

Pt. 564, App. A

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**APPENDIX A TO PART 564—INFORMATION
TO BE SUBMITTED FOR REPLACEABLE
LIGHT SOURCES**

I. Filament or Discharge Arc Position Dimensions and Tolerances Using Either Direct Filament or Discharge Arc Dimensions or the Three Dimensional Filament or Discharge Arc Tolerance Box

A. Lower beam filament dimensions or filament tolerance box dimensions and relation of these to the bulb base reference plane and centerline.

1. Axial location of the filament centerline or the filament tolerance box relative to the bulb base reference plane.
2. Vertical location of the filament centerline or the filament tolerance box relative to the bulb base centerline.
3. Transverse location of the filament centerline or the filament tolerance box relative to the bulb base centerline.
4. Filament tolerance box dimensions, if used.

B. Upper beam filament dimensions or the filament tolerance box dimensions, and relation of these to the bulb base reference plane and centerline.

1. Axial location of the filament centerline or the filament tolerance box relative to the bulb base reference plane.
2. Vertical location of the filament centerline or the filament tolerance box relative to the bulb base centerline.
3. Transverse location of the filament centerline or the filament tolerance box relative to the bulb base centerline.
4. Filament tolerance box dimensions, if used.

C. If the replaceable light source has both a lower beam and an upper beam filament, the dimensional relationship between the two filament centerlines or the filament tolerance boxes may be provided instead of referencing the upper beam filament centerline or filament tolerance box to the bulb base centerline or reference plane.

D. For a light source using excited gas mixtures as a filament, necessary fiducial information and specifications including electrode position dimensions and tolerance information that provide similar location and characteristics information required by paragraphs A, B, and C of this section I for light sources using a resistive type filament.

II. Dimensions Pertaining to Filament Capsule and Capsule Supports

A. Maximum length from bulb base reference plane to tip of filament capsule.

B. Maximum radial distances from bulb base centerline to periphery of filament capsule and/or supports.

C. Location of black cap relative to low beam filament centerline, filament tolerance box or other to-be-specified reference.

D. Size, length, shape, or other pertinent features and dimensions for providing undistorted walls for the filament capsule.

III. Bulb Base Interchangeability Dimensions and Tolerance

A. Angular locations, diameters, key/keyway sizes, and any other interchangeability dimensions for indexing the bulb base in the bulb holder.

B. Diameter, width, depth, and surface finish of seal groove, surface, or other pertinent sealing features.

C. Diameter of the bulb base at the interface of the base and its perpendicular reference surface.

D. Dimensions of features related to retention of the bulb base in the bulb holder such as tabs, keys, keyways, surfaces, etc.

IV. Bulb Holder Interchangeability Dimensions and Tolerance

A. Mating angular locations, diameters, key/keyway sizes, and any other interchangeability dimensions for indexing the bulb base in the bulb holder.

B. Mating diameter, width, depth, and surface finish of seal groove, surface, or other pertinent sealing features.

C. Mating diameter of the bulb holder at the interface of the bulb base aperture and its perpendicular reference surface.

D. Mating dimensions of features related to retention of the bulb base in the bulb holder such as tabs, keys, keyways, surfaces, etc.

V. Wiring Harness Connector to Bulb Base Interchangeability Dimensions and Tolerances

A. Maximum depth of harness connector insertion into bulb base.

B. Location of electrical pins in bulb base.

C. Dimensions of electrical pins in bulb base—length, diameter, width, thickness and etc.

D. Fit of harness connector into bulb base providing all necessary dimensions, key/keyway controls, and dimensions, tapers etc.

E. Dimensions and location of locking features for wiring harness connector to bulb base.

F. Identification of upper beam, lower beam, and common terminals.

VI. Seal Specifications (if Replaceable Light Source is Intended to be of a Sealed Base Design)

A. Type.

B. Material.

C. Dimensions.

VII. Electrical Specifications for Each Filament at 12.8 Volts

A. Maximum power (in watts).

B. Luminous Flux with tolerance (in lumens) with black cap if so equipped, measured in accordance with the document: Illuminating Engineering Society of North America, LM-45; IES Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps (April 1980). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the Illuminating Engineering Society of North America, 345 East 47th St., New York, NY 10017. Copies may be inspected at the National Highway Traffic Safety Administration, Technical Information Services, 1200 New Jersey Avenue, Washington, DC 20590, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

VIII. *Bulb Markings/Designation—ANSI NUMBER, ECE IDENTIFIER, MANUFACTURER'S PART NUMBER, INDIVIDUALLY OR IN ANY COMBINATION*

IX. *All Other Information, Dimensions or Performance Specifications Necessary for Interchangeability, Replaceability, or System Test Purposes not Listed in Sections I Through VIII*

IF A BALLAST IS REQUIRED FOR OPERATION, A COMPLETE LISTING OF THE REQUIREMENTS AND PARAMETERS BETWEEN THE LIGHT SOURCE AND BALLAST, AND BALLAST AND THE VEHICLE SHALL ALSO BE PROVIDED.

APPENDIX B TO PART 564—INFORMATION TO BE SUBMITTED FOR LONG LIFE REPLACEABLE LIGHT SOURCES OF LIMITED DEFINITION

I. *Filament or Discharge Arc Position Dimensions and Tolerances Using Either Direct Filament or Discharge Arc Dimensions or the Three Dimensional Filament Discharge Arc Tolerance Box*

A. Lower beam filament or discharge arc dimensions or filament or discharge arc tolerance box dimensions and relation of these to the bulb base reference plane and centerline.

1. Axial location of the filament or discharge arc centerline or the filament or discharge arc tolerance box relative to the bulb base reference plane.

2. Vertical location of the filament or discharge arc centerline or the filament or discharge arc tolerance box relative to the bulb base centerline.

3. Transverse location of the filament or discharge arc centerline or the filament or discharge arc tolerance box relative to the bulb base centerline.

4. Filament or discharge arc tolerance box dimensions, if used.

B. Upper beam filament or discharge arc dimensions or the filament or discharge arc tolerance box dimensions and relation of these to the bulb base reference plane and centerline.

1. Axial location of the filament or discharge arc centerline or the filament or discharge arc tolerance box relative to the bulb base reference plane.

2. Vertical location of the filament or discharge arc centerline or the filament or discharge arc tolerance box relative to the bulb base centerline.

3. Transverse location of the filament or discharge arc centerline or the filament or discharge arc tolerance box relative to the bulb base centerline.

4. Filament or discharge arc tolerance box dimensions, if used.

C. If the replaceable light source has both a lower beam and upper beam filament or discharge arc, the dimensional relationship between the two filament or discharge arc centerlines or the filament or discharge arc tolerance boxes may be provided instead of referencing the upper beam filament or discharge arc centerline or filament or discharge arc tolerance box to the bulb base centerline or reference plane.

D. For a light source using excited gas mixtures as a filament, necessary fiducial information and specifications including electrode position dimensions, and tolerance information that provide similar location and characteristics information required by paragraphs A, B, and C of this section I for light sources using a resistive type filament.

II. *Bulb Base Interchangeability Dimensions and Tolerance*

A. Angular locations, diameters, key/keyway sizes, and any other interchangeability dimensions for indexing the bulb base in the bulb holder.

B. Diameter, width, depth, and surface finish of seal groove, surface, or other pertinent sealing features.

C. Diameter of the bulb base at the interface of the base and its perpendicular reference surface.

D. Dimensions of features related to retention of the bulb base in the bulb holder such as tabs, keys, keyways, surface, etc.

III. *Bulb Holder Interchangeability Dimensions and Tolerances*

A. Mating angular locations, diameters, key/keyway sizes, any other interchangeability dimensions for indexing the bulb base in the bulb holder.