

## SPEC SHEET: MICRO PWM EL INVERTER

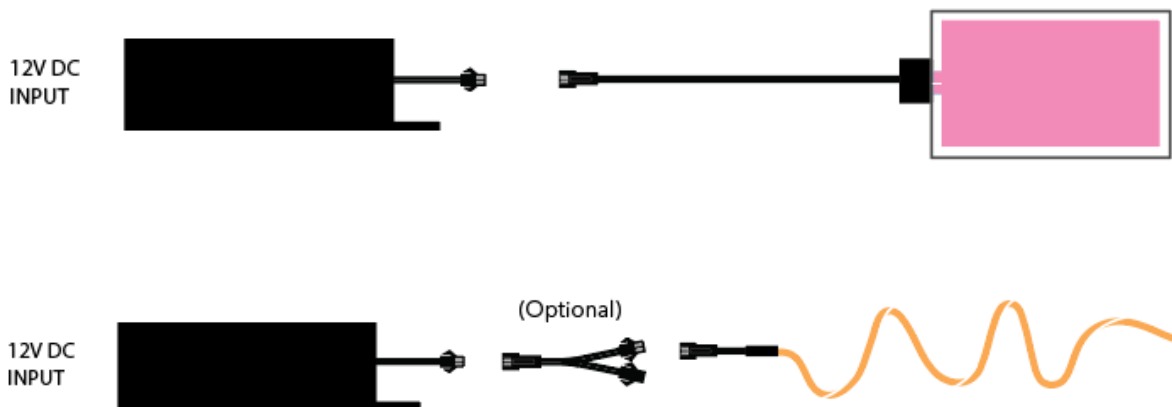
The Micro PWM EL Inverter is a compact, efficient inverter designed for many uses. The constant on function allows for input devices such as an Arduino, Raspberry Pi (among many others) to send a PWM signal to the power pin to increase or decrease the brightness. The 12V DC operation allows for easy integration into automotive, retail, and residential uses. This inverter can easily be controlled with remote dimmers with PWM control. This inverter module is specifically designed for Electroluminescent Panels, VynEL™, SewGlo™ thread, or Electroluminescent Wire.

This variable voltage and frequency inverter module are load dependent and will vary based on the size and type of load (EL Wire, Tape, VynEL™, EL Panel, EL Paint, etc.). The minimum load for EL Wire is 1in (~25mm), and EL Tape or Panels is 0.5sqin (~3.2sqcm). The maximum load for EL Wire is 7600mm (~300in), and EL Tape or Panels is 390sqcm (~60sqin). The maximum voltage and frequency rating for this inverter is 130V @ 1800Hz. The output has a 2-pin JST-SM style connector which is an industry standard Electroluminescent device connector. For custom connector options, please contact us.

This module is designed to allow for external control through PWM (Pulse-Width Modulation). The power and brightness can be adjusted by adjusting the + (Power) Pin on the DC 2.1mm Input. There is a 3-way slide switch next to the power input which selects between ON, OFF and BLINK modes.

Size	SKU	MAX OUTPUT	INPUT VOLTAGE	MIN-MAX LOAD	CONSUMPTION	RATING
101 x 39 x 33mm 4" x 1.5" x 1.34"	EOE276	130V @ 1800Hz	12V DC	25mm-7600mm (~1-300in) EL Wire 3sqcm-390sqcm (~0.5-60sqin) EL Panels	0.25A	IP20

### INVERTER DIAGRAM:

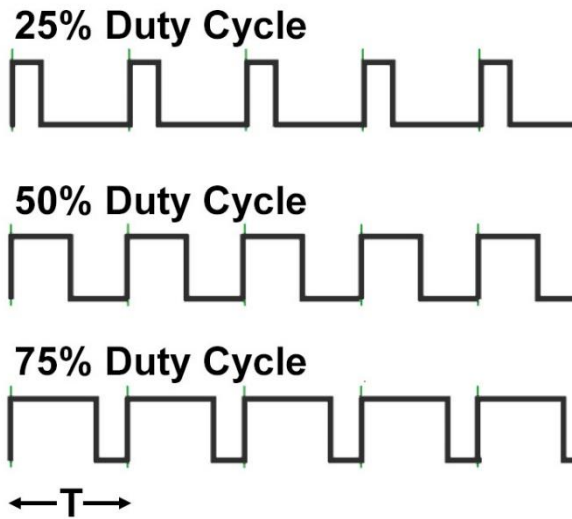


### SAFETY INFORMATION:

The inverter module should be handled with caution. NEVER touch the bare input or output wires when connected to power.

## PWM INFORMATION

Pulse-Width Modulation (PWM) is a method of reducing the average power delivered by an electrical signal, chopping it up into discrete parts. The average value of voltage is fed to the load and is controlled by turning on the switch between supply and load on/off at a fast rate. The PWM cycle can be adjusted between 100-1000Hz. The PWM frequency on this inverter can be adjusted through the + (Power) pin.



## FAQ

- Do all Electroluminescent Devices Need An Inverter?**  
 Yes. All Electroluminescent material requires a specific voltage and frequency to operate. This typically uses a low voltage DC Input and raises the output voltage and frequency to somewhere around 100V @ 1kHz. The specific voltage and frequency excites the phosphor particles that are on an EL Panel or surround EL Wire which creates the glow.
- How Can I Get Electroluminescent Material Brighter?**  
 Electroluminescent material does have a brightness threshold which is limited by the Electroluminescent phosphors used. This brightness is usually measured in candela per meter, and typically reaches its maximum brightness around 100-150cd/m. If you are looking for a brighter illuminated wire, we recommend checking out Laser Wire® brand cable. It has a virtually unlimited brightness but typically ranges in brightness from 500-1500cd/m.

For questions or concerns on this inverter, please contact Ellumiglow for further information.