



03/16/2008

General Guidelines For Using Magtech Drivers

It is not MAGTECH'S place to instruct a customer on how to perform a temperature test on their fixtures. We can only point out the limitations of our drivers in high ambient environments. As such I can offer the following suggestions. Our drivers will perform as expected as long as you take into account our suggestions and maintain a healthy environment for the drivers.

- 1) The Tc point is the hottest location on the surface of the LED driver. It is strongly recommended that Tc temperature shall be measured during initial engineering design. For whatever the mechanical design, it is the absolute highest temperature allowed in order to maintain the highest reliable operation of the driver. The Tc point temperature should never be reached under any circumstances to ensure longevity. As long as you do not exceed the maximum TC point temperature for a given installation, you can forgo ambient temp measurements and de-rating of the output.
- 2) Each driver has its operating specifications listed on the application notes published for each series of drivers. To operate above 50 deg C ambient you must apply the derating curve for your application as noted on the specification. To derate our power supply output, you must reduce the load that the driver is seeing, normally, depending on the model selected, 1% to 2.5% per degree C above 50 deg C.
- 3) Our drivers are convection cooled which means that you need a convection air current flowing over the driver to remove the excess heat. You must also evaluate the location of the driver inside your fixture as some locations are not good for convection air flow.
- 4) You must not stack our drivers and observe the spacing requirements to other heat producing objects contained in the fixture.
- 5) The MTBF is not calculated based on high ambient temperatures and this should be taken into consideration. The MTBF measurement criteria is listed on the spec sheets for each model series.
- 6) Ambient temperature is measured within a 4 inch envelope of air that surrounds the driver.

Installation notes for Damp/Wet locations and Outdoors.

- 1) When installing DRY/DAMP rated units outdoors you must use an appropriate NEMA rated enclosure.
- 2) LP1060, LP1090 and LP4240 series come in NEMA rated enclosures and do not require another enclosure.
- 3) When laying out the system during the installation process, care must be given to verify that the drivers are not located at a low point where liquid can collect and short out the drivers.
- 4) All covers and screws must be checked for proper sealing and that all screws are torqued to specification as listed on the installation instructions shipped with each driver.

We recommend using an appropriate surge protection device and solid state relays installed prior to the AC input of the drivers particularly in 277vac environments. When using devices designed for use with incandescent lighting products, we recommend evaluating the devices for use with solid state devices as some of the products can produce damaging spikes leading to failures of the drivers.

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