



**ANSI C78.1407-2004 (S2020)**

*American National Standard for Electric Lamps—  
Condenser-Reflector, Four-Pin Prefocus-Base  
Projection Lamps—Dimensions*

Secretariat:

**National Electrical Manufacturers Association**

Approved: July 24, 2015

**American National Standards Institute, Inc.**

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**Foreword** (This foreword is not part of ANSI C78.1407-2004.)

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## 1. Scope

1.1 This standard specifies the dimensions essential to the interchangeability of condenser-reflector lamps having four-pin prefocused bases, T12 or T14 bulbs, and used in 8mm motion-picture projectors. It is not the intent of this standard to prescribe operating characteristics or details of design.

## 2. Normative References

2.1 The following standards contain provisions which, through reference in this text, constitute provisions of this American national Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI C78.370-1997, Method for the Designation of Photo Lamps.

ANSI C81.61-2003, Specifications for Electric Lamp Bases.

## 3. Lamp Designations

Incandescent projection lamps are usually identified by a three-letter code, as specified in American National Standard Method for the Designation of Photo Lamps, ANSI C78.370.

## 4. Dimensions

### 4.1 Base Dimensions.

For detailed dimensions of the G17q and GX17q bases, see ANSI C81.61.

### 4.2 Lamp Dimensions.

Lamp dimensions shall be as specified in Figure 1.

4.2.1 The maximum diameter, dimension A, is defined as the diameter of a cylindrical volume, coaxial with the axis of the lamp base, into which the lamp shall fit. This dimension includes both bulb diameter and excursion.

4.2.2 The bulb excursion limit, toward the aperture of the projector, is defined by dimension J. Dimension J is measured from the base reference axis.

4.2.3 The bulb dome excursion limit, at certain potential lamp housing interference points in the projector, is defined by dimension C. Measurement is made in plane X at a dimension H above the base reference plane and within the critical zone defined by angle  $\beta$ . Dimension C is measured from the base reference axis.