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Cinematography — Manufacturer-printed, latent image identification on 16 mm, 35 mm and 65 mm motion-picture film — Specifications and dimensions

Cinématographie — Identification d'image latente, imprimée par le fabricant, sur films cinématographiques 16 mm, 35 mm et 65 mm — Spécifications et dimensions

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 36, *Cinematography*.

This fourth edition cancels and replaces the second edition (ISO 12222:1998), subclauses 3.1, Clause 4, 5.1.1, 5.4.5, 5.4.6, 5.4.7, 6.1.3.3 b), 6.1.3.3 d), 6.4.7, 6.4.8 and 7.3, Figures 3, 6 and 8, and Tables 1, 4 and 5 of which have been technically revised. Subclause 5.4.8 was added.

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Cinematography — Manufacturer-printed, latent image identification on 16 mm, 35 mm and 65 mm motion-picture film — Specifications and dimensions

1 Scope

1.1 This document specifies the position and dimensions of machine-readable identification numbers on 16 mm, 35 mm and 65 mm motion-picture film. These numbers are intended to be a machine-readable version of the latent image key number. This document also specifies the encoding format to be used for these machine-readable numbers, as well as the area scanned and the spectral characteristics of the scanner.

1.2 This document also specifies the position, dimensions and content of human-readable identification (key) numbers for use on 16 mm, 35 mm and 65 mm motion-picture films intended for original photography or intermediate printing which also include the machine-readable key number described in 1.1.

NOTE These numbers normally are exposed onto the film at the time of manufacture.

1.3 This document further specifies an area that may be used for optional manufacturer-specific film-type identification information.

1.4 This document also specifies an area on the film which is not to be exposed by the film manufacturer, thus leaving it available for customer data recording.

1.5 Finally, this document specifies an optional frame line index mark for 35 mm and 65 mm film.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 69, *Cinematography — 16 mm motion-picture and magnetic film — Cutting and perforating dimensions*

ISO 491, *Cinematography — 35 mm motion-picture film and magnetic film — Cutting and perforating dimensions*

ISO 3023, *Cinematography — 65 mm and 70 mm unexposed motion-picture film — Cutting and perforating dimensions*

ANSI/AIM BC4-1995, *Uniform Symbology Specification — Code 128*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

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3.1
key number
edge number
footage number
identification number that is printed with ink or exposed onto the film at the time of manufacture

Note 1 to entry: The numbers are placed at regular intervals, typically every 20 perforations for 16 mm film, 64 perforations for 35 mm film and 120 perforations for 65 mm film. For the purposes of this document, the key numbers are latent-image exposed.

3.2
bar edge
⟨bar code⟩ that point where the transmittance is halfway between the maximum transmittance of the adjacent space and the minimum transmittance of the adjacent bar

3.3
scan transmittance profile
⟨bar code⟩ record of the transmittance measured as a function of distance along the entire bar code symbol

3.4
symbol contrast
SC
⟨bar code⟩ difference between the largest transmittance (T_{max}) and smallest transmittance (T_{min}) in a scan transmittance profile

3.5
minimum edge contrast
EC_{min}
⟨bar code⟩ minimum difference between a space transmittance (T_s) and the adjoining bar transmittance (T_b)

3.6
modulation
MOD
⟨bar code⟩ ratio of minimum edge contrast (EC_{min}) to symbol contrast (SC)

4 General format

The general format of the latent-image identification information shall be as shown in Figure 1 for 16 mm film, Figure 2 for 35 mm film, and Figures 3 a) and 3 b) for 65 mm film.

No latent information shall be placed along the upper edge of the film, as shown in Figures 1, 2 and 3. This area is reserved for data recording at the time of photography.

This identification information is intended to be exposed onto film cut and perforated in accordance with ISO 69, ISO 491 or ISO 3023.

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