

# MICRO-DR 96W

## Dimmable 24VDC Power Supply

The MICRO-DR LED transformer series are class 2 rated and designed to operate with any standard ELV, MLV, & Incandescent TRIAC (Leading edge) dimmer switch and is forward phase and reverse phase compatible.

- 12V DC or 24VDC constant voltage hardwire transformer
- Dimmable with standard TRIAC, MLV, and ELV dimmers
- Forward phase and reverse phase compatible
- Short circuit and over-loadprotections
- Micro aluminum housing design (only 0.89" tall)
- PWM Output with 20-100% load operation
- Free air convection cooling
- Class 2, Type HL, FCC compliant, cULus Listed, Damp location rated



### MICRO-DR - 96W QUICK SPECS

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| SERIES          | MICRO-DR-96                                         |
| INPUT VOLTAGE   | 120VAC, 47-63Hz                                     |
| INPUT CURRENT   | 0.92A@100V                                          |
| OUTPUT VOLTAGE  | 24VDC                                               |
| RATED CURRENT   | 4A                                                  |
| LEAKAGE CURRENT | <0.5mA@120VAC                                       |
| POWER FACTOR    | 0.98@120VAC - Built-in Active PFC                   |
| MIN LOAD        | 19.2W                                               |
| MAX LOAD        | 96W                                                 |
| EFFICIENCY      | > 86%                                               |
| DIMENSIONS      | 2.83" (72mm) L x 1.53" (39mm) W x 0.89" (22.5mm) H  |
| DIMMING         | 0-100% Phase Dimming / MLV / ELV / TRIAC            |
| STORAGE TEMP    | -40°F to 194°F (-40°C to 90°C)                      |
| AMBIENT TEMP    | -40°F to 140°F (-40°C to 60°C)                      |
| OPERATING TEMP  | -40°F to 140°F (-40°C to 60°C) — See Derating Curve |
| RATING          | cULus Listed for Damp locations                     |

### MICRO-DR - 96W ORDERING INFORMATION

|                |                                    |
|----------------|------------------------------------|
| ITEM NUMBER    | DESCRIPTION                        |
| MICRO-DR-96-24 | MICRO-DR 24V DC - 96W Power Supply |

PROJECT:

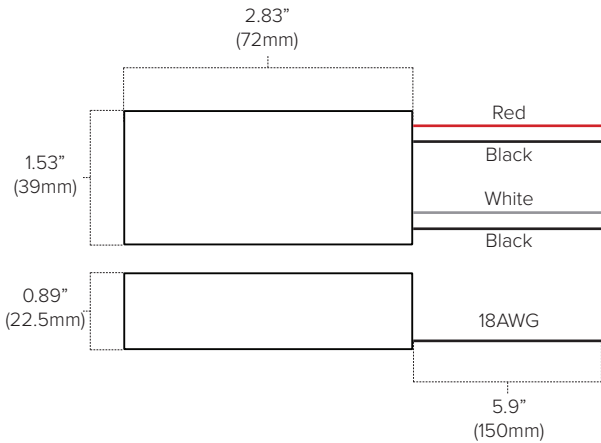
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LOCATION:

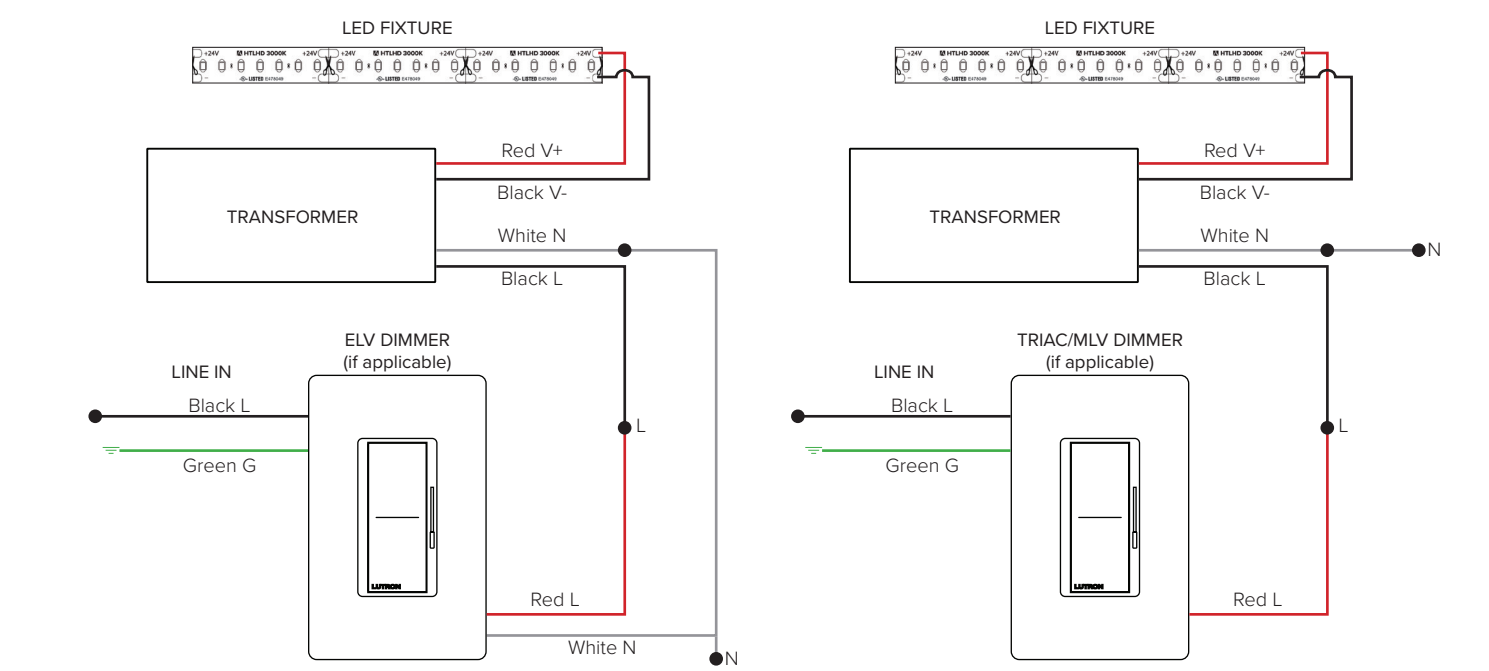
CATALOG NUMBER:



### MICRO-DR - 96W QUICK DIMENSIONS



MICRO-DR - 96W TRIAC/ELV/MLV DIMMING WIRING DIAGRAM



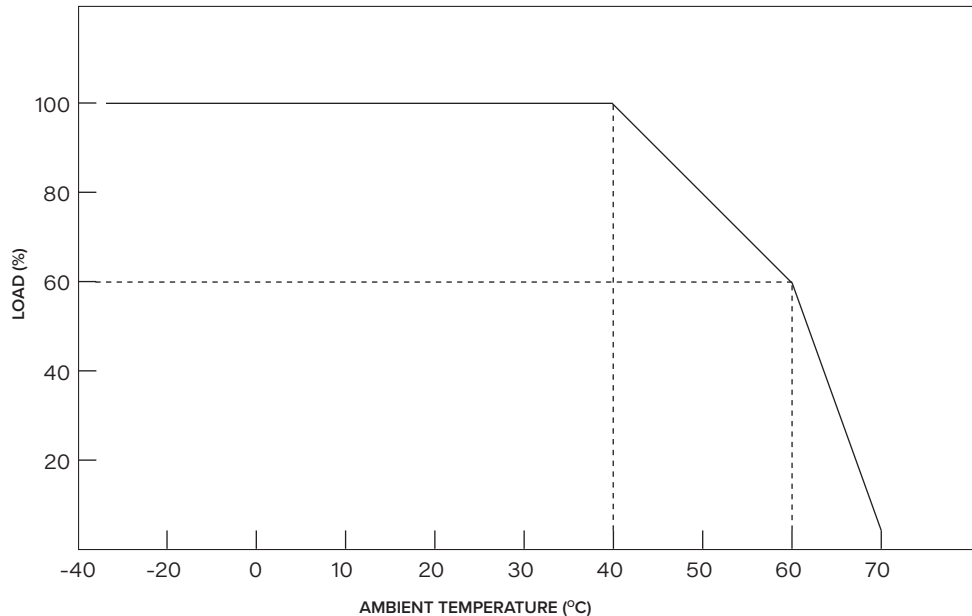
LOAD

|             |                                 |
|-------------|---------------------------------|
| 0-100% LOAD | UP TO 40°C (104°F)              |
| 80% LOAD    | UP TO 50°C (122°F)              |
| 60% LOAD    | UP TO 60°C (140°F)              |
| 0% LOAD     | STORAGE ONLY UP TO 90°C (194°F) |

ENVIRONMENT

|                              |                                         |
|------------------------------|-----------------------------------------|
| SERIES                       | MICRO-DR-96                             |
| WORKING TEMPERATURE          | -40°C~+60°C. (See Derating Curve below) |
| WORKING HUMIDITY             | 20~90%RH, Non-condensing                |
| STORAGE TEMPERATURE HUMIDITY | -40°C~+90°C, 10~95%RH                   |

TEMPERATURE DERATING CURVE (AMBIENT TEMPERATURE)



# RECOMMENDED DERATING FOR TAPE LIGHT TYPES

| Tape Family   | Watts Per Foot | Rated Max Run | Recommended Derating | "Max Run After Derating Using 96W Micro-DR" |         |
|---------------|----------------|---------------|----------------------|---------------------------------------------|---------|
|               |                |               |                      | Length/Feet                                 | Wattage |
| STMR          | 1.47           | 65.6          | Max 70% load         | 45.71                                       | 67.2    |
| STL           | 2.19           | 32.8          | Max 70% load         | 30.68                                       | 67.2    |
| STL-COB       | 2.19           | 16.4          | Max 40%–45% load     | 16.40                                       | 35.916  |
| STL-COB-3018  | 2.19           | 33            | No Derating Required | 33.00                                       | 72.27   |
| STLHD         | 2.19           | 32.8          | Max 60% load         | 26.30                                       | 57.6    |
| MIN4X10-3018  | 2.4            | 16.4          | No Derating Required | 16.40                                       | 39.36   |
| MIN4X6        | 2.4            | 16.4          | Max 70% load         | 16.40                                       | 39.36   |
| MIN6X6        | 2.4            | 16.4          | Max 70% load         | 16.40                                       | 39.36   |
| TL4MM-COB     | 2.43           | 16.4          | Max 40%–45% load     | 15.80                                       | 38.4    |
| HTL-TW        | 2.9            | 32.8          | Max 70% load         | 23.17                                       | 67.2    |
| HTL-COBFC     | 3              | 16.4          | Max 70% load         | 16.40                                       | 49.2    |
| HTMR-COB      | 3              | 32.8          | Max 40%–45% load     | 12.80                                       | 38.4    |
| STLWD-3018    | 3              | 20            | Max 40%–45% load     | 12.80                                       | 38.4    |
| HTLHD         | 3.65           | 27            | Max 60% load         | 15.78                                       | 57.6    |
| HTLWD-3018    | 4              | 20            | Max 40%–45% load     | 9.60                                        | 38.4    |
| HTL-COB-3018  | 4.4            | 16.4          | No Derating Required | 21.82                                       | 96      |
| HTL-RGBW      | 4.4            | 22            | Max 70% load         | 15.27                                       | 67.2    |
| MLUX          | 4.4            | 16.4          | No Derating Required | 16.40                                       | 72.16   |
| HTL-COB       | 4.5            | 16.4          | Max 40%–45% load     | 8.53                                        | 38.4    |
| HTL-COB-RGBTW | 4.5            | 16            | Max 40%–45% load     | 8.53                                        | 38.4    |
| HTL-COB-RGBW  | 4.5            | 16.4          | No Derating Required | 16.40                                       | 73.8    |
| HTL-COB-TW    | 4.5            | 16.4          | No Derating Required | 16.40                                       | 73.8    |
| HTL           | 4.6            | 22            | Max 70% load         | 14.61                                       | 67.2    |
| SFLEX         | 5.8            | 33            | No Derating Required | 16.55                                       | 96      |
| SPTLECO       | 5.8            | 16.4          | Max 40%–45% load     | 6.62                                        | 38.4    |
| SPTL-SCOB     | 5.8            | 16.4          | Max 40%–45% load     | 6.62                                        | 38.4    |
| HTL-TWR       | 5.9            | 16.4          | Max 70% load         | 11.39                                       | 67.2    |
| SPTL-RGBTW    | 7              | 13.1          | Max 70% load         | 9.60                                        | 67.2    |
| SPTL-RGBTWR   | 7              | 13.1          | Max 70% load         | 9.60                                        | 67.2    |
| SPTL-RGBW     | 7              | 16.4          | Max 70% load         | 9.60                                        | 67.2    |
| SPTL-TW       | 7              | 13.1          | Max 70% load         | 9.60                                        | 67.2    |
| SPTLX         | 7              | 13.1          | Max 70% load         | 9.60                                        | 67.2    |
| VTL           | 7              | 13.1          | Max 40%–45% load     | 5.49                                        | 38.4    |
| SPTL          | 7.8            | 13.1          | Max 70% load         | 8.62                                        | 67.2    |



## AMERICAN LIGHTING WARRANTY

LIMITED WARRANTY FOR LED PRODUCTS: 2 YEARS

### AVERAGE LIFE

Average incandescent lamp life, rated life and average life are terms used to describe the number of hours at which half of the lamps have failed. For LEDs, the hours of rated life specify the point at which 70% of original lumen output is reached. Below this point, the effective life is over, however, the LED may still emit light. Individual results may vary with actual environmental conditions including, but not limited to, proper installation, ambient temperature and/or input voltage fluctuations.

**Warranty life based on average 8 hours/day use, 7 days/week. Product should be cycled off for at least 6 hours per day.**

### SAFETY

You must disconnect lighting products from the power supply before servicing or replacing bulbs. Only qualified personnel should install and perform service on lighting products. Periodic inspection and maintenance is required to keep equipment operating properly and at peak performance. Do not mount fixtures on or adjacent to combustible materials.

**Lighting products may present a possible shock or fire hazard if improperly installed or attached in any way. Products should always be installed in accordance with their instruction manuals, current electrical codes, and/or the current National Electric Code (NEC). Code compliance is the sole responsibility of the person, company, or party performing the installation of product. Failure to comply with national and/or regional safety codes may result in hazardous or dangerous conditions, damage to property or life, and/or altered product performance/specifications.**

### LIMITED PRODUCT WARRANTY

Our products are warranted to be free from defects in material and workmanship for the warranty period listed on the reverse by product category. Warranty periods begin from the date of shipment from American Lighting Inc's warehouse to the original purchaser. Products that prove to be defective during their specific warranty period will be either repaired or replaced, at the sole discretion of American Lighting Inc. Claims for defective products must be submitted in writing to American Lighting Inc's RGA Department within the warranty period. Upon approval of such return, American Lighting Inc reserves the right to inspect the product for misuse or abuse. Claims for indirect or consequential damages or for any product that, in American Lighting Inc's opinion, has been misused will be denied. This is a warranty of product reliability only and not a warranty of merchantability or fitness for a particular purpose. American Lighting Inc shall have no liability whatsoever in any event for payment of incidental or consequential damages, including, without limitations, installation costs and/or damages for personal injury and/or property. These products may represent a possible shock or fire hazard if improperly installed or altered in any way. This warranty does not apply to any product that has not been properly installed in accordance with current local codes and/or the National Electrical Code. Products that require a transformer, driver or power supply must be used in conjunction with American Lighting Inc's recommended power supply to ensure safety and retain product warranty. Limited Product Warranty applies to lengths up to 75 feet for rope light products.

### STANDARD LINEAR WARRANTY

Rope light and linear lighting products in all their various types and shapes, whether LED or incandescent, are wired in series parallel. This means that several individual lamps or LEDs are wired together in series to equal 12V, 24V or 120V. Then these sections are wired together (in parallel) to light up in unison. If one solder joint, lamp or resistor fails, a whole section will not light. Due to the number of elements involved, and the numerous extenuating circumstances beyond our control, American Lighting Inc offers a Standard Linear Warranty on most linear lighting products. The limited liability warranty is listed above, however the Standard Linear Warranty offers replacement product by section due to defective material and/or workmanship for one year beginning from the date of shipment from American Lighting Inc's warehouse to the original purchaser.

### USE OF LINEAR LIGHTING IN OUTDOOR APPLICATIONS

Incandescent rope light and LED Flexbrite UL 2388 custom cuts; incandescent and LED Flexbrite pre-packaged kits; and UL Listed (special order) cuts of LED Neon Flexbrite Plus and Economy have factory assembled power connections and end caps that seal the rope from moisture. Due to strict quality control standards, American Lighting is able to offer a limited warranty on these items rather than the standard linear lighting warranty that replaces product by defective section only. For outdoor applications, best practices include using kits interconnected (same length kits are best for color control of White LED Flexbrite) or using custom cuts that do not exceed 75 feet.

For all linear lighting categories, any non-rated field connection made in an outdoor application should be properly sealed with dielectric grease covering all conductive materials; and properly installed power connections and end caps, sealed with dielectric grease, silicone, and heat shrink tube. However, since non-rated (field executed) power connections of linear lighting products cannot be quality controlled, and outdoor use of non-rated product is not recommended, American Lighting cannot warrant the product to any purchaser.

### PRODUCT SPECIFICATIONS

For the latest product information, updates, instructions and details concerning specifications, colors, finishes, performance, installation and design, visit [www.americanlighting.com](http://www.americanlighting.com). Color may vary from the color printed herein due to limitations in photographic and printing processes. American Lighting Inc. reserves the right to change product specifications without notice. Other product specifications such as color temperature, wavelength characteristics and lumen output are subject to production limitations and may vary.

LED technology is changing rapidly, and not all color temperatures and performance levels can be duplicated at a later time. Best practices include purchasing 10-15% additional product for a project on the same initial order where white LED color temperatures must be maintained over project and product life. Eventual product replacement should be considered at layout and design stages. Best practices also include testing connections and product performance prior to mounting and/or installing.