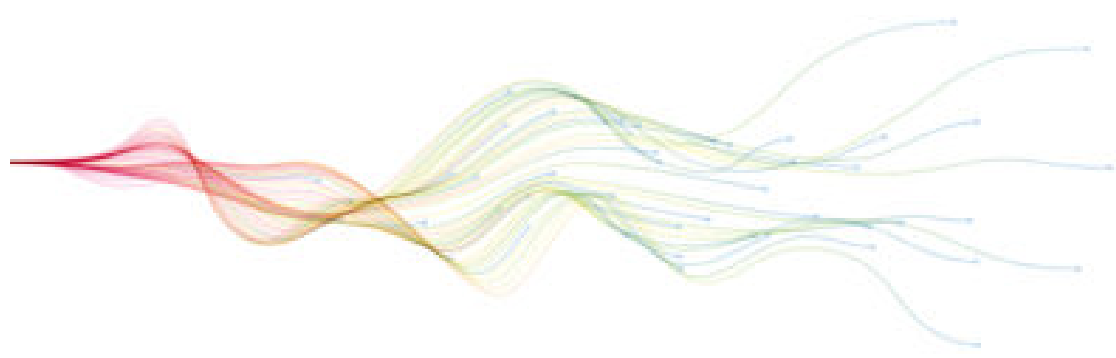


Selecting for Quality in Indoor and Outdoor LED Drivers



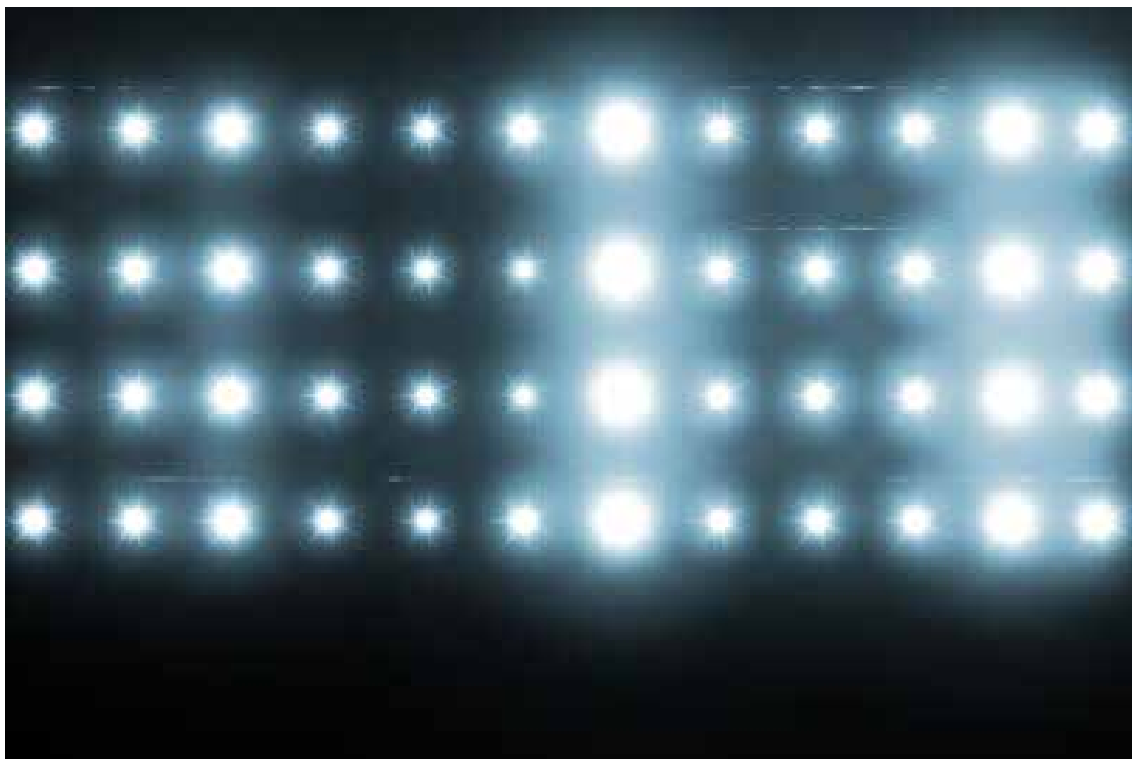
Like a watchful stage manager, the driver works behind the scenes of a LED display, making sure the show is running smoothly. Drivers regulate power so that lighting performs optimally and efficiently.

At American Bright, we scrutinize the quality of LED drivers to the same degree we test the individual LEDs for viability and longevity.

Why are LED drivers so important? LED drivers serve a multifaceted purpose: they convert higher voltage AC to low voltage DC. They level out incoming power if there are spikes or gaps.

Power requirements for LED components may vary with temperature. An LED driver adjusts the supply to match this forward voltage (VF) and maintain consistent brightness of the LED.

For outdoor lighting applications, drivers must weather the elements, from temperature extremes to moisture exposure. Indoor drivers also require attention to nuances in performance demanded by some interior environments.



The Value of LED Drivers

The quality of an LED driver is measured by its reliability, efficiency, and the ability to provide consistent illumination. High-quality drivers limit the risk of premature failure, which can be challenging and costly in outdoor settings where access and maintenance prove difficult. They also offer protection against electrical anomalies, a necessity for the longevity of both indoor and outdoor LED systems.

For indoor environments, a superior LED driver must deliver flicker-free lighting and smooth dimming capabilities for premium user experience. In commercial or industrial spaces – where lights are in use for extended periods – drivers must be robust enough to avoid downtime and maintenance costs.



Outdoor LED systems, such as streetlights or architectural lighting, require drivers that can cope with fluctuating temperatures and conditions while ensuring safety and compliance with stringent regulations. High-quality outdoor drivers from American Bright come equipped with features like IP67 waterproofing and dust resistance as well as built-in thermal management systems that safeguard LED performance over time.

Settling for less-than-optimal drivers can lead to several issues: energy inefficiency, poor lighting quality, higher maintenance costs, and potential safety hazards. In outdoor street lighting applications, for example, the failure of an LED driver can compromise public safety.

Selection Criteria for LED Driver Quality

When engineers select an LED driver, several factors come into play:

- Electrical Performance**
The driver should provide constant output despite input voltage fluctuations and be efficient to ensure that the energy savings potential of LEDs is fully realized.
- Thermal Management**
Drivers must be able to dissipate heat effectively to prevent overheating, which could otherwise lead to reduced lifespan and performance.
- Compatibility**
The driver must be compatible with the LEDs in terms of current and voltage requirements and should facilitate easy integration into lighting systems.
- Durability**
For outdoor applications, the driver should be constructed with materials that can withstand environmental stressors.
- Certifications**
Compliance with industry standards and certifications is non-negotiable for quality assurance.

Bright Solutions for LED Power Regulation



Our newest LED drivers achieve the highest safety standard for both the North American and European markets, and include open-circuit, short-circuit, overload, and overheat protection.

The American Bright driver offerings feature:

- Input Voltage: 90 – 305VAC
- Output Power: 15W to 320W
- Output Voltage: 12VDC & 24VDC; 48VDC also available.
- Metal Body with Waterproof Grade up to IP67
- UL, cUL, and CE certification
- Constant Voltage
- Dual mode Constant Voltage (CV) and Constant Current (CC) available
- Dimmable with 0-100% Dimming Range
- Built-in Active PFC function
- 5-year warranty

As LED technology advances, the quality of drivers becomes even more important for successful projects. Experienced engineers recognize that high-quality drivers are a critical part of LED projects delivering on the full promise of LED lighting: superior efficiency, impressive longevity, and excellent performance.

Need help choosing which American Bright driver matches your application? One of [our sales engineers](#) can guide you to the best selection.