photovoltaic systems, array field, environmental parameters, performance parameters

English version

Characteristic parameters of stand-alone photovoltaic (PV) systems

(IEC 1194 : 1992, modified)

Paramètres descriptifs des systèmes
photovoltaïques autonomes
(CEI 1194 : 1992 modifiée)

Charakteristische Parameter von photovoltaischen
(PV)-Inselsystemen
(IEC 1194 : 1992, modifiziert)

This European Standard was approved by CENELEC on 1995-05-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 61194:1995 E

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Foreword

The text of the International Standard IEC 1194 : 1992, prepared by IEC TC 82, Solar photovoltaic energy systems, together with common modifications prepared by Reporting Secretariat SR 82, was submitted to the formal vote and was approved by CENELEC as EN 61194 on 1995-05-15.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1996-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-07-01

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CHARACTERISTIC PARAMETERS OF STAND-ALONE PHOTOVOLTAIC (PV) SYSTEMS

1 Scope

This International Standard defines the major electrical, mechanical and environmental parameters for the description and performance analysis of stand-alone photovoltaic systems. The parameters as listed are presented in a standard format for the purposes of procurement and performance analysis:

- measurement of short- and long-term on-site photovoltaic-system performance;
- comparison between on-site measured and projected performance, both extrapolated to standard test conditions (STC).

Specialized documents related to specific applications and/or to specific uses (designing, performance prediction and measurement) may be issued, if necessary.

NOTE - The minimum requirements, when applicable, are represented in boxes in the figures and the text. Recommended optional requirements are also given.

Example

U_N	nominal voltage
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minimum requirement

W Weight

optional requirement

The numbering of subclauses is arbitrary and may not be the same for specific data sheets.

2 PV-system description

2.1 Array field

See annex A for example of array field components.

2.1.1 Modules

Its characteristics as defined by the data sheets

P_{max}	peak power at STC	(W)
A_m	overall area (including frame)	(m ²)

2.1.2 Panels

n number of modules in a panel
 A_p overall panel area
 (including frame, module inter spacing,
 reflectors, etc.)

(m²)



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