

Certification program

Standard illumination

Stichworte

Standard illumination, Display, Softproof, Colour matching, ugra.swiss, swissPSO

Related documents

U/TD 17.0	Certification system
ISO 3664:2009	Graphic technology and photography – Viewing conditions
ISO 12646	Graphic technology – Displays for colour proofing – Characteristics
ISO 14861	Graphic technology – Requirements for colour soft proofing systems

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1 Scope

Basis of the specified requirements are the following International Standards and specifications:

- ISO 3664:2009 Graphic technology and photography -- Viewing conditions.

Unless otherwise noted, the specified requirements of the standards apply.

2 Specified requirements

2.1 Critical comparison

The above mentioned standard describes the requirements for the critical color comparison (viewing condition P1) between two (or more) copies of an image.

The comparison is done between the original and the artwork or between different copies of the reproduction such as printed sheets of a print run or digital proofs, usually laid side by side one to another.

- A1. The illuminant on the viewing surface:
- a. shall comply CIE illuminant D50 ,
 - b. the coordinates $\Delta u'v'$ shall be less than 0.005 ,
 - c. the color rendering index R_a shall be greater than 90 ,
 - d. the visual metamerism index MI_{vis} shall be less than 0.5, and should be less 1.0,
 - e. the UV metamerism index MI_{uv} shall be less than 1.5, and should be less than 1.0.
- A2. The illuminance at the center of the illuminated area shall be (2000 ± 500) lx and should be (2000 ± 250) lx. For the uniformity of viewing areas up to 1 m² applies: the intensity of illumination at each point shall not be less than 75% of the illuminance in the center of the surface. The uniformity should be determined at least at 9 uniformly distributed locations on the viewing surface.
- A3. The environment and the surface of the viewing area shall be neutral and matte.
- A4. The operation time of the illumination source shall be checked, either through regular monitoring with a suitable measuring system, or by a built-in elapsed-time counter.

2.2 Practical appraisal of prints

The above mentioned standard describes the requirements for the practical appraisal (viewing condition P2) of tone reproduction of single images, photographs or prints.

These requirements are not appropriate for the simultaneous comparison of media, where colour matching is the primary concern.

- A5. The illumination shall comply with requirement A1, section 2.1.
- A6. The illuminance at the center of the illuminated area shall be (500 ± 125) lx.
The uniformity of the viewing area shall comply with requirement A2, chapter 2.1.
- A7. The environment and the surface of the viewing area shall be neutral and matte.
- A8. The operation time of the illumination source shall be checked, either through regular monitoring with a suitable measuring system, or by a built-in elapsed-time counter.

2.3 Appraisal of images displayed on colour monitors

The requirements of the certification program, "Premedia/Publishing", chapter 2.3 Display and the International Standard ISO 12646 applies.

3 Conformity testing

The conformity testing of the specified requirements laid down in Chapter 2 shall be carried out by means of the following measures:

1. Inspection during audit
2. Interview (Q&A) during audit
3. Proof of competence by qualified person of the organization

All non-conformities are logged by the auditor and documented as open requirement. The organization must remedy the the non-conformities in due time but at the latest until the next surveillance audit.

3.1 Non-conformities

Non-conformities are documented by the auditor according to the following classification:

Table 1 – Classification of non-conformities

Classification of Non-conformities (NK)	Description
Critical non-conformity	A normative requirement is not compliant. Conformity must be mandatory complied to confirm the certification.
Major non-conformity	A normative or specified requirement is not compliant and therefore leads to a non-conformity.
Minor non-conformity	A normative or specified requirement is partially not compliant and therefore leads to a non-conformity.
Recommendation	A requirement is compliant, but can be optimized by means of recommended measures.