



Servicing Venbrite LED systems in the field – existing signs

Note: if you are installing a new sign, please see "installation Instructions" and "troubleshooting tips"

IF NOTHING LIGHTS:

1) Check primary input power to driver. Measure L-N, L-G, and N-G.

120V primary systems:

L-N must be between 108 V and 132V.

277 Primary Systems:

L-N must be between 249 V and 305V.

For both Primary systems: L-G must be within 3V of L-N and N-G voltage must be less than 3V

2) Check O/P of power supply. With power off & LEDs disconnected, set multimeter to dc-mA & attach leads to output of driver; apply primary power and the meter should read the same current as specified on the driver.

Alternative methods for testing the output are: using a single known working Venbrite LED & observing polarity, attach directly to the output of the driver (alligator clamps work well). *Note: The driver has open circuit protection and will immediately turn itself off if power is applied to the driver with an open secondary circuit, therefore the meter and Venbrite module must be hooked up to the driver with the power turned off and then the power applied to the driver.*

3) At this point we know that the primary power is good and the driver has electrical output. If all of the LEDs are still not lighting the problem is either a grounded condition on the secondary side or open circuit on the secondary side or an overloaded condition (more LEDs than the maximum allowable installed originally and overlooked). With System 100 and System 200 you may be able to distinguish between these three problems: if the power is turned off and on and the LEDs flash once the problem is most likely a grounding problem. You might be able to locate the grounding problem by process of elimination by testing separate "zones" to distinguish sections without problems where the LEDs light correctly. (While an overloading problem will display the same "one Flash" it can be confidently diagnosed by counting the modules.)

4) If the primary power is good and the secondary output is good and the LEDs do NOT flash once when power is applied, the problem is most likely an open circuit problem. If you cannot find the problem visually, you should try to jump out sections and narrowing down the location of the open circuit. *Note: the VLP 125SPD-120 may flash very dimly in this test and your only option is first a visual check of the wiring and then going through a process of elimination of the lit and unlit sections of the sign. The System 100 and 200 might flash in an open circuit condition if there is high capacitance coupling.*



Troubleshooting Tips

There is a protection circuit in the LED driver that will latch off (trip) the power whenever an open circuit, GFI or overload condition occurs. If your LED sign is off, and the AC input power is on, the LED driver has probably tripped due to fault conditions. If so, remove power to the driver. This action will reset the protection circuit. Clear the fault and wait at least five seconds before reapplying power. If tripping continues, remove power and check the following:

1. Is output wiring properly connected? Turn off power and check wiring.
2. Does LED driver have correct input AC voltage? Measure volts AC into driver. Check the breaker. Check the wiring.
3. Is there a break in the output series connected circuit? Jumper the cut wire.
4. Is there a short circuit at the LED driver output? Look for damaged wire.
5. Is output wired with the polarity reversed? Make sure driver + output is connected to + of 1st LED Module. Make sure each successive LED module is connected + to -. If some LED sections light properly and other sections do not, the problem is most likely to be reverse polarity in the non-working section. Correcting the polarity should resolve the problem.
6. Have the maximum modules per LED driver been exceeded? Count the modules and confirm number is within maximum listed under specifications.