

**Multimedia systems and equipment - Colour
measurement and management - Part 9: Digital
cameras**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61966-9:2004 sisaldab Euroopa standardi EN 61966-9:2004 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 14.12.2004 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 28.10.2004.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 61966-9:2004 consists of the English text of the European standard EN 61966-9:2004.

This standard is ratified with the order of Estonian Centre for Standardisation dated 14.12.2004 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 28.10.2004.

The standard is available from Estonian standardisation organisation.

ICS 33.160.60, 35.040, 37.040

Võtmesõnad: environ, figures, handling, luminance, measurement, measurement conditions, measuring techniques, methods for measuring, multilingual, multimedia, properties, receivers, reproductions, specification (approval), specifications, verification plotter, video play-backs

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English version

**Multimedia systems and equipment –
Colour measurement and management
Part 9: Digital cameras
(IEC 61966-9:2003)**

Systèmes et appareils multimedia -
Mesure et gestion de la couleur
Partie 9: Appareils numériques
de prise de vue
(CEI 61966-9:2003)

Multimediasysteme und -geräte -
Farbmessung und Farbmanagement
Teil 9: Digitale Kameras
(IEC 61966-9:2003)

This European Standard was approved by CENELEC on 2004-09-01. 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.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 61966-9:2003, prepared by IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the formal vote and was approved by CENELEC as EN 61966-9 on 2004-09-01 without any modification.

This European Standard supersedes EN 61966-9:2000.

The European Standard includes the following significant technical changes from EN 61966-9:2000:

- a) in the light of issuing EN 61966-2-2, the relevant reference to EN 61966-2-1 in Annex C has been replaced by EN 61966-2-2 together with sRGB by scRGB;
- b) Annex C has been replaced and Figure C.1 has been deleted.

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) 2005-09-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-09-01

Endorsement notice

The text of the International Standard IEC 61966-9:2003 was approved by CENELEC as a European Standard without any modification.

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 Where 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) Chapter 845: Lighting	-	-
IEC 61146-1	1994	Video cameras (PAL/SECAM/NTSC) - Methods of measurement Part 1: Non-broadcast single-sensor cameras	EN 61146-1	1996
IEC 61966-2-1	1999	Multimedia systems and equipment - Colour measurement and management Part 2-1: Colour management - Default RGB colour space – sRGB	EN 61966-2-1	2000
ISO 2813	1994	Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees	EN ISO 2813	1999
ISO/CIE 10527	1991	CIE standard colorimetric observers	-	-
CIE 17.4	1987	International Lighting Vocabulary	-	-

INTERNATIONAL STANDARD

IEC
61966-9

Second edition
2003-11

Multimedia systems and equipment – Colour measurement and management –

Part 9: Digital cameras

*Systèmes et appareils multimédia –
Mesure et gestion de la couleur –*

*Partie 9:
Appareils numériques de prise de vue*



Reference number
IEC 61966-9:2003(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

Part 9: Digital cameras

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 61966-9 has been prepared by 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 from the previous edition.

- a) In the light of issuing IEC 61966-2-2, the relevant reference IEC 61966-2-1 in Annex C has been replaced by IEC 61966-2-2 together with sRGB by scRGB.
- b) The previous Annex C has been replaced by the new Annex C where the previous Figure C.1 has been deleted.

The text of this standard was submitted to the national committees for voting under the Fast Track Procedure as the following documents:

CDV	Report on voting
100/666/CDV	100/722/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.

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

IEC 61966 consists of the following parts, under the general title *Multimedia systems and equipment – Colour measurement and management*:

- Part 1: General
- Part 2-0: Colour management
- Part 2-1: Colour management – Default RGB colour space – sRGB
- Part 2-2: Colour management – Extended RGB colour space – scRGB
- Part 3: Equipment using cathode ray tubes
- Part 4: Equipment using liquid crystal display panels
- Part 5: Equipment using plasma display panels
- Part 6: Front projection displays
- Part 7-1: Colour printers – Reflective prints – RGB inputs
- Part 7-2: Colour printers – Reflective prints – CMYK inputs
- Part 8: Multimedia colour scanners
- Part 9: Digital cameras
- Part 10: Quality assessment – Colour image in network systems
- Part 11: Quality assessment – Impaired video in network systems

The committee has decided that the contents of this publication will remain unchanged until 2008. At this date, the publication will be

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

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

Part 9: Digital cameras

1 Scope

This part of IEC 61966 is applicable to the assessment of colour reproduction of digital cameras used in open computer systems and similar applications.

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 reproduction.

This standard deals with digital cameras to capture colour still images and moving images for use in multimedia applications.

The methods of measurement standardized in this standard are designed to make possible the objective performance assessment and characterization of the colour reproduction of digital cameras which can capture colour still and moving images, and output colour information corresponding to red – green – blue digital image data. The measured results are intended to be used for the purpose of colour management in multimedia systems, typically in the Internet.

This standard defines test charts, measurement conditions and methods of measurement, so as to make possible the colour management in open multimedia systems and comprehensive comparison of the results of measurements for assessment of digital cameras.

Colour control within digital cameras is outwith the scope of this part. 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*.

IEC 61146-1:1994, *Video cameras (PAL/SECAM/NTSC) – Methods of measurement – Part 1: Non-broadcast single-sensor cameras*

IEC 61966-2-1:1999, *Multimedia systems and equipment – Colour measurement and management – Part 2-1: Colour management – Default RGB colour space – sRGB*

ISO 2813:1994, *Paints and varnishes – Determination of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees*

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

CIE 17.4:1987, *International lighting vocabulary*