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Standards

Irish Standard  
I.S. EN 61966-5:2009

# Multimedia systems and equipment - Colour measurement and management -- Part 5: Equipment using plasma display panels (IEC 61966-5:2008 (EQV))

## I.S. EN 61966-5:2009

*Incorporating amendments/corrigenda issued since publication:*

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**EUROPEAN STANDARD**

**EN 61966-5**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

August 2009

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Supersedes EN 61966-5:2001

English version

**Multimedia systems and equipment -  
Colour measurement and management -  
Part 5: Equipment using plasma display panels  
(IEC 61966-5:2008)**

Systèmes et appareils multimédia -  
Mesure et gestion de la couleur -  
Partie 5: Appareils utilisant  
des afficheurs à plasma  
(CEI 61966-5:2008)

Multimediasysteme und -geräte -  
Farbmessung und Farbmanagement -  
Teil 5: Geräte mit Plasma-Anzeigen  
(IEC 61966-5:2008)

This European Standard was approved by CENELEC on 2009-07-01. 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 CENELEC 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.

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**CENELEC**

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

**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

**I.S. EN 61966-5:2009**

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**Foreword**

The text of document 100/1295/CDV, future edition 2 of IEC 61966-5, prepared by technical area 2, Colour measurement and management, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61966-5 on 2009-07-01.

This European Standard supersedes EN 61966-5:2001.

EN 61966-5:2009 includes the following significant technical change with respect to EN 61966-5:2001:

Annex A has been deleted as it is no longer relevant.

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) 2010-04-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2012-07-01

Annex ZA has been added by CENELEC.

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**Endorsement notice**

The text of the International Standard IEC 61966-5:2008 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61966-2-1      NOTE Harmonized as EN 61966-2-1:2000 (not modified).

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|--------------|-------------|
| IEC 60050-845      | 1987        | International Electrotechnical Vocabulary (IEV) -<br>Chapter 845: Lighting/CIE 17.4:1987,<br>International Lighting Vocabulary (joint<br>IEC/CIE publication) | -            | -           |
| IEC 61966-3        | 2000        | Multimedia systems and equipment - Colour<br>measurement and management -<br>Part 3: Equipment using cathode ray tubes  | EN 61966-3   | 2000        |
| ISO 5-4            | 1995        | Photography - Density measurements -<br>Part 4: Geometric conditions for reflection<br>density  | -            | -           |
| ISO 9241-8         | 1997        | Ergonomic requirements for office work with<br>visual display terminals (VDTs) -<br>Part 8: Requirements for displayed colours                                | -            | -           |
| ISO/CIE 10526      | 1999        | CIE standard illuminants for colorimetry  | -            | -           |
| ISO/CIE 10527      | 1991        | CIE standard colorimetric observers   | -            | -           |
| CIE 15             | 2004        | Colorimetry   | -            | -           |

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MULTIMEDIA SYSTEMS AND EQUIPMENT –  
COLOUR MEASUREMENT AND MANAGEMENT –****Part 5: Equipment using plasma display panels**

## 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 liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61966-5 has been prepared by technical area 2: Colour measurement and management of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2000. This edition includes the following significant technical changes with respect to the previous edition: Annex A has been deleted as it is no longer relevant.

The text of this standard is based on the following documents:

| CDV          | Report on voting |
|--------------|------------------|
| 100/1295/CDV | 100/1387/RVC     |

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

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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61966 series, under the general title *Multimedia systems and equipment – Colour measurement and management*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

## INTRODUCTION

A series of methods and parameters for colour measurements and management for use in multimedia systems and equipment is applicable to the assessment of colour production and reproduction. This part of IEC 61966 deals with equipment using plasma display panels (PDP) to display colour images for use in multimedia applications.

The methods of measurement standardized in this part of IEC 61966 are designed to make possible the objective performance assessment and characterization of colour reproduction of PDP displays which accept red – green – blue analogue or digital signals from electrical input terminals and output colour images on PDP display screens. For PDP displays to which analogue signals are applicable, the corresponding digital signals are taken into account. The measured results are intended to be used for the purpose of equipment specific colour control in order to enable colour management in open multimedia systems.

## MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

### Part 5: Equipment using plasma display panels

#### 1 Scope

This part of IEC 61966 defines input test signals, measurement conditions, methods of measurement and reporting of the measured data, to be used for colour characterization and colour management of plasma display panels in multimedia systems.

Colour control within equipment is outside the scope of this International Standard. It does not specify limiting values for various parameters.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 60050-845:1987, *International Electrotechnical Vocabulary (IEV) – Chapter 845: Lighting/ CIE 17.4:1987, International Lighting Vocabulary (joint IEC/CIE publication)*

IEC 61966-3:2000, *Multimedia systems and equipment – Colour measurement and management – Part 3: Equipment using cathode ray tubes*

ISO 5-4:1995, *Photography – Density measurements – Part 4: Geometric conditions for reflection density*

ISO 9241-8:1997, *Ergonomic requirements for office work with visual display terminals (VDTs) – Part 8: Requirements for displayed colours*

ISO/CIE 10526:1999, *CIE standard illuminants for colorimetry*

ISO/CIE 10527:1991, *CIE standard colorimetric observers*

CIE 15:2004, *Colorimetry*

#### 3 Terms and definitions

For the purpose of this part of IEC 61966, the definitions of IEC 60050-845/CIE 17.4, as well as the following definitions, apply.

##### 3.1

##### background

image on a screen of the PDP display other than the interested area of a colour patch

##### 3.2

##### colour control

effort to convert equipment dependent colour image data to equipment independent data for a specific colour space including tone characteristics

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