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(Reaffirmation of ANSI C136.5-1989)

American National Standard for Roadway Lighting Equipment—Film Cutouts

Sponsor

Standards Committee on Roadway Lighting Equipment, C136

accredited by the

American National Standards Institute

Secretariat

The Institute of Electrical and Electronics Engineers, Inc.

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Abstract: Operating and dimensional features of single-shot film cutouts used with series roadway lighting equipment and circuits are covered. The film cutouts function by dielectric breakdown and subsequent partial fusing of components.
Keywords: film cutouts, lighting equipment, roadway lighting equipment, series roadway lighting equipment

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Introduction

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American National Standard for Roadway Lighting Equipment—Film Cutouts

1. Scope

This standard covers operating and dimensional features of single-shot film cutouts used with series roadway lighting equipment and circuits, and function by dielectric breakdown and subsequent partial fusing of components to establish a shunting electrical circuit to bypass nonoperative series roadway lighting equipment.

2. Related standards

The following standard is intended to be used solely for explanation or clarification.

ANSI C136.4-1995, American National Standard for Roadway Lighting Equipment—Series Sockets and Series-Socket Receptacles.[1]

3. General

Film cutouts as covered by this standard shall consist of two electrodes separated both electrically and physically by one or more dielectric substances.

4. Physical characteristics

4.1 Dimensions

Film cutouts shall have a diameter of 5/8 in (15.88 mm) ± 1/8 in (3.18 mm) and a thickness of 1/16 in (1.59 mm) ± 1/64 in (0.4 mm).

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4.2 Contact pressure

Film cutouts shall be designed to permit normal operation for a minimum period of 6 months with a sustained pressure of 25 lbs (11.34 kg) applied at the contacts by socket prongs, without deterioration of electrical characteristics or physical damage to the assembly.

4.3 Temperature and breakdown

4.3.1

Film cutouts shall be capable of withstanding an operating temperature of 175 °C (347 °F) concurrent with the pressure described under 4.2.

4.3.2

The design shall be such that, after circuit closing because of dielectric breakdown, the generated heat within the film cutout will not produce localized temperatures in the holding members in excess of 175 °C (347 °F).

5. Identification

The principal identification of each film cutout shall be by the proper rating identification mark in keeping with the published data and insignia of the manufacturer, which shall be conspicuously and permanently imprinted on the cutout.

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