

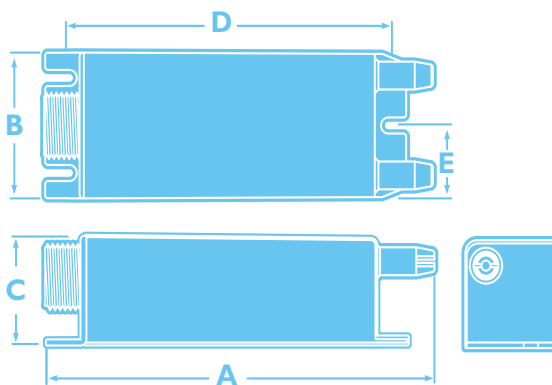
FEATURES AND BENEFITS:

- Exceptionally bright single-bin Nichia chip
- Constant current output from the Venbrite Driver eliminates need for heat generating, energy consuming components found in competitors' LED modules
- Power supplies can be remote mounted up to 175 feet from signs using standard #18 AWG wire
- Series wired for ultimate energy efficiency and consistent illumination, regardless of distance from the driver.
- Superior performance reduces string footage and power supply counts
- Evenly illuminates up to an 8" wide stroke, reducing module counts and system cost
- Safe, low current design with built in GFI, open circuit, short circuit, overload and polarity protection
- Highly efficient and conservatively driven LED chips run cooler for extended useful life and maximum reliability
- UL Classified for Neon to LED Retrofits using existing GTO and conduit, saving 40% over competitive conversion systems

SPECIFICATIONS:

Venbrite LED Driver	VLP200-120
Input Voltage, (50/60Hz)	120VAC (+/-10%)
Input Current @ Max Load	0.65Arms
Power Factor	0.95MIN
Output Voltage	0-250 V _{DC} (+/- 125V _{DC} max to Gnd)
Output Current (Line-Load Regulated)	250mA (Factory Set)
Operating Temperature*	-30°F to 122°F (-34°C to 50°C)
Input Surge Protection	Varistor Type

*When Operating at Ambient Temperatures Higher than Above Limit, Reduce Load by 10% for each 9°F (5°C) Ambient Rise



DIMENSIONS:

Length (A)	4.85in (12.4cm)
Width (B)	2.0in (5.0cm)
Height (C)	1.45in (3.7cm)
Mounting (D)	4.50in (11.43cm)
Mounting (E)	1.38in (3.5cm)
Weight	12.0oz (350gr)
Input Leads	18 AWG 18" (0.46M) UL1015
Output Leads	18 AWG 18" (0.46M) VA-W02 (+red) VA-W00 (-Blk)

VENBRITE ACCESSORIES:

VA-W09/100	VA-W09/500	Venbrite Low Voltage LED Wire
VA-WN01		Venbrite Standard Wire Nut
VA-WN02		Venbrite GTO Retrofit Wire Nut





SERIES-WIRED, CONSTANT CURRENT LED SIGN LIGHTING SYSTEM

Specifications and User Guide For Installation in
Channel Letters, Raceway & Remote Applications

Thank you for purchasing the VenBrite™ LED SYSTEM. For proper installation and operation please read the following directions and tips carefully. It is the user's responsibility to ensure installation complies with national and local electrical codes.

INSTALLATION INSTRUCTIONS

(CAUTION: Output NOT Class 2. Make sure input power is off prior to installation.)

The Venbrite® LED System has been designed especially for installation in channel letter signs, raceway / wireway & remote applications. The System is UL Recognized and may be used in non-enclosure rated signs as well as reverse channel letter applications. Direct mounting of LED modules and/or driver on plastic sheet is permitted under suitable conditions.

1. This LED System is suitable for dry or damp locations. Do not mount where it can stand in water.
2. Primary wiring must be connected by a licensed electrician and comply with National Electrical Code and NFPA 70 standard, including the use of disconnect switches and enclosures.
3. The LED driver can be direct mounted in enclosure or non-enclosure rated self-contained channel letters, box signs, raceway / wireway or remote applications.
4. DO NOT ground output wiring.
5. Input grounding (green) wire of LED driver must be connected to ground.
6. If using multiple LED drivers, maintain at least 6 inches of distance between them. This will minimize the effects of "electronic crosstalk."
7. Mount the LED driver using proper size hardware (# 8 sheet metal screws or pop rivets). Optional UL approved mounting methods may also be used. LED modules can be mounted using the attached peel & stick VHB tape, # 6 screws, 1/8in pop-rivets or an approved UL recognized adhesive may also optionally be used.
8. If the LED driver is mounted on a metallic surface, make sure it is grounded to the metal frame via the ground foot provided on the LED driver, using UL approved mounting methods. Typically a straight run of LED modules would be fastened using a screw or rivet in each end module while the middle modules are held down using the attached VHB tape.
9. Observe output polarity. Although LED Driver & LED modules will not be damaged by reverse polarity, there will be no light produced.
10. DO NOT connect LED Strings in parallel as they will run dimmer than normal.
11. DO NOT use a dimmer on input of the LED driver. The driver maintains a constant output current regardless of load or primary voltage.
12. DO NOT connect Venbrite® LED Modules to a Class 2 supply or any battery.
13. DO NOT overload. The driver has overload protection. If the Maximum number of LED's per driver is exceeded the unit will Latch OFF (trip).
14. When connecting LED driver to LED Module String, use the following:
 - A) For Enclosure Rated Sign: Any application approved UL wire connector and #18AWG, 600V wire, can be used.
 - B) For Non-Enclosure Rated Sign; use Ventex Wire Nut P/N: VA-WN01 or Ideal Industries Wire Connector cat no. #30-x61 (where 'x' = package style); for return/jumper wire, Use LED wire, Ventex P/N: VA-W09 (#18 AWG, 600V, White, VW-I). This LED wire, sold separately, is unique & integral to the LED system. No substitutes allowed unless otherwise specified in this manual. Typically a single stroke LED string will need a return wire from the end farthest away from the driver. (See examples next page). This same wire can also be used to jump between LED string ends as required.
15. Mounting on Suitable Sign face material: A temperature test was conducted with LED modules in a box with an overall density of 1 module/6in3 (98cm3) & LED driver in a box with an overall density of 1 driver/31in3 (500 cm3). The maximum case temperature measured was 83°C for both driver & LED case. The suitability of any condition that would result in a more severe wattage density shall be determined. The temperature rating of any UYMR2 material the LED module or driver may be mounted to shall be considered in the end product.
16. Dimming option: Connect yellow & violet wires to an ON-OFF switch. When switch is ON the output current is reduced 50%. For polarized switch, tie yellow wire to positive contact and violet to negative one. If the dimming option is not required, cut the yellow & violet wires and cap each with wire nut.

TROUBLE-SHOOTING 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 5 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 reverse polarity? Make sure driver + output is connected to + of 1st LED Module. Make sure each successive LED module is connected + to -.
 6. Have the maximum modules per LED driver been exceeded? Count the modules and confirm number is within maximum listed under "specifications"
- Note: Do not attempt to disassemble LED driver or LED module for repairs. This action will void any warranty offers made by Ventex.



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