



Irish Standard
I.S. EN IEC 62087-2:2023
Version 1.00

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

I.S. EN IEC 62087-2:2023 V1.00

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National Foreword

I.S. EN IEC 62087-2:2023 V1.00 is the version of the NSAI adopted European document EN IEC 62087-2:2023, *Audio, video, and related equipment - Determination of power consumption - Part 2: Signals and media*, including any Corrections, Amendments etc. to EN IEC 62087-2:2023.

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EUROPEAN STANDARD

EN IEC 62087-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2023

ICS 33.160.10

Supersedes EN 62087-2:2016

English Version

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

Appareils audio, vidéo et matériel connexe - Détermination
de la consommation de puissance - Partie 2 : Signaux et
supports
(IEC 62087-2:2023)

Audio-, Video- und verwandte Geräte - Messverfahren für
die Leistungsaufnahme - Teil 2: Signale und Medien
(IEC 62087-2:2023)

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European foreword

The text of document 100/3771/CDV, future edition 2 of IEC 62087-2, 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 62087-2:2023.

The following dates are fixed:

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-03-24

This document supersedes EN 62087-2:2016 and all of its amendments and corrigenda (if any).

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The text of the International Standard IEC 62087-2:2023 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 60933-5 NOTE Approved as EN 60933-5

IEC 62087-3:2023 NOTE Approved as EN IEC 62087-3:2023 (not modified)

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 62087-7 NOTE Approved as EN IEC 62087-7

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: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60107-1	1997	Methods of measurement on receivers for television broadcast transmissions - Part 1: General considerations - Measurements at radio and video frequencies	EN 60107-1	1997
IEC 60268-1	-	Sound system equipment - Part 1: General -	-	-
IEC 60315-1	1988	Methods of measurement on radio receivers for various classes of emission. Part 1: General considerations and methods of measurement, including audio-frequency measurements	-	-
IEC 60315-3	-	Methods of measurement on radio receivers for various classes of emission. Part 3: Receivers for amplitude-modulated sound-broadcasting emissions	EN 60315-3	-
IEC 60315-4	1997	Methods of measurement on radio receivers for various classes of emission - Part 4: Receivers for frequency-modulated sound broadcasting emissions	EN 60315-4	1998
IEC 60958-1	-	Digital audio interface - Part 1: General	EN IEC 60958-1	-
IEC 60958-3	-	Digital audio interface - Part 3: Consumer applications	EN IEC 60958-3	-
IEC 61938	-	Multimedia systems - Guide to the recommended characteristics of analogue interfaces to achieve interoperability (GMT)	EN IEC 61938	-
IEC 62087-1	-	Audio, video, and related equipment - Determination of power consumption - Part 1: General	EN 62087-1	-
IEC 62216	-	Digital terrestrial television receivers for the DVB-T system	EN 62216	-
Recommendation ITU-R BT.2100-2	-	Image parameter values for high dynamic range television for use in production and international programme exchange	-	-

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Edition 2.0 2023-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Audio, video, and related equipment – Determination of power consumption –
Part 2: Signals and media**

**Appareils audio, vidéo et matériel connexe – Détermination de la consommation
de puissance –
Partie 2: Signaux et supports**



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IEC 62087-2

Edition 2.0 2023-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Audio, video, and related equipment – Determination of power consumption –
Part 2: Signals and media**

**Appareils audio, vidéo et matériel connexe – Détermination de la consommation
de puissance –
Partie 2: Signaux et supports**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**AUDIO, VIDEO, AND RELATED EQUIPMENT –
DETERMINATION OF POWER CONSUMPTION –****Part 2: Signals and media**

FOREWORD

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IEC 62087-2 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) HDR and UHD video test signals have been added;
- b) dynamic box and outline test signals have been added, replacing the static box and outline test signals;
- c) all test signals are provided as media files for download from a specified IEC online repository, which replaces previous DVD and Blu-ray media.

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

Draft	Report on voting
100/3771/CDV	100/3848/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 publication contains multiple test signals downloadable from a specified IEC online repository, available at <https://www.iec.ch/tc100/supportingdocuments>. These files form an integral part of this standard.

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.

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- reconfirmed,
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- replaced by a revised edition, or
- amended.

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INTRODUCTION

This document identifies test signals to be used to determine power consumption and related characteristics specified in some other parts of the IEC 62087 series.

IEC 62087:2008¹ (second edition) added methods for measuring On (average) mode power consumption of television sets, based on three video signal sets. These include static signals, dynamic broadcast content signals, and Internet content signals.

IEC 62087:2011² (third edition) revised methods for measuring power consumption of set-top boxes. The signals and media were not changed in this third edition.

IEC 62087-2:2015³ (first edition) separates signals and media that are to be used for determining power consumption and related characteristics into a dedicated part. The three original video signal sets (static, dynamic broadcast-content, and Internet-content) are not changed. This edition adds signals for the purpose of determining the peak luminance ratio that is sometimes associated with television set power consumption measurement programs.

This second edition of IEC 62087-2 adds HDR and UHD video test signals and dynamic box and outline test signals for TV power consumption testing. All test signals are available from a specified IEC online repository for download, replacing the former physical media distribution.

IEC 62087 series currently consists of the following published parts:

- Part 1: General
- Part 2: Signals and media
- Part 3: Television sets
- Part 4: Video recording equipment
- Part 5: Set-top boxes
- Part 6: Audio equipment
- Part 7: Computer monitors

¹ IEC 62087:2008, *Methods of measurement for the power consumption of audio, video and related equipment*

² IEC 62087:2011, *Methods of measurement for the power consumption of audio, video and related equipment*

³ IEC 62087-2:2015, *Audio, video, and related equipment – Determination of power consumption, Part 2: Signals and media*

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

Part 2: Signals and media

1 Scope

This part of IEC 62087 specifies the signals used to determine the power consumption of audio, video, and related equipment, such as television sets and computer monitors. It also specifies signals for determining the peak luminance ratio that is sometimes associated with television set power consumption measurement programs. In addition, this part specifies equipment, interfaces, and accuracy related to signal generation.

2 Normative references

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 60107-1:1997, *Methods of measurement on receivers for television broadcast transmissions – Part 1: General conditions – Measurements at radio and video frequencies*

IEC 60268-1, *Sound system equipment – Part 1: General*

IEC 60315-1:1988, *Methods of measurement on radio receivers for various classes of emission. Part 1: General considerations and methods of measurement, including audio-frequency measurements*

IEC 60315-3, *Methods of measurement on radio receivers for various classes of emission – Part 3: Receivers for amplitude-modulated sound-broadcasting emissions*

IEC 60315-4:1997, *Methods of measurement on radio receivers for various classes of emission – Part 4: Receivers for frequency-modulated sound broadcasting emissions*

IEC 60958-1, *Digital audio interface – Part 1: General*

IEC 60958-3, *Digital audio interface – Part 3: Consumer applications*

IEC 61938, *Multimedia systems – Guide to the recommended characteristics of analogue interfaces to achieve interoperability (GMT)*

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

IEC 62216, *Digital terrestrial television receivers for the DVB-T system*

Recommendation ITU-R BT.2100-2, *Image parameter values for high dynamic range television for use in production and international programme exchange*

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