Cinematography — Printed 8 mm Type S image area on 16 mm motion-picture film perforated 8 mm Type S (1-3) — Position and dimensions

1 Scope

This International Standard specifies the position and size of the 8 mm Type S printed picture areas for negative/positive and reversal printing on 16 mm motion-picture film perforated 8 mm, Type S, 2R-4.234 (1667) and 2R-4.227 (1664), in position 1 and 3.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1781:1983, *Cinematography — Projector usage of 8 mm Type S motion-picture film for direct front projection.*

ISO 1785:1983, *Cinematography — Printed 8 mm, Type S, image area on 16 mm motion-picture film perforated 8 mm, Type S (1-4) — Position and dimensions.*

ISO 1787:1984, *Cinematography — Camera usage of 8 mm Type S motion-picture film — Specifications.*

ISO 2966:1988, *Cinematography — 16 mm motion-picture film perforated 8 mm Type S (1-3) and (1-4) — Cutting and perforating dimensions.*

ISO 3645:1984, *Cinematography — Image area produced by 8 mm Type S motion-picture camera aperture and maximum projectable image area — Positions and dimensions.*

ISO 4244:1979, *Cinematography — Photographic sound record on 8 mm Type S motion-picture prints — Position and width dimensions.*

3 Dimensions

3.1 The dimensions shall be as shown in figure 1 and table 1.

3.2 Dimensions B, G, H and R apply to all images. The differences in values from the reference edge, dimensions A, C, E and F, establish the minimum area to be printed. For convenience, and to avoid unnecessary addition and subtraction in applying this International Standard, a reference dimension has been supplied for a typical width of the image area.

NOTES

1 The reduction ratio of prints made from 16 mm negatives or reversal originals should be approximately 1,8 : 1.

2 To provide understanding in the design and use of printers, the dimensions specified in figure 1 and table 1 provide an image ideally centred vertically on the perforation, with a reference dimension of 7,90 mm (0,311 in) from the positioning perforation to the horizontal centre line of the intended image.

When film having a perforation pitch of 4,227 mm (0,166 4 in), is printed, dimension H must be reduced by the change of average perforation pitch and processing shrinkage to ensure the appropriate dimension for H in release prints.

3 The "film travel" shown in figure 1 is to aid in illustrating the −2 perforation used to position the 8 mm print, and the direction motion in the projector for the resulting 8 mm print if the figure is as seen from the light source in a projector used for direct front projection (see annex A).

4 If photographic sound is to be applied to the print, it is necessary to restrict the value for dimensions A and F to avoid intrusion into the sound-track area. The maximum value of dimensions A and F should not exceed the minimum value by more than 0,038 mm (0,001 5 in).

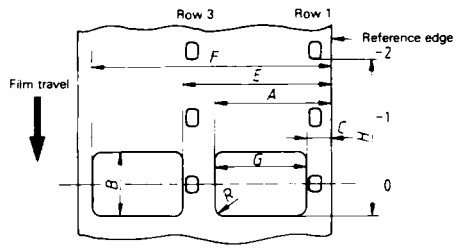
5 Dimension B is a minimum. In practice, the value used must be such that the frame line between pictures is opaque or double exposed in the final print intended for projection.

Table 1

Dimension	mm	in
A	7,16 min.	0,282 min.
B_{min} [1]	4,14	0,163
C	1,47 max.	0,058 max.
E	9,45 max.	0,372 max.
F	15,14 min.	0,596 min.
G	5,79 ref.	0,228 ref.
H [2]	9,98 ± 0,05	0,393 ± 0,002
R	0,13 max.	0,005 max.

1) See note 5 in 3.2.

2) See note 2 in 3.2, and annex A.



Annex A
(informative)

Additional information

A.1 If prints are made with a step printer, the registration device should be in the −2 perforation, or that perforation which corresponds to the −2 perforation when the final print stage is reached, to obtain maximum benefit of cancellation as films are projected in accordance with ISO 1781, which specifies the −2 position for projected films.

A.2 The parenthetical numerals have been added to the title of this International Standard to specify how the rows of perforations are placed on the film. This designation is necessary only when the film stock is wider than its end use and more than one combination of perforation rows is possible. The perforation rows are numbered starting at the reference edge, which is the edge nearest to that row of perforations which is retained in the slitting operation.