

American National Standard dimensions of projectable image area on 8-mm type R motion-picture film

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Secretariat: Society of Motion Picture and Television Engineers

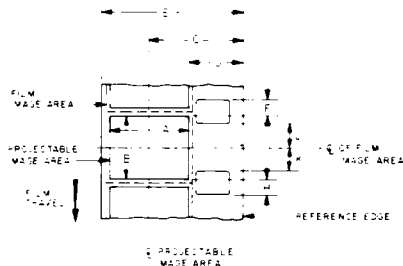
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1. Scope

This standard specifies the maximum dimensions of the film image area intended for projection from an 8-mm Type R motion-picture film, and the placement of this area relative to the perforations and the reference edge of the film.

2. Dimensions

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



PROJECTABLE AREA ON FILM AS SEEN LOOKING THROUGH THE FILM TOWARD THE LENS

Dimensions	Inches	Millimeters
A	0.172 ref	4.37 ref
B	0.130 max	3.30 max
C*	0.205 ref	5.21 ref
D	0.117 min	2.97 min
E	0.293 max	7.44 max
F = H	within 0.014	within 0.36
J = K	nominally equal	nominally equal

*See Appendix.

2.2 The angle between the horizontal edges of the image area and the reference edge of the film shall be $90 \pm 1/2$.

3. Relationship to Other Standards

3.1 This standard may be used as the basis for establishing picture areas from original photography for final viewing because it presents a description of the picture area on the projection print that is usable for the indicated purposes of the print (which is of primary importance because

the projection print is the most commonly interchanged item).

3.2 American National Standard Dimensions of Camera Aperture Image on 8-mm Type R (Regular 8) Motion-Picture Film, ANSI PH22.19-1976, defines the image area for other important phases of motion-picture operations, and is consistent with this standard under currently acceptable commercial practice.

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NOTE 1: Camera and Printer Apertures. The actual image on the film is significantly larger than the maximum area intended for projection, so that in placement of the images throughout the sequence of films the tolerance is not restrictive of commercial practice. Upper limits have been established through consideration of good practice in avoiding frame overlap, encroachment upon areas reserved for sound records, flare from perforation edges, etc. Lower limits are similarly related to the avoidance of image effects at a defined edge, tolerances in film positioning, etc.

NOTE 2: Projector Aperture. Dimensions B, D, and E define the maximum image area on the film that is available for projection. They do not define the opening in the aperture plate of a projector. The size of this opening may differ from Dimensions A and B, for example, because of the physical separation necessary between the aperture plate and the film to avoid scratching the film, the slant of the marginal rays accepted by the projection lens, etc.

NOTE 3: Actual Projected Area. It is recognized that, in many cases, the actual film image area that is projected may be smaller than the projectable maximum and, in some cases, may be nonrectangular (for example, an irregular four-sided figure bound by either

straight or curved lines). Such departures may result from equipment considerations, such as slight inconsistencies among lenses, screen sizes, etc.; from geometric limitations such as the screen surface being at an angle other than 90° from the projection axis, or being non-planar, or both; and from aesthetic considerations such as pictorial composition within more restrictive image limits. In the absence of specific instructions to the contrary, it is intended that the actual projected film image area be the largest appropriately-shaped figure that can be inscribed within the specified dimensions.

When the picture outline on the screen is defined by the projector aperture, it is customary to round the corners of the projected film area. A maximum corner radius of 0.010 in (0.25 mm) at the film plane is recommended.

NOTE 4: Film Perforations. Film intended for projection with this image area is normally perforated as specified in American National Standard Dimensions for 16-mm Motion-Picture Film Perforated 8-mm Type R (Regular 8), 2R-1500, ANSI PH22.17-1974.

NOTE 5: Print Preparation. Prints conforming to this standard are prepared for use as specified in American National Standard Specifications for Projector Usage of 8-mm Type R (Regular 8) Motion-Picture Film Perforated One Edge, ANSI PH22.22-1975 (R1981).

Appendix

(The Appendix is not a part of this American National Standard, but is included for information purposes only.)

The centerlines of the image area are given for convenience in interpreting the standard, facilitating such applications as the optical design of equipment, and assisting in the understanding of suitable mechanical em-

bodiments related to projectable image area. Note that the centerline of the projectable image area is displaced from the centerline of the film by 0.048 in (1.22 mm) nominal.

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