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>
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A Stable document is "In Force", and not deprecated or withdrawn.

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STABILIZED 2012

REAFFIRMED 2006

SMPTE STANDARD

ANSI/SMPTE 76-1996
Revision of
ANSI/SMPTE 76-1991

for Motion-Picture Cameras — 16- and 8-mm Threaded Lens Mounts

1 Scope

1.1 This standard specifies the dimensions required for mechanical and optical interchangeability of lenses for 16-mm and 8-mm motion-picture cameras. For 16-mm cameras with threaded lens mounts, threads having a nominal major diameter of 1 in are often specified. Similarly, for 8-mm motion-picture cameras, threads having a nominal major diameter of 5/8 in are in common use.

1.2 This standard does not apply to continuous-type motion-picture cameras because of the type of optical system employed in those cameras.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

ANSI/ASME B1.1-1989, Unified Inch Screw Threads (UN and UNR Thread Form)

3 Dimensions

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

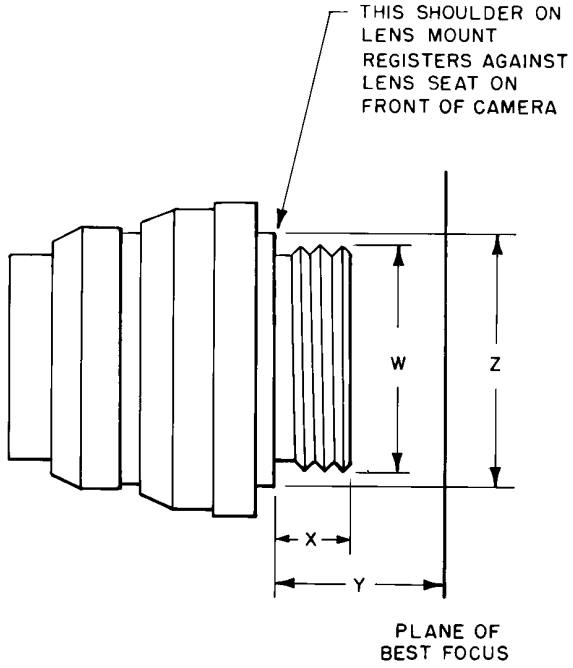

Figure 1 – Dimensions

Table 1 – Specifications

	D mount		C mount	
Dimensions	Inches	Millimeters	Inches	Millimeters
W	0.625	15.88	1.000	25.40
X	0.115	2.92	0.160	4.06
Y	0.484	12.29	0.690	17.53
Z	1.000	25.40	1.187	30.15

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American National Standard

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3.2 The lens mounts shall have 32 threads per inch.

3.3 The form of the thread shall be in accordance with ANSI/ASME B1.1.

3.4 Limiting dimensions and tolerances of the threads shall be class NS-2A for the external threads on the lens. These dimensions shall include plating or any other finish.

NOTES

1 The values specified for dimension X are the maximums for the lenses; additional length for clearance should be provided in the camera. With some lenses, the section of the mount, smaller in diameter than the root of the thread, extends beyond the limit of dimension X towards the plane of best focus. For such lenses, clearance must be established individually.

2 For the lens, dimension Y is the distance from the registering shoulder to the plane of the best overall image. For the camera, dimension Y is the distance from the registering shoulder to the plane that best represents the location of the emulsion on the film in a camera operating normally. The allowable tolerance for dimension Y depends upon the *f* /number of the lens and other variables, and so is not suitable for definite standardization. A tolerance of 0.001 in (0.03 mm), applied independently to the lens and camera, is suggested as a generally accepted practice.

3 The values given for dimension Z are maximum diameters for the seat on the lenses; the seat on the camera shall provide clearance for these diameters.

Annex A (informative)
Additional information

A.1 Past practice has not been entirely consistent so far as dimension X of the D mount is concerned. Some existing cameras will not accept a thread longer than 0.115 in (2.92 mm); some lenses have been made with a length of 0.120 in or 0.125 in (3.05 mm or 3.18 mm).

A.2 If any part of the lens mount has a larger diameter than dimension Z, it should be checked for mechanical interference with the camera on which it is to be used.