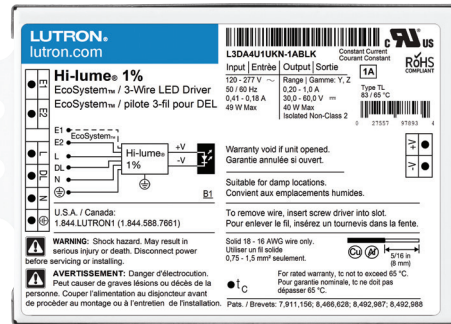


Hi-lume 1% EcoSystem/3-Wire L3D Driver Overview

Hi-lume 1% EcoSystem/3-Wire Driver is a high-performance LED driver that provides smooth, continuous 1% dimming for virtually any LED fixture, whether it requires constant-current or constant-voltage. It is the most versatile LED driver offered today due to its compatibility with a wide variety of LED arrays, multiple form factors, and numerous control options.

Features

- Continuous, flicker-free dimming from 100% to 1%.
- Compatible with Energi Savr Node unit with EcoSystem, GRAFIK Eye QS control unit, PowPak dimming module with EcoSystem, and Quantum systems, allowing for integration into a planned or existing EcoSystem lighting control solution. Please see **Compatible Controls** chart or contact Lutron for details regarding compatible controls.
- Standard 3-wire, line-voltage phase-control technology for consistent dimming performance and compatibility with all Lutron 3-wire fluorescent controls.
- QwikFig compatible. For more information please refer to Lutron P/N 367-2533 (K and M case only).
- Line voltage miswire protection on EcoSystem control inputs.
- 100% performance tested at factory.
- A rated lifetime of 50,000 hours @:
 - $t_c = 149^\circ\text{F}$ (65°C) for 40 W drivers
 - $t_c = 158^\circ\text{F}$ (70°C) for 50 W drivers
- UL recognized and listed options for United States and Canada.
- NOM certified option for Mexico.
- Type TL Rated.
- FCC Part 15 Class A
- Pulse Width Modulation (PWM) or Constant-Current Reduction (CCR) dimming methods available. See Application Note #360 for details.
- RoHS Compliant.
- For more information please go to: www.lutron.com/hilume1led



Case type K

3.00 in (76 mm) W x 1.00 in (25 mm) H x 4.90 in (124 mm) L



Case type M

1.18 in (30 mm) W x 1.00 in (25 mm) H x 14.25 in (362 mm) L



Case type KL

K-case mounted on a 4.00 in (102 mm) W x 1.50 in (38 mm) H x 4.00 in (102 mm) L junction box to provide wiring compartment

The Hi-lume 1% EcoSystem/3-Wire family of drivers includes models which operate at a maximum power of 40 W or less as well as models which can operate up to 50 W.

- 40 W or less models – output ranges A-M and X-Z
 - 50 W models – output ranges N and W (K-case only)
- For a description of the output ranges please see following pages.

Job Name:	Model Numbers:		
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Job Number:	<input type="text"/>	<input type="text"/>	<input type="text"/>

Specifications

Regulatory Approvals

- Meets ANSI C62.41 category A surge protection standards up to and including 4 kV.
- FCC Part 15 Class A
- CAN ICES-005(A)
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20.
- Lutron Quality Systems registered to ISO 9001.2008.
- UL 8750 recognized.
- UL recognized models are also UL classified to 1598C for field replacement capability
- UL 8750 listed form factor available.
- Class 2 output available.
- Type TL Rated.
- L3DA4U1UKL-AV120 and L3DA4U1UKL-CV240 models are NOM certified and available for Mexico.

UL 8750 Listed Option

- cULus for United States and Canada available for certain operating regions.
- Pre-wired and installation ready.
- See **KL Enclosure** page for more specific details regarding UL listed option.
- UL 8750 Listed construction.
- Integral junction box to save time.
- For maximum driver-to-LED light engine wire length, see **Driver Leads** section near the end of this document.

Environmental

- Sound Rating: Inaudible in 27 dB ambient.
- Relative Humidity: Maximum 90% non-condensing.
- Minimum operating ambient temperature $t_a = 32\text{ }^\circ\text{F}$ ($0\text{ }^\circ\text{C}$).

Performance

- Dimming Range: 100% to 1%.
- Operating Voltage: 120 V \sim /277 V \sim at 50/60 Hz.
- Lifetime: 50,000 hours @:
 - $t_c = 149\text{ }^\circ\text{F}$ ($65\text{ }^\circ\text{C}$)¹ for 40 W drivers.
 - $t_c = 158\text{ }^\circ\text{F}$ ($70\text{ }^\circ\text{C}$)¹ for 50 W drivers.
 - For rated warranty, t_c not to exceed 149 °F (65 °C) for 40 W drivers and 158 °F (70 °C) for 50 W drivers (maximum rated temperatures).¹
- Patented thermal foldback protection.
- LEDs turn on to any dimmed level without going to full brightness.
- Non-volatile memory restores all driver settings after power failure.
- Power Factor: >0.90 for loads greater than 25 W
- Standby Power Consumption: <1.0 W
- Total Harmonic Distortion (THD): <20% for loads greater than 25 W.
- Inrush Current: <2 A.
- Inrush Current Limiting Circuitry: eliminates circuit breaker tripping, switch arcing and relay failure.
- Open circuit protected.
- Short circuit protected.
- Turn-on time: ≤ 1.5 seconds.²
- PWM Dimming Frequency: 550 Hz.

Driver Wiring and Mounting

- Driver is grounded by a mounting screw to the grounded fixture (or by terminal connection on the K-case).
- Terminal blocks on the driver accept one solid wire per terminal from 18 AWG to 16 AWG (0.75 mm^2 to 1.5 mm^2).
- Fixture must be grounded in accordance with local and national electrical codes.
- For maximum driver to LED light engine wire lengths see **Driver Leads** section at end of document.

¹ Installer is responsible for ensuring that the driver case temperature does not exceed the maximum rated temperature.

² Models available with turn-on time ≤ 1 second.

Job Name:	Model Numbers:	
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Job Number:	<input type="text"/>	<input type="text"/>

How to Build a Model Number: Hi-lume 1% EcoSystem/3-Wire

L3DA U1U -

Maximum Power:
 4 = 40 W maximum
 5 = 50 W maximum (K-case only)

Example: L3DA4U1UKS-HC070
 For further assistance selecting your model number, contact our LED Center of Excellence at 1.877.346.5338 or LEDs@lutron.com

Current Level (for Constant-Current):
 020 = 0.20 A; 021 = 0.21 A . . . 070 = 0.70 A . . . 210 = 2.10 A

Voltage Level (for Constant-Voltage):
 100 = 10.0 V; 105 = 10.5 V . . . 600 = 60.0 V

Case Size:
 K = Compact
 M = Stick

Case Style:
 S = Studded (K case only)
 N = Non-Studded
 L = UL Listed (K case only)

Driver Output:
 C = Constant-current driver with pulse width modulation (PWM) dimming
 A = Constant-current driver with constant-current reduction (CCR) dimming
 V = Constant-voltage driver with pulse width modulation (PWM) dimming

LED Load Output Range (see the following pages for more detail):

<p>40 W Drivers</p> <p><u>Class 2 Constant-Voltage</u></p> <p>A = 10.0 V–12.0 V*</p> <p>B = 12.5 V–20.0 V**</p> <p>C = 20.5 V–24.0 V**</p> <p>D = 24.5 V–38.0 V**</p> <p><u>Isolated Non-Class 2 Constant-Voltage</u></p> <p>X = 38.5 V–60.0 V**</p>	<p><u>Class 2 Constant-Current</u></p> <p>E = 0.20 A–0.50 A 30 V–54 V</p> <p>F = 0.51 A–1.00 A 30 V–54 V**</p> <p>G = 0.20 A–0.70 A 8 V–20 V</p> <p>H = 0.20 A–0.70 A 15 V–38 V</p> <p>I = 0.71 A–1.05 A 8 V–20 V</p> <p>J = 0.71 A–1.05 A 15 V–38 V</p> <p>K = 1.06 A–1.50 A 8 V–20 V</p> <p>L = 1.06 A–1.50 A 15 V–38 V**</p> <p>M = 1.51 A–2.10 A 8 V–19.9 V**</p> <p><u>Isolated Non-Class 2 Constant-Current</u></p> <p>Y = 0.20 A–0.50 A 30 V–60 V</p> <p>Z = 0.51 A–1.00 A 30 V–60 V**</p>	<p>50 W Drivers</p> <p><u>Class 2 Constant-Current</u></p> <p>N = 0.71 A–1.05 A 35 V–54 V**</p> <p><u>Isolated Non-Class 2 Constant-Current</u></p> <p>W = 0.71 A–1.05 A 35 V–60 V**</p>
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* 3.33 A maximum.
 ** Output parameter is power-limited for these output ranges. Consult detailed specifications on the following pages for each range.

Job Name:	Model Numbers:	
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Job Number:	<input type="text"/>	<input type="text"/>