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STABILIZED 2012

REAFFIRMED 2006

SMPTE STANDARD

SMPTE 146M-2001
Revision of
ANSI/SMPTE 146M-1996

for Motion-Picture Film — 16- and 8-mm Reversal Color Camera Films — Determination of Speed

1 Scope

1.1 Specifications

This standard specifies a method for the determination of speed of 16-mm, 8-mm type R, and 8-mm type S reversal color camera films intended for direct projection in motion-picture photography.

1.2 Basic standard

ISO 2240 constitutes the basis for this standard.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were 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 standards indicated below.

ANSI/PIMA IT3.301-1990 (R1997), Photography — Cameras — Automatic Controls of Exposure

ISO 2240:1994, Photography — Colour Reversal Camera Films — Determination of ISO Speed

3 Exposure time

Exposure time shall be between 1/25 and 1/50 second.

Annex A (informative)
Density

Experience has shown that a density level selected as optimum for a transparency is influenced by screen luminance. A less dense transparency is selected if the screen luminance is reduced. Because of the difference in screen luminance typical of 35-mm slide projection (approximately 137 candelas per square meter [40 foot-lamberts]) and that typical of 16-mm motion-picture film projection (assumed to range from approximately 48 cd/m^2 to 62 cd/m^2 [14 fL to 18 fL]), a variation in preferred picture density may lead to a desire for approximately 1/3 camera stop increase in exposure for the latter. This difference is not considered sufficient to warrant a change in the sensitometric test method for motion-picture use. However, many 8-mm projection conditions are different enough in luminance from 55 cd/m^2 (16 fL) to require lighter or darker pictures. ANSI/PIMA IT3.301 suggests that an adjustment which permits 1/3 stop more exposure for 8-mm films is permissible. This is standard practice by camera manufacturers. However, since there is no standard for 8-mm projection, it is not practical to write a separate standard for determining speed of 8-mm films.

Approved
June 6, 2001