



LED Drivers Matter

Which Driver Is in the Luminaire You're Specifying?

LED Drivers Matter. Their quality, capability and intelligence drive the results of your lighting design and empower lighting controls on your project:

eldoLED® LED Drivers deliver quality of light, dimming, color tuning, flicker-safe applications, and intelligence for control options. With an industry-leading portfolio, **look to eldoLED drivers to enable all applications**, from downlight to linear, industrial to outdoor, and mainstream to high end.

When designing your lighting, look for unique value that can only be delivered by eldoLED drivers within the luminaires of your choice. **Enable your project with:**

eldoLED LED Drivers

Enhances lighting design, with unique dimming and color tuning capabilities, and available for a variety of indoor and outdoor luminaires.

OPTOTRONIC® LED Drivers by eldoLED

Suitable for many indoor commercial applications while excelling at providing the necessary robustness for industrial, outdoor and roadway applications.



Enable Your Project with eldoLED Drivers

What do you want on your project?

Dimming: Range and quality equal to incandescent dimming

eldoLED LED Drivers

Spec This

- Dim down options including deep dimming down to 0.1% (Dim to Dark) OR dim down to 1%
- Selectable dimming curves including linear, logarithmic, soft linear and square, enabling incandescent-like dimming

Look for

- Configurable minimum dimming levels.
- Consistent minimum dimming level throughout operating range
- Programmable output currents in 1mA increments
- High resolution dimming delivering no visible steps throughout the dimming curve
- Electronic off/ dim to off capabilities, for shut off of driver output at lowest dimming signal input
- Complies with: NEMA - ANSI C137.1-2022, ESTA E1.3 (0-10V Analog Control), ANSI E1.11-2008 (R2018), ESTA DMX 512, USITT
- Addresses requirements of: California Title 24, ENERGY STAR®

OPTOTRONIC LED Drivers by eldoLED

Spec This

- Dim down to 1%

Look for

- Configurable minimum dimming levels.
- Consistent minimum dimming level throughout operating range
- Programmable output currents in 1mA increments
- Electronic off/ dim to off capabilities, for shut off of driver output at lowest dimming signal input
- Complies with: NEMA - ANSI C137.1-2022, ESTA E1.3 (0-10V Analog Control)
- Addresses requirements of: ENERGY STAR, California Title 24, when SoftStart feature is selected

Flicker: No visible flicker or stroboscopic effects

eldoLED LED Drivers

Spec This

- Complies with IEEE 1789 standard at all dimming levels
- Complies with NEMA 77 standards at all dimming levels (ANSI C82.18 - 2022)

Look for

- No visible or invisible flicker over dimming range, dynamic and static
- No stroboscopic effect when filming (camera)
- Addresses requirements of: California Title 24

OPTOTRONIC LED Drivers by eldoLED

Spec This

- Complies with NEMA 77 standards at all dimming levels (ANSI C82.18 - 2022)
- Addresses requirements of: California Title 24, when SoftStart feature is selected

Controls/Embedded Controls Interface Compatibility: A choice of control protocols to cover lighting controls and network needs

eldoLED LED Drivers

Spec This

- Controls through analog, 0-10V, OR end-to-end digital (LEDcode) communication OR nLight® supported including embedded controls OR SensorSwitch™ supported including embedded controls OR Complies with open lighting controls standards including 0-10V; DMX / RDM, DALI-2 (DT6 and DT8) and D4i
- Support for integrated or embedded devices with programmable auxiliary outputs 4-24V

Look for

- Isolated 0-10V input for protection against wiring errors. Complies with UL 8750 Supplement SF 3.1

OPTOTRONIC LED Drivers by eldoLED

Spec This

- Controls through analog, 0-10V OR nLight, including embedded controls, supported through analog 0-10V OR SensorSwitch, including embedded controls, supported through analog 0-10V
- Support for integrated or embedded devices with programmable auxiliary outputs 12/20/24V

Look for

- Isolated 0-10V input for protection against wiring errors. Complies with UL 8750 Supplement SF 3.1

Color Tuning: Ability to adjust color temperature over customized range. Smooth transitions between intensity levels and color. Color consistency in the space

eldoLED LED Drivers

Spec This

- Programmable color temperature range managed at local driver level. Color math includes intensity and color. (LightShape)
- nLight implementation support including embedded controls OR Complies with open lighting controls standards including DMX / RDM, DALI-2 (DT6 and DT8)

Look for

- Supports Tunable White, Dim to Warm, Dynamic Dimming

OPTOTRONIC LED Drivers by eldoLED

Spec This

- Not supported

Consistent Behavior at Start Up/Shut Down: All luminaires within a space to have the same behavior at on and off

eldoLED LED Drivers

Spec This

- No perceived timing difference at turn on, turn off and dimming

Look for

- No flashes or flicker of light after driver output has been turned off (aka no popcorning effect)
- Start-up time at 750ms / 550ms for indoor applications
- Addresses requirements of: California Title 24

OPTOTRONIC LED Drivers by eldoLED

Spec This

- No perceived timing difference at turn on, turn off and dimming

Look for

- No flashes or flicker of light after driver output has been turned off (aka no popcorning effect)
- Start-up time at <1 sec for indoor applications
- Instant turn on starting at -40C for outdoor applications
- Addresses requirements of: California Title 24, when SoftStart feature is selected

No Electromagnetic Interference: No unwanted radiated or conducted interference in the space

eldoLED LED Drivers

Spec This

- Complies with FCC Title 47 part 15 class A & B

OPTOTRONIC LED Drivers by eldoLED

Spec This

- Complies with FCC Title 47 part 15 class A

Surge & EFT Protection

eldoLED LED Drivers

Look for

- 2.5kV common and differential mode for indoor applications, complies with ANSI C62.41 Test Severity III - Cat A (ANSI C82.77-5-2017 Surge and Transient Standard)

OPTOTRONIC LED Drivers by eldoLED

Look for

- 2.5kV common and differential mode for indoor applications, complies with ANSI C62.41 Test Severity III - Cat A (ANSI C82.77-5-2017 Surge and Transient Standard)
- 6kV common and differential mode for industrial applications, complies with ANSI C62.41 Test Severity III - Cat B (ANSI C82.77-5-2017 Surge and Transient Standard)

Power Quality for Industrial, Outdoor & Roadway Applications: Protection against dirty power

eldoLED LED Drivers

Spec This

- Not supported

OPTOTRONIC LED Drivers by eldoLED

Spec This

- Meets Power Quality Immunity requirements including standards on harmonics disturbances, voltage notching, requirements for capacitor voltage transients, impulse voltage transients, and withstands temporary of overvoltage of 130% rated input for 30 minutes (ZetaShield)
- Loss of neutral protection at nominal 277V & 480V with lifetime duration. Loss of neutral protection at nominal 347V for 30 min

Additional Features

eldoLED LED Drivers

- **Low power consumption as luminaire is set to (electronic) off:** standby power < 0.5W
- **Environmental standards:** complies with RoHS3, REACH Art 33, Living Building Challenge™ Red List exemption
- **No audible sound:** in compliance with ANSI C82.18 Class A
- **Thermal protection:** programmable thermal protection with External NTC thermistor
- **Ingress protection:** indoor: IP-20 rated driver enclosure, NEMA type 1
- Global coverage with voltage and regulatory certification requirements (CE, ENEC, BIS, CSA, PSE, KC, RCM, TISI)

OPTOTRONIC LED Drivers by eldoLED

- **Low power consumption as luminaire is set to (electronic) off:** standby power < 1W
- **Environmental standards:** complies with RoHS3, REACH Art 33, Living Building Challenge Red List exemption
- **No audible sound:** in compliance with ANSI C82.18 Class A
- **Thermal protection:**
 1. *Indoor:* programmable thermal protection with external NTC Thermistor
 2. *Industrial/Outdoor:* programmable thermal protection with external NTC thermistor & driver thermal protection
- **Ingress protection:**
 1. *Indoor:* IP-20 rated driver enclosure, NEMA type 1
 2. *Outdoor:* IP-66 rated driver enclosure, NEMA type 4

LEARN MORE ABOUT WHY LED DRIVERS MATTER

