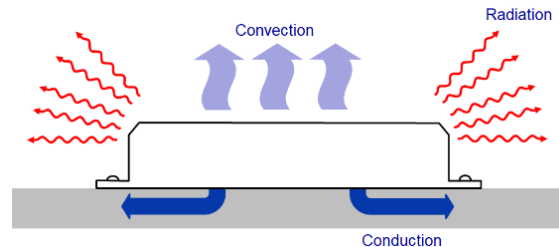


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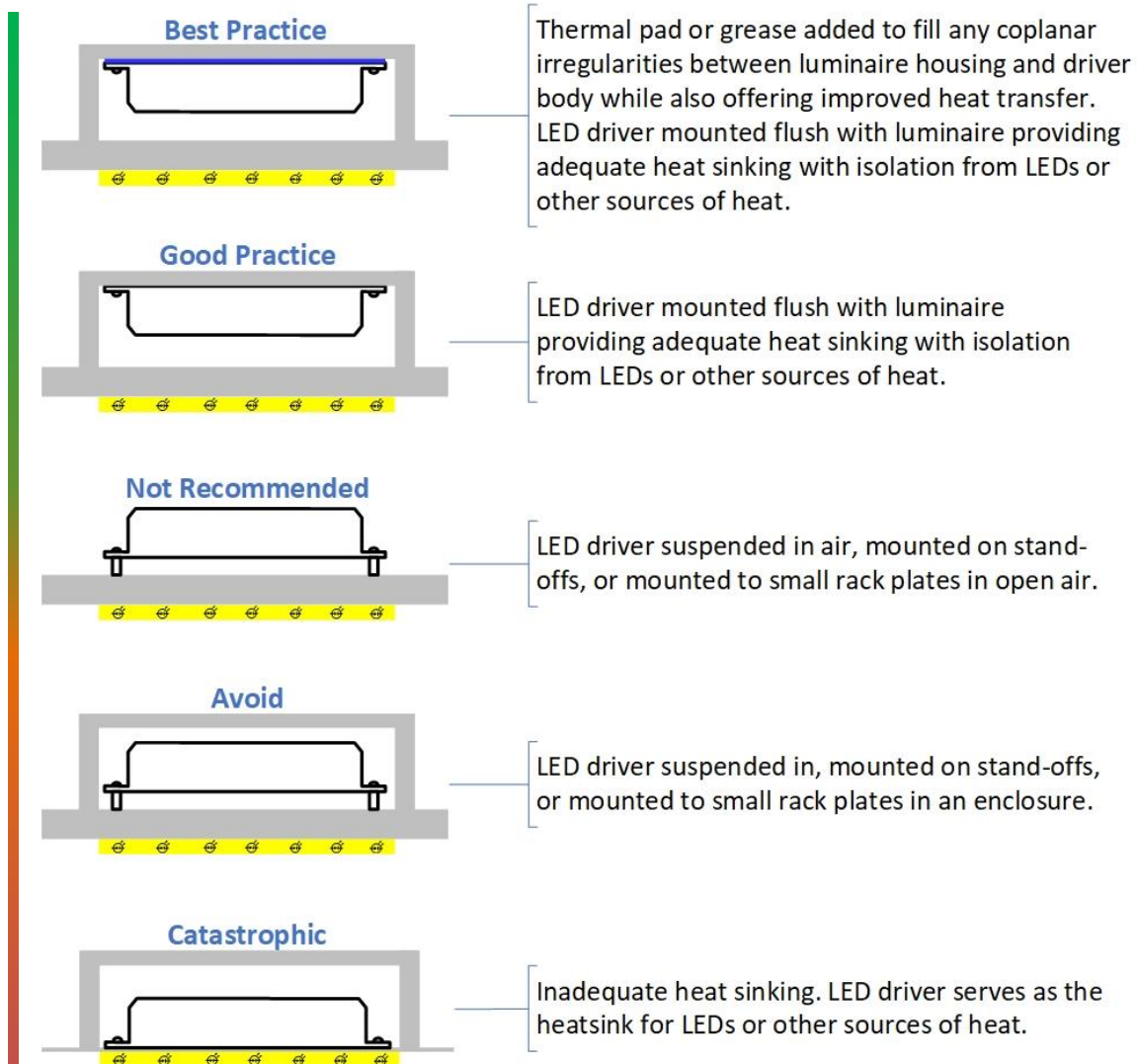
Installation Guidelines – Thermal Design

Proper thermal management is critical to luminaire design and impacts driver success in the field. Following traditional lifetime curves, electrolytic capacitors dry out more quickly as heat increases (reducing lifetime), and extreme heat can even lead to solder cracks or component failures. Providing optimal driver thermal performance requires dissipating as little heat as possible (high efficiency) as well as removing heat as effectively as possible (careful layout of components and material selection).

The driver is responsible to distribute heat to its surface, and the luminaire is responsible to pull this heat away from the driver. Heat transfers in three ways – conduction, convection, and radiation. Conduction through a heat sink is the most effective cooling method for drivers, especially for built in designs that utilize an enclosure.



The driver case temperature, or “Tc”, for safety is typically 90° C and should never be the design target for a luminaire. Instead, the luminaire should manage thermals so that the driver’s worst-case, operational Tc is always maintained within the warranty specification. The luminaire’s ability, or inability, to pull heat away from the driver will ultimately determine the life of the system.



Inventronics is committed to concurrent engineering with our customers to develop the world’s most reliable drivers for the toughest applications. Please contact us with any comments, questions, or concerns at: <https://www.inventronics-co.com/technical-support/>.