

# INTERNATIONAL STANDARD

# ISO 12646

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**AMENDMENT 1**  
2010-09-01

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## Graphic technology — Displays for colour proofing — Characteristics and viewing conditions

### AMENDMENT 1

*Technologie graphique — Affichages pour la réalisation d'épreuves en  
couleur — Caractéristiques et conditions d'examen visuel*  
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ISO 12646:2008/Amd 1:2010

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## Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to ISO 12646:2008 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

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# Graphic technology — Displays for colour proofing — Characteristics and viewing conditions

## AMENDMENT 1

### Page 1, Normative references

Remove the date of the normative reference, ISO 13655:—<sup>1</sup>), and delete its footnote at the bottom of the page. Replace it with the following undated normative reference:

ISO 13655, *Graphic technology — Spectral measurement and colorimetric computation for graphic arts images*

### Page 4, 4.4

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Replace the text by the following: [standards.iteh.ai](http://standards.iteh.ai)

The display should be visually uniform when displaying flat white, grey and black images. When measured as described in 5.3, at a setting of R=G=B=255, all luminance values should be within 5 % of the luminance of the centre and shall be within 10 % of it. For R=G=B=128, all luminance values should be within 6,5 % of the luminance of the centre and shall be within 13 % of it. For R=G=B=64, all luminance values should be within 7,5 % of the luminance of the centre and shall be within 15 % of it. However, there should be no areas of significant visual non-uniformity between the points marked in Figure 2 regardless of the RGB level set.

For the entire display, measured at least at the positions stated in 5.3, the chromaticity of every neutral image (defined by equal digital values for R, G and B) shall be within a radius of 0,005 (in  $u'$ ,  $v'$ ) from the chromaticity values measured at the centre of the display.

NOTE 1 The uniformity of chromaticity is specified in 4.8.

NOTE 2 There is no simple relationship between the chromaticity coordinates ( $u'$ ,  $v'$ ) and colour differences. Therefore, specifying the chromaticity of neutral images in terms of a radius of 0,005 (in  $u'$ ,  $v'$ ) results in a variation in colour difference as a function of CIE  $L^*$ . This corresponds to an average CIE 2000 colour difference (as defined in ISO 13655) of approximately 0,8 at a CIE  $L^*$  value of 5 and a difference of 4,0 at a CIE  $L^*$  of 95.

### Page 6, 4.10

Replace the last paragraph with the following:

The measured tristimulus values shall be transformed to CIELAB values using the white point chosen by the software application vendor. The average of the CIE 2000 colour differences between these values and the CIELAB values intended to be displayed by the software characterizing the display (e.g. an ICC monitor profile) should not exceed 1 and shall not exceed 2. The maximum CIE 2000 colour differences between the individual display values and the CIELAB values intended to be displayed by the software characterizing the display (e.g. an ICC monitor profile) should not exceed 3 and shall not exceed 6.

Page 7, 4.11

Replace third paragraph with the following:

In the contrast inversion test, for a given RGB drive state, and for all points on the display, the luminance at angles off the DVD should not exceed the luminance at the DVD.

Page 12, 5.6.1.2 f)

Replace the text with the following:

- f) The sampling interval should be 5 nm and shall not exceed 10 nm. The bandwidth, as defined in ISO 13655, shall be identical to the sampling interval. If the measurements are taken at sampling intervals smaller than 5 nm, the procedure for widening the bandwidth specified in ISO 13655 shall be used for deriving and reporting data at 5 nm intervals.

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