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CSA C865.2:23
National Standard of Canada

Light-emitting diode drivers — Performance characteristics

SCC CCN

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National Standard of Canada

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C82 Preface

This foreword is not part of ANSI C82.18-2023.

This is a revision of ANSI C82.18-2022.

LED Drivers have been developed to support the LED transformation of lighting applications. The National Electrical Manufacturers Association (NEMA) developed an industry consensus document describing some basic performance requirements, titled *NEMA SSL-1 Electronic Drivers for LED Devices, Arrays, or Systems*. NEMA SSL-1 provided specifications and operating characteristics of non-integral electronic drivers (power supplies) for LED devices, arrays, or systems intended for general lighting applications.

The C82 committee developed a consensus document describing the LED drivers test methods; ANSI C82.16 *American National Standard for Light-Emitting Diode Drivers—Methods of Measurement*. ANSI C82.16 describes the procedures to be followed and the precautions to be taken in measuring the performance of LED drivers. The scope includes, but is not limited to, LED drivers with these characteristics:

- General lighting, exterior lighting, and roadway lighting applications
- Input supply voltage up to 600 VDC or 600 VAC (50 or 60 Hz)
- Output open-circuit voltage of 600 V or less
- Constant-current or constant-voltage DC output
- PWM LED drivers
- Fixed, variable (dimmable), pulse width modulation, or programmable (tunable) output power
- External (standalone) or internal (enclosed in luminaire)
- Energy efficiency
- Driver Standby Power

NEMA and C82 member testing experience, based on ANSI C82.16 methods, contributed to drafting this document. This standard, ANSI C82.18 *American National Standard for Light-Emitting Diode Drivers—Performance Characteristics*, and ANSI C82.16 *American National Standard for Light-Emitting Diode Drivers—Methods of Measurement* enables a consistent characterization of LED driver performance.

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

Secretary of C82
National Electrical Manufacturers
1300 North 17th Street, Suite 900
Rosslyn, VA 22209

This standard was developed and approved for submittal to ANSI by the C82 Committee. Approval of this standard is not meant to imply that all committee members voted to approve it.

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CSA Preface

This is the first edition of CSA C865.2, *Light-emitting diode drivers — Performance characteristics*.

CSA Group acknowledges that the development of this Standard was made possible, in part, by the financial support of BC Hydro, Fortis BC Electric, Nova Scotia Department of Energy, Efficiency Manitoba, Independent Electricity System Operator, and Efficiency Nova Scotia.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed by the CSA Subcommittee on Methods of Performance Measurement of LED Drivers, under the jurisdiction of the CSA Technical Committee on Performance of Lighting Equipment and the CSA Strategic Steering Committee on Performance, Energy Efficiency, and Renewables, and has been formally approved by the CSA Technical Committee.

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