ANSI C82.16-2022

American National Standard for Light-Emitting Diode Drivers— Methods of Measurement

Secretariat:

National Electrical Manufacturers Association

Approved: January 10, 2022

American National Standards Institute, Inc.

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Foreword

This foreword is not part of ANSI C82.16-2022.

This is a revision of ANSI C82.16-2020.

Suggestions for improvement on this standard will be welcome. They should be sent to the following address:

Secretary of C82
National Electrical Manufacturers Association
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CONTENTS

Figures

Tables

Equations

1

1. General

1.1. Purpose

This document complements standards and specifications that set performance limits, such as NEMA SSL 1, and provides testing methods.

1.2. Scope

This standard describes the procedures to be followed and the precautions to be taken in measuring performance of LED drivers commonly used in general lighting, exterior lighting, and roadway lighting, and similar applications. The scope includes LED drivers that may have these characteristics:

a. Input supply voltage up to 600 VDC or 600 VAC (60 or 50/60 Hz)
b. Output open-circuit voltage of 600 V or less
c. Constant-current or constant-voltage direct current (DC) output
d. Fixed, pulse-width modulation, or programmable (tunable or dimmable) output power
e. External (standalone) or internal (enclosed in luminaire)

2. References

2.1. Normative References

The following publications contain provisions that, through reference in this text, constitute provisions of this American National Standard. 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 publications indicated below.

ANSI C82.18	*American National Standard for Light-Emitting Diode Drivers—Performance Characteristics*
ANSI C82.77-5	*American National Standard for Lighting Equipment—Voltage Surge Requirements*
ANSI C82.77-10	*American National Standard for Lighting Equipment—Harmonic Emission Limits—Related Power Quality Requirements*
ANSI C137.1	*American National Standard for Lighting Systems—0-10V Dimming Interface for LED Drivers, Fluorescent Ballasts, and Controls*
IEC Guide 115	*Application of uncertainty of measurement to conformity assessment activities in the electrotechnical sector*
IEEE 100	*IEEE Standards Dictionary Online*
JCGM 100	*Evaluation of measurement data—Guide to the expression of uncertainty in measurement*
NEMA 410	*Performance Testing for Lighting Controls and Switching Devices with Electronic Drivers and Discharge Ballasts*
UL 8750	*Light Emitting Diode (LED) Equipment for Use in Lighting Products*