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INTERNATIONAL STANDARD

IEC 61966-7-1

Second edition
2006-05

**Multimedia systems and equipment –
Colour measurement and management –**

**Part 7-1:
Colour printers – Reflective prints – RGB inputs**

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	7
4 Letters and symbols.....	9
5 Conditions.....	9
5.1 Environmental conditions.....	9
5.2 Sampling conditions.....	10
5.3 Measurement conditions.....	11
5.4 Method of calculation.....	12
6 Spectral characteristics.....	14
6.1 Attributes to be measured.....	14
6.2 Method of measurement.....	14
6.3 Presentation of the result.....	14
7 Basic colorimetric characteristics.....	15
7.1 Attribute to be measured.....	15
7.2 Method of measurement.....	15
7.3 Presentation of the results.....	15
8 Tone reproduction characteristics.....	16
8.1 Attribute to be measured.....	16
8.2 Method of measurement.....	16
8.3 Presentation of the results.....	17
9 Spatial non-uniformity characteristics.....	18
9.1 Attribute to be measured.....	18
9.2 Method of measurement.....	18
9.3 Presentation of the result.....	18
10 Temporal instability characteristics.....	19
10.1 Short-term instability.....	19
10.2 Long-term instability.....	20
11 Dependency on illuminant characteristics.....	23
Annex A (normative) Values in the colour test-chart file.....	26
Annex B (normative) Specification of the measurement positions in the spatial non-uniformity test-chart file and the reporting form.....	32
Annex C (normative) Specification for the measurement of short-term instability characteristics.....	37
Annex D (informative) Estimation of effect for backing material change.....	38
Annex E (informative) Layout of the colour test-chart file reproduced as a reflective print.....	39
Annex F (informative) Layout of the spatial non-uniformity test-chart file reproduced as a reflective print.....	40
Annex G (informative) Layout of the short-term instability test-chart file reproduced as a reflective print.....	41
Bibliography.....	42

Figure 1 – Spectral reflectance of the primary and secondary saturated colours, and white, grey and black	15
Figure 2 – Example plots for gamut of colours in the CIE 1976 $L^*a^*b^*$ colour space.....	16
Figure 3 – An example of reporting tone reproduction characteristics.....	17
Table 1 – Reference to Table A.1	14
Table 2 – Reference to Table A.3	17
Table 3 – Conditions for sampling and measurements	19
Table 4 – Specification of data in the colour test chart file and the form for reporting the result in the long-term instability measurement	22
Table 5 – Specification of colour patches.....	23
Table 6 – Specification of data in the colour test chart file and the form of reporting the result of dependency on illuminants measurement –	24
Table 7 – Specification of data in the colour test chart file and the form of reporting the result of dependency on illuminants measurement –	25
Table A.1 – Specification of the colour test chart file and the form for reporting – Primary colours.....	26
Table A.2 – Specification of the colour test-chart file and the form for reporting – 6-by-6 cubic data	26
Table A.3 – Specification of the colour test-chart file and the form for reporting – Data and form for gradation	30
Table B.1 – Form of reporting with measurement positions	32
Table C.1 – Short-term instability characteristics	37

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

Part 7-1: Colour printers – Reflective prints – RGB inputs

FOREWORD

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International Standard IEC 61966-7-1 has been prepared by Task 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 2001. This edition constitutes a technical revision.

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

- a) In addition to the default illuminant, D50, D65, F11 and illuminant A were added as optional illuminants.
- b) The numbering of the colour patches in the test-chart file was changed for easy understanding of the measurement location.

- c) Two test-chart files: short-term instability test chart and spatial non-uniformity test chart were added.

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

FDIS	Report on voting
100/1061FDIS	100/1082/RVD

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 (proposed work item)
- Part 2-1: Colour management – Default RGB colour space – sRGB
- Part 2-2: Colour management – Extended RGB colour space – scRGB
- Part 2-4: Colour management – Extended-gamut YCC colour space for video applications – xvYC (to be published)
- Part 2-5: Colour management – Optional RGB colour space – opRGB (under consideration)
- 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 (proposed work item)
- Part 8: Multimedia colour scanners
- Part 9: Digital cameras
- Part 10: Quality assessment – Colour image in network systems (proposed work item)
- Part 11: Quality assessment – Impaired video in network systems (proposed work item)

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 standard may be issued at a later date.

INTRODUCTION

This part of IEC 61966 is applicable to characterization of colour printers that produce colour on opaque substrate corresponding to digital data files in which colour image information is expressed in a red–green–blue colour space. The characterization will be realized by objective measurements to be utilized for colour management in open systems. The measured and reported results are used to relate the equipment-dependent and undefined red–green–blue colour space to the default RGB colour space defined as the sRGB by IEC 61966-2-1. This standard is also applicable to assessment of colour image attributes on reflective prints reproduced from colour digital image files.

The recommended usage of the standard is for evaluation of the output of home and office RGB printers.

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

Part 7-1: Colour printers – Reflective prints – RGB inputs

1 Scope

This part of IEC 61966 specifies a set of data in colour test chart files for measurements, sampling of successive prints, measurement conditions and forms of reporting the results so as to make possible the characterization of the colour printer and comparison of the results of measurements. The sets of data for measurements are in colour test chart files expressed in a red–green–blue colour space, to which corresponding colour images are reproduced on reflective substrate. The methods of measurement in this standard are designed to be applicable to reflective colour prints for consumer use. The reflective colour prints may be produced by non-impact colour printers, incorporating such technologies as ink-jet, sublimation transfer, thermal transfer, electro-photography and other similar technologies.

This standard does not specify limiting values for various attributes.

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*

ISO 216:1975, *Writing paper and certain classes of printed matter – Trimmed sizes – A and B series*

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

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

CIE 15, *Colorimetry*