

Driver Quality and Power Performance

Why Omni-Ray Lighting, Inc. vs. others? Simply said; Quality Components and Engineering. Most consumers equate the LED type or brand as an overall determination of quality. However, it is the less understood hidden component, the Driver, that will be the greatest factor in determining system life, lumen efficacy, and durability.

The quality of power in your system and its management is controlled through the Driver. How well your driver performs will be determined by quality and technology of components, and engineering. Much of the first stage a driver must deal with are problems with power quality within a building. Such as, inadequate or degraded wiring, incorrect grounding, and large loads sharing the same circuit. Overloading transformers, undersized wiring, and continued power problems can harm valuable data and equipment.

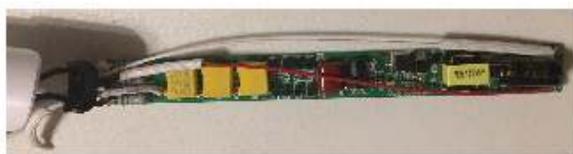
Power anomalies can damage low quality drivers and cause failure. Pictured is a driver providing the bare minimum of what was required to operate a T8 24vDC LED system. These are the type of 2-5 year warranted product on the market that are developed and warranted for residential use of 4-6 hours per day, and usually in the lower price range.



Omni-Ray Lighting requires its drivers to address 4 key factors of power conditioning:

1. Voltage Optimization
2. Current Reduction
3. Harmonics Filtration
4. Power Factor Correction
 - Voltage is stabilized with a dynamic fast acting capacitor bank
 - Current is reduced by using a real time dynamic reactive power compensation system to reduce copper losses I^2R
 - Harmonics filtration is performed by utilizing custom designed reactors tuned to the 5th or to the 5th and 7th harmonics
 - Power factor is improved by adding KVAR (Kilovolt Amp Reactive) to the inline voltage system

An example of Omni-Ray Lighting driver components for the same type of lighting:



OUR DRIVERS

