NEMA Standards Publication

NEMA SSL 1-2016

Standard for Electronic Drivers for LED Devices, Arrays, or Systems

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National Electrical Manufacturers Association

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Electronic Drivers for LED Devices, Arrays, or Systems

Published by:

National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209

www.nema.org

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Foreword

The NEMA Ballast and Driver Section has revised this standards publication. In its initial preparation, input of users and other interested parties was sought and evaluated. Inquiries, comments, and proposed or recommended revisions should be submitted to the concerned NEMA product subdivision by contacting:

Senior Technical Director, Operations
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Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time the standard was approved, the Ballast and Driver Section was composed of the following members:

Acuity Brands, Inc.
Advanced Lighting Technologies Inc.
Atlas Lighting Products, Inc.
Crestron Electronics, Inc.
Eaton Lighting Solutions
EiKO Global, LLC
GE Lighting
Halco Lighting Technologies
Hubbell Lighting, Inc. / Thomas Research Products
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Section 1
General

1.1 Scope

This standard provides specifications for and operating characteristics of non-integral electronic drivers (power supplies) for LED devices, arrays, or systems intended for general lighting applications. Electronic drivers are devices that use semiconductors to control and supply dc power for LED starting and operation. The drivers operate from supply sources of 600 V AC or DC maximum at a frequency of 50 or 60 hertz.

1.2 References

1.2.1 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 editions of the standards indicated below.

American National Standards Institute (ANSI)
25 West 43nd Street
New York, NY 10036

ANSI C82.13-2002	*American National Standard for Lamp Ballasts—Definitions—for Fluorescent Lamps and Ballasts*
ANSI C82.16-2015	*American National Standard for Light-Emitting Diode Drivers—Methods of Measurement*
ANSI C82.77-5-2015	*American National Standard for Lighting Equipment—Voltage Surge Requirements*
ANSI C82.77-10-2014	*American National Standard for Lighting Equipment—Harmonic Emission Limits–Related Power Quality Requirements*
ANSI C84.1-2016	*American National Standard for Electric Power Systems and Equipment—Voltage Ratings (60 Hz)*
ANSI/IESNA RP-16-2010	*Nomenclature and Definitions for Illuminating Engineering*
ANSI/NEMA Z535 Set	*Safety Standards*

Institute of Electrical and Electronics Engineers (IEEE)
445 Hoes Lane
Piscataway, NJ 08854-4141

IEEE 100-2000	*The Authoritative Dictionary of IEEE Standards Terms*

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