

SLOVENSKI STANDARD SIST EN IEC 62087-3:2023

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Audio, video, and related equipment - Determination of power consumption - Part 3: Television sets (IEC 62087-3:2023)		
Audio-, Video- und verwandte Geräte - Messverfahren für die Leistungsaufnahme - Teil 3: Fernsehgeräte (IEC 62087-3:2023)		
Appareils audio, vidéo et matériel connexe - Détermination de la consommation de puissance - Partie 3: Téléviseurs (IEC 62087-3:2023)		
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Audio, video, and related equipment - Determination of power consumption - Part 3: Television sets (IEC 62087-3:2023)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 100/3772/CDV, future edition 2 of IEC 62087-3, prepared by Technical Area 12 "AV energy efficiency and smart grid applications" of IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62087-3:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2023-12-24 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2026-03-24 document have to be withdrawn

This document supersedes EN 62087-3:2016 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 62087-3:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 62087-4 NOTE Approved as EN 62087-4

IEC 62087-5 NOTE Approved as EN 62087-5

IEC 62087-6 NOTE Approved as EN 62087-6

IEC 62542 NOTE Approved as EN 62542

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: <u>www.cencenelec.eu</u>.

Publication	<u>Year</u>	Title	<u>EN/HD</u>	Year
IEC 62087-1	2015	Audio, video, and related equipment - Determination of power consumption - F 1: General	EN 62087-1 Part	2016
IEC 62087-2	2023	Audio, video, and related equipment - Determination of power consumption - F 2: Signals and media	EN IEC 62087-2 Part	2023
IEC 62301	-	Household electrical appliances - Measurement of standby power	EN 50564	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



Audio, video, and related equipment – Determination of power consumption – Part 3: Television sets

Appareils audio, vidéo et matériel connexe – Détermination de la consommation de puissance – <u>SIST EN IEC 62087-3:2023</u> Partie 3: Téléviseurs la iten ai/catalog/standards/sist/003e399c-f746-47b4-a2e9-260f2de3c408/sist-en-iec-62087-3-2023

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUDIO, VIDEO, AND RELATED EQUIPMENT – DETERMINATION OF POWER CONSUMPTION –

Part 3: Television sets

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 62087-3 has been prepared by technical area 19: Environmental and energy aspects for multimedia systems and equipment, of IEC technical committee 100: Audio, video and multimedia systems and equipment. It is an International Standard.

This second edition cancels and replaces the first edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) it introduces measuring procedures for the determination of power consumption in the On mode while viewing static metadata HDR video content;
- b) all tests for On mode power determination are performed with MDD disabled;
- c) only progressive video signals are used for testing;
- d) a dimmable LED reflector lamp is used as a light source for illuminating the ABC sensor to achieve specific illuminance levels;

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e) a dynamic box and outline video signal is used for determining the ratio of peak luminance.

The text of this International Standard is based on the following documents:

Draft	Report on voting
100/3772/CDV	100/3849/RVC

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

The language used for the development of this International Standard is English.

A list of all parts in the IEC 62087 series, published under the general title *Audio, video, and related equipment – Determination of power consumption*, can be found on the IEC website.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended. nups://standards.iteh.ai/catalog/standards/sist/003e399c-f746-47b4-a2e9-260f2de3c408/sist-ep-iec-62087-3-2023

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INTRODUCTION

This document specifies the determination of the power consumption of television sets for consumer use.

This document includes measuring procedures for the determination of power consumption in the On (operation) mode, which was identified as "On (average) mode" in previous editions of IEC 62087. Additionally, it specifies measuring procedures for the determination of power consumption in the Off mode and Partial On mode. This document also defines the determination of the peak luminance ratio for use associated with television set power consumption evaluation as well as the power factor. It also defines measuring procedures for the determination of power consumption in the On mode while viewing representative static metadata HDR video content.

A verification procedure to assess product compliance is described in Annex A of IEC 62087-1:2015.

The IEC 62087 series consists of the following planned or published parts:

- Part 1: General
- Part 2: Signals and media
- Part 3: Television sets
- Part 4: Video recording equipment DARD PREVIEW
- Part 5: Set-top boxes
- Part 6: Audio equipment standards.iteh.ai)
- Part 7: Computer monitors

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AUDIO, VIDEO, AND RELATED EQUIPMENT – DETERMINATION OF POWER CONSUMPTION –

Part 3: Television sets

1 Scope

This part of IEC 62087 specifies the determination of the power consumption and related characteristics of television sets. Television sets include, but are not limited to, those with LCD, OLED, or projection technologies.

The operating modes and functions, as they specifically apply to television sets, are defined in detail in this part of IEC 62087.

This document is limited to television sets that can be connected to an external power source. Television sets that include a non-removable, main battery are not covered by this document. Television sets can include any number of auxiliary batteries.

The measuring conditions in this document represent the normal use of the equipment and can differ from specific conditions, for example as specified in safety standards.

2 Normative references standards.iteh.ai)

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62087-1:2015, Audio, video, and related equipment – Determination of power consumption – Part 1: General

IEC 62087-2:2023, Audio, video, and related equipment – Determination of power consumption – Part 2: Signals and media

IEC 62301, Household electrical appliances – Measurement of standby power

3 Terms, definitions, and abbreviated terms

For the purposes of this document, the terms and definitions given in IEC 62087-1:2015, IEC 62087-2:2023 and in the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

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3.1 Terms and definitions

3.1.1 television set TV

equipment for the reception and display of television broadcast and similar services for terrestrial, cable, satellite and broadband network transmission of analogue and/or digital signals

Note 1 to entry: A television set can include additional functions that are not required for its primary function.

3.1.2 forced menu

on-screen menu that requires the user to choose a configuration option when a television set is first setup or after a factory reset

Note 1 to entry: For example, a forced menu can offer the user the option to select either "Normal"/"Home" or "Retail"/"Store" configuration.

Note 2 to entry: See Figure 1.

3.1.3

normal configuration

setting intended to be chosen for home use from the forced menu

Note 1 to entry: Subclause 4.2.2 describes the selection of normal configuration from the forced menu. This configuration selection is generally named "normal", "home", "standard", or equivalent.

Note 2 to entry: See Figure 1 and 3.1.16.

3.1.4

default configuration

manufacturer's preset configuration for television sets without a forced menu

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Note 1 to entry: See Figure 1. 260f2de3c408/sist-en-iec-62087-3-2023

3.1.5

retail configuration

forced menu selection intended for use in a retail environment

Note 1 to entry: Subclause 4.2.3 describes the selection of retail configuration from the forced menu. This configuration selection is generally recommended by the manufacturer for presentation in a public space when the television set is offered for sale and might be named "retail", "store", "shop", or equivalent.

Note 2 to entry: See Figure 1.

3.1.6

preset picture setting

common set of manufacturer-defined parameters which differ in their settings

Note 1 to entry: Examples of paraments of preset picture settings are brightness, contrast, colour space, chroma control.

3.1.7

selectable preset picture setting

TV picture setting that is selectable by a user from a set of manufacturer-defined picture settings

Note 1 to entry: See Figure 1.

3.1.8

default picture setting

picture setting for television sets in the normal or default configuration that is highlighted, or if none is highlighted, the picture setting first available for user selection