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Cinematography — 16 mm motion-picture film perforated 8 mm Type R — Cutting and perforating dimensions

Cinématographie — Film cinématographique 16 mm *perforé* 8 mm *type R — Dimensions de coupe et de perforation*

Reference number
ISO 486 : 1988 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 486 was prepared by Technical Committee ISO/TC 36, *Cinematography.*

This third edition cancels and replaces the second edition (ISO 486 : 1982), of which it constitutes a minor revision, the annex having been replaced.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Cinematography — 16 mm motion-picture film perforated 8 mm Type R — Cutting and perforating dimensions

1 Scope and field of application

This International Standard specifies the cutting and perforating dimensions for 16 mm motion-picture film which is perforated 8 mm Type R, as well as the width of the motion-picture film after processing and slitting.

NOTE — Film perforated in accordance with this International Standard is also referred to as "double 8 mm motion-picture film".

2 Reference

ISO 543, *Cinematography — Motion-picture safety film — Definition, testing and marking.*

3 Dimensions

The dimensions shall be as shown in the figure and given in the table.

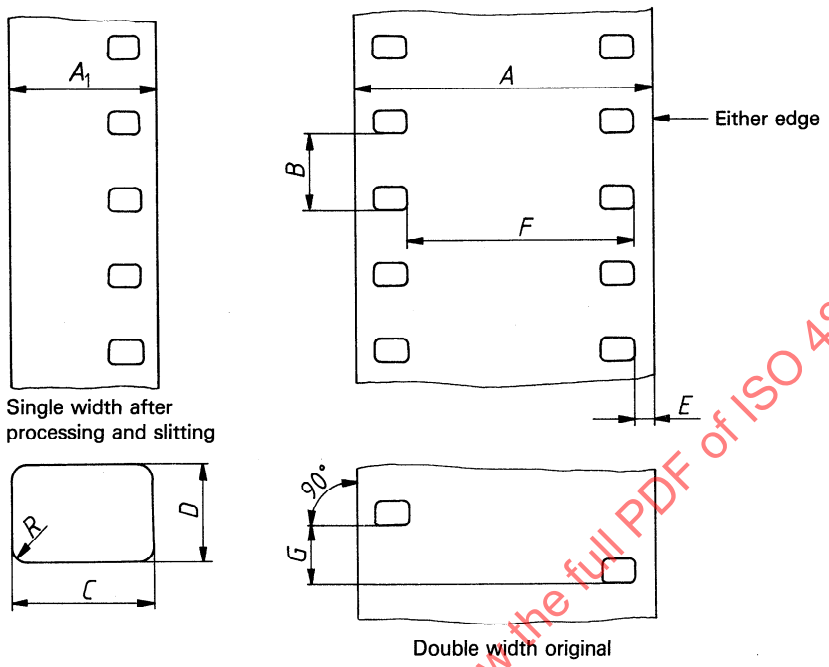

Figure — 16 mm film perforated 8 mm Type R

Table — Dimensions

Dimension	mm	in
A	15,95 ± 0,03	0.628 ± 0.001
A_1	7,975 ± 0,050	0.314 0 ± 0.002 0
B	3,810 ± 0,013	0.150 0 ± 0.000 5
C	1,83 ± 0,01	0.072 0 ± 0.000 4
D	1,27 ± 0,01	0.050 0 ± 0.000 4
E	0,90 ± 0,05	0.035 ± 0.002
F	12,32 ± 0,03	0.485 ± 0.001
G	0,025 max.	0.001 max.
L	381,00 ± 0,40	15.000 ± 0.016
R	0,25 ± 0,03	0.010 ± 0.001

NOTES

1 These dimensions and tolerances, except dimension A_1, apply to unexposed safety motion-picture film as specified in ISO 543 immediately after cutting and perforating. If required by usage, the manufacturer should indicate the atmospheric conditions applied to the dimensional control at the time of cutting and perforating.

2 Dimension L represents the length of any 100 consecutive perforation levels.

3 The dimensions apply to low-shrinkage film base, as defined in clause A.3 of the annex. For film with higher shrinkage characteristics, dimension A should be 15,98 ± 0,025 mm (0.629 ± 0.001 in), and dimension E should be 0,91 ± 0,05 mm (0.036 ± 0.002 in).

4 The inch dimensions follow the practice of those countries using the imperial system and in some instances are not exact conversions from the metric dimensions.

Annex

Additional data

(This annex does not form part of the standard.)

A.1 Uniformity of perforating

The uniformity of pitch, hole size and margin (dimensions B, C and D, and E) are important variables affecting image steadiness. Variations in these dimensions within a roll from one perforation to the next are more significant than variations from roll to roll. Actually, it is the maximum variation from one perforation to the next within any small group of consecutive perforations that is the most important variable.

A.2 Dimensional stability

During its life, film can shrink or swell due to changes in temperature or to loss or gain in moisture content. It can also shrink due to loss of solvent or plasticizer. These changes may result in changes in the dimensions. The change is generally uniform through the roll.

A.3 Definition of low-shrinkage film

Low-shrinkage film is film which shrinks no more than 0,2 % from its original dimensions at the time of cutting and perforating, after the film has been

a) kept in the manufacturer's normal commercial packing for six months at recommended storage conditions;

b) exposed;

c) processed and dried as recommended by the manufacturer;

d) stored in roll form, exposed to air, for a period not exceeding 30 days at 18 to 24 °C and 50 to 60 % relative humidity.

A.4 Effect of humidity

It is the common tendency of the film to expand when exposed to high relative humidity. Allowance should be made for this factor in equipment design.

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