



True 277V Drivers Offer Better performance

LED Drivers from Thomas Research Products are designed for higher performance and quality than most competing products. Our universal 100-277V input is a key part of that quality. Here's why:

Actual Voltage Range

- Commonly used US line voltages are 120/208/240/277/480. Most common are 120 & 277.
 - Typical Canadian voltages are 120/240/277/347.
 - In Europe, common line voltages are 220/230/240, while in Japan 100 & 200 are used.
- Tolerances for all of these are $\pm 10\%$.

TRP's Drivers are designed for an extended Input Voltage Range, with a 90-305Vac min/max. The result is a *true* 100-277Vac nominal range, able to handle any variances in the line voltage.

No De-rating

Many typical competing drivers utilize 100-240Vac input, designed for common European or Japanese line voltages. Some manufacturers de-rate 240V drivers to operate at 277V, in order to sell them in North America.

LED Drivers from TRP are *not* de-rated.

Heat

The critical factor for LED Drivers: power loss due to inefficiency is dissipated as heat.

- More heat = shorter life
- Less heat = longer life

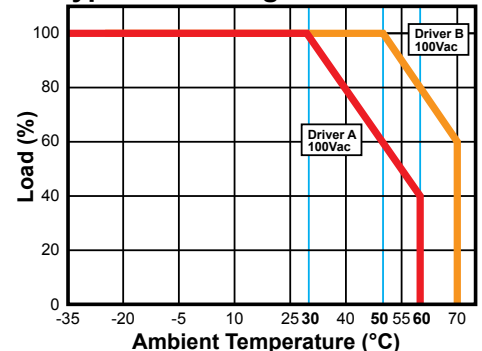
TRP Driver circuits are designed to operate the internal electrolytic capacitors at 80% of capacity, so they run cooler. Competing products designed for 240V will run hot at 277V, leading to **SHORTENED LIFETIMES**.

240V \neq 277V

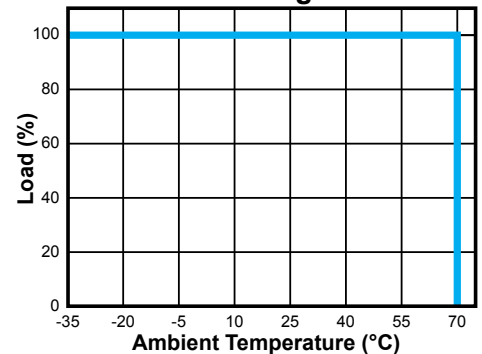
ALL TRP drivers are 100-277V Nominal

When specifying LED Drivers, make sure they have the capacity to truly handle 277V nominal operation without any de-rating.

Typical Derating Curves (By Others)



TRP Derating Curve



For 347 or 480V mains, TRP has two solutions available:

- 1) TSC/TSV Series drivers offer a 277-480V input voltage range.
- 2) Step-down Transformers that allow 100-277V drivers to be utilized with the higher mains.