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EcoSystem™ 5-Series LED Driver (220 - 240 V~, CE)

EcoSystem™ 5-Series LED Drivers provide a high performance solution for any space in any application, while providing smooth, continuous dimming down to 5% of output current.

EcoSystem™ LED Driver, case type M

30 mm W x 25 mm H x 359 mm L

Features

- Continuous, flicker-free dimming from 100% to 5%[1]
- Guaranteed dimming performance when used with Lutron® controls
- Compatible with Energi Savr Node™ EcoSystem® and ESN DALI units, GRAFIK Eye® QS control unit with EcoSystem®, GRAFIK Eye® QS control unit with DALI, PowPak® dimming module with EcoSystem®, Quantum® systems and HomeWorks® QS systems, allowing for integration into a planned or existing EcoSystem® lighting control solution
- Protected from miswires of input power to EcoSystem™ control inputs
- Meets IEC 61347-2-13
- SELV output
- A rated lifetime of 50 000 hours
- 100% performance tested at factory
- RoHS compliant
- Non-volatile memory restores all settings after power failure (EcoSystem™ control only)
- Constant-current reduction dimming
- For more information please go to: www.lutron.com/5SeriesLED

[1] Light output at 5% depends on the efficacy of the light engine used with the driver.

Job Name:	Model Numbers:	
Job Number:		

Specifications

Performance

- Dimming Range: 100% to 5%[1]
- Dimming method: constant-current reduction

  Refer to Lutron® application note #360 for details
- Operating Voltage: 220 V~ to 240 V~ at 50/60 Hz
- Lifetime: 50 000 hours
- Patented thermal foldback protection
- LED lighting turns on to any dimmed level without flashing to full brightness
- Non-volatile memory restores all driver settings after power failure (EcoSystem™ control only)
- Power Factor: $\lambda > 0.95$ at maximum power
- Typical standby power consumption: 0.3 W
- Meets Harmonics requirements for IEC-6000-3-2
- Output open circuit protected
- Output short circuit and overload protected
- Turn-on time: < 100 ms typical from electronic off

Environmental

- Sound rated: inaudible in 24 dB ambient
- Relative Humidity: maximum 90% non-condensing
- Operation Range: t_a = 0 to 50 °C (Where t_a is the temperature of the air directly surrounding the driver.)

Regulatory Approvals and Compliance

- CE compliant and ENEC certified:
  - Safety: IEC/EN 61347-2-13
  - Emissions: CISPR15/EN55015, IEC 61000-3-2, 3-3
  - Immunity: IEC/EN 61547, IEC/EN 61000-4-2, -4-3, -4-4, -4-6, -4-11
  - Performance: IEC/EN 62384
- RoHS 2006 Compliant
- Meets IEC 60529, IP20 Rating
- DALI® Compliant
  - Meets the following:
    - IEC62386-207 ed. 1.0
    - IEC62386-101 ed. 1.0
    - IEC62386-102 ed. 1.0
- Lutron® Quality Systems registered to ISO 9001.2008
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20.

[1] Light output at 5% depends on the efficacy of the light engine used with the driver.

Job Name:	Model Numbers:	
Job Number:		

Driver Wiring & Mounting

- Driver must be grounded by a mounting screw to the grounded fixture.

  Note: Ground termination not provided on driver. Terminate ground in compliance with local electric codes.
- Fixture must be grounded in accordance with local and national electrical codes.
- Terminal blocks on the driver accept one solid wire per terminal from 0.75 to 1.5 mm^2 (18 to 16 AWG).
- Maximum driver–to–LED light engine wire length

	Maximum Lead Length
Wire Gauge	**700 mA to 1.33 A**
0.75 mm^2 (18 AWG)	4.5 m
1.5 mm^2 (16 AWG)	7.5 m
2.5 mm^2 (14 AWG)	12 m
4.0 mm^2 (12 AWG)	18 m

OEM Notes

- For best dimming performance, Lutron® recommends electrical insulation with 50/60 Hz impedance of at least 12 MΩ and minimum breakdown voltage of at least 1 500 V~ between LEDs and fixture chassis.

- Maximum number of drivers on miniature circuit breaker:
  – 16 A Type B: 14 drivers
  – 16 A Type C: 24 drivers

How to Build a Model Number: EcoSystem™ 5-Series

LDE55E1CMN - UA xxx

example: LDE55E1CMN-UA070
For further assistance selecting your model number, contact our LED Center of Excellence at LEDs@lutron.com

Current Level (for Constant Current):
070 = 0.70 A; 071 = 0.71 A . . . 133 = 1.33 A

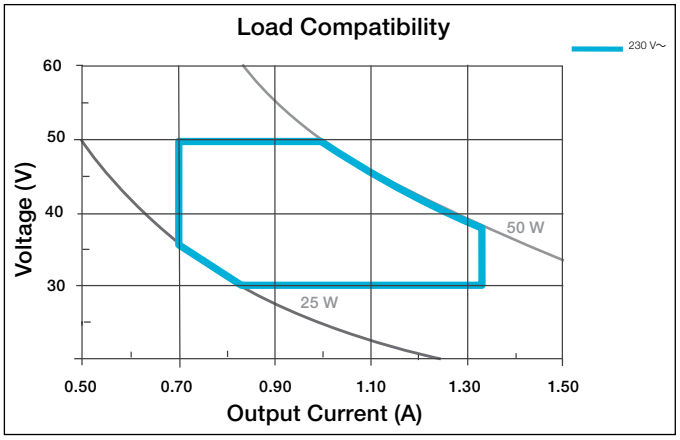
Job Name:	Model Numbers:	
Job Number:		

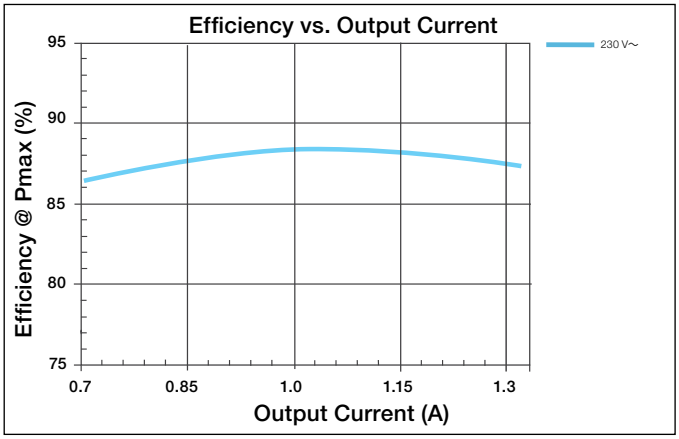
"U" Output Range

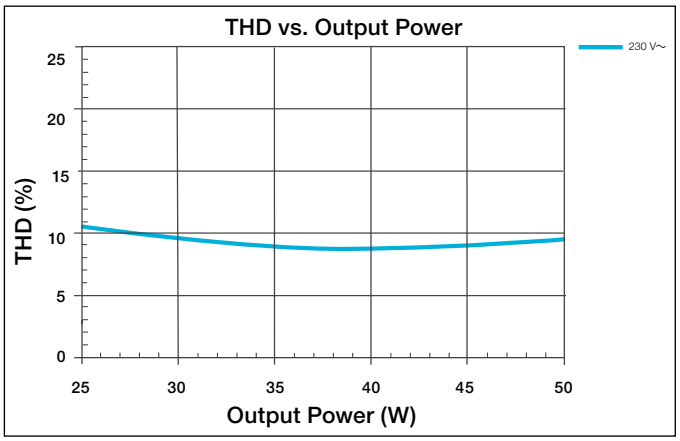
Driver Type	Output Dimming Method	Output Voltage	Output Current	Output Power	Standards Recognition
Constant Current Driver (SELV)	Constant Current Reduction (CCR)	30 – 50 V⎓	0.70 – 1.33 A	25 – 50 W	Meets IEC 61347-2-13

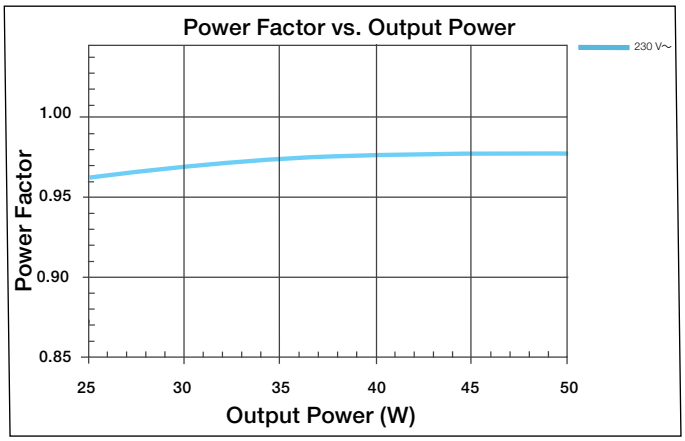
Typical Performance Specifications:

Parameter	Value	Test Conditions
Input Current	0.27 A	V_i = 230 V, t_a = 25 °C, I_o = 1.0 A, V_o = 50 V, Max. Light Output
Power Factor	0.98	
THD	13%	
Driver Efficiency	86%	



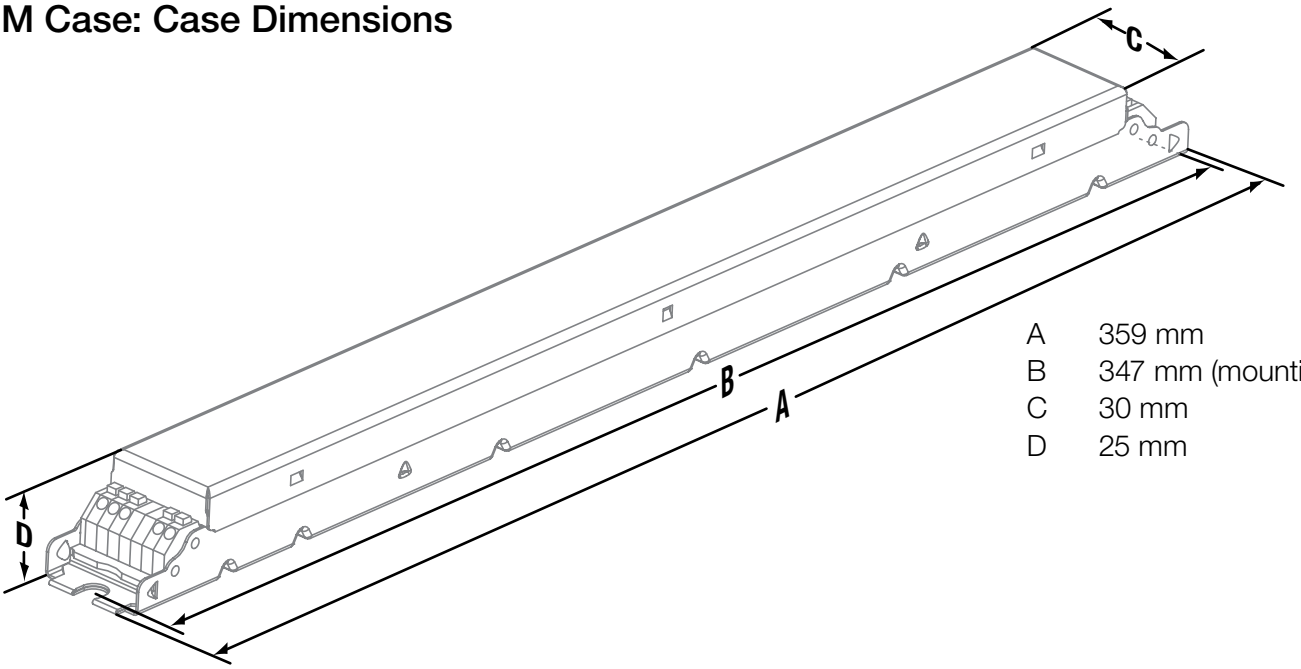






Job Name:	Model Numbers:	
Job Number:		

M Case: Case Dimensions



A	359 mm
B	347 mm (mounting center)
C	30 mm
D	25 mm

Job Name:	Model Numbers:	
Job Number:		

EcoSystem™ LED Driver Wiring Diagrams

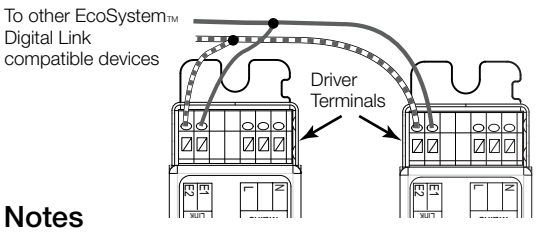
EcoSystem™ Digital Link Overview

- The EcoSystem™ Digital Link wiring (E1 and E2) connects the drivers together to form a lighting control system.
- For EcoSystem™ link limits, refer to EcoSystem™ control specifications.
- E1 and E2 (EcoSystem™ digital link wires) are polarity insensitive and can be wired in any topology.
- An Energi Savr Node™ unit with EcoSystem®, GRAFIK Eye® QS control unit with EcoSystem®, PowPak® dimming module with EcoSystem®, Quantum® system or HomeWorks® QS system provides power for the EcoSystem™ Digital Link and supports system programming.
- All EcoSystem™ Digital Link programming is completed by using the Energi Savr App for *Apple iPad, iPod Touch* or *iPhone* mobile digital devices, GRAFIK Eye® QS with EcoSystem®, PowPak® dimming module with EcoSystem®, Quantum® system or HomeWorks® QS system.

EcoSystem™ Digital Link Wiring

- Driver EcoSystem™ Digital Link terminals only accept one 0.75 mm^2 to 1.50 mm^2 (18 AWG to 16 AWG) solid copper wire per terminal.
- Make sure that the mains breaker to the driver and EcoSystem™ Digital Link Supply is OFF when wiring.
- Connect the two conductors to the two driver terminals E1 and E2 as shown.
- To avoid confusion and shorting the link when daisy chaining several drivers, the use of different color wires is recommended.
- Consult applicable electrical codes for proper wiring practices.

EcoSystem™ Digital Link Wiring



Notes

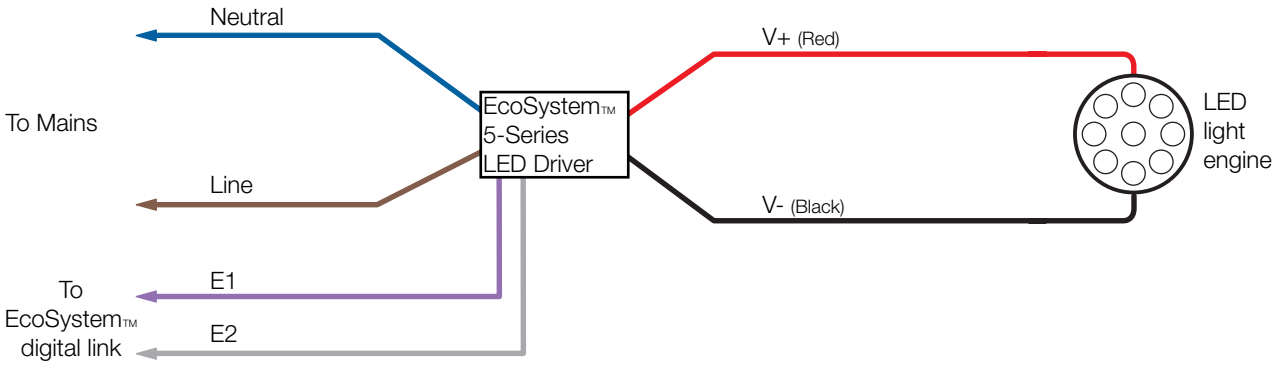
- The EcoSystem™ Digital Link Supply does not have to be located at the end of the Digital Link.
- EcoSystem™ Digital Link length is limited by the wire size used for E1 and E2 as follows:

Wire Size	Digital Link Length (maximum)
4.00 mm^2 (12 AWG)	800 m*
2.50 mm^2 (14 AWG)	500 m*
1.50 mm^2 (16 AWG)	300 m
1.00 mm^2	200 m
0.75 mm^2 (18 AWG)	150 m

* For DALI applications, the maximum permissible link length is 300 m

Job Name:	Model Numbers:	
Job Number:		

Wiring Diagram for EcoSystem™ Digital Control



ATTENTION ELECTRICIANS AND CONTRACTORS

Driver Leads

Lead lengths from driver to LED light engine must not exceed the values in the table.

Wire Size	Maximum Lead Length 700 mA to 1.33 A
0.75 mm² (18 AWG)	4.5 m
1.5 mm² (16 AWG)	7.5 m
2.5 mm² (14 AWG)	12 m
4.0 mm² (12 AWG)	18 m

Wiring

Drivers must be installed per national and local electrical codes.

Maximum Operating Temperature

Drivers must not exceed the rated calibration point temperature (t_C).

ATTENTION FACILITIES MANAGERS

SERVICE

Warranty

For warranty information, please see http://www.lutron.com/ballastdriverwarranty

Replacement Parts

Use replacement parts with exact Lutron® model numbers. Consult Lutron® if you have any questions.

Contact Information

For further information, please visit us at http://www.lutron.com/europe or contact Lutron® Technical Support at
+44.(0)20.7680.4481 (Europe)

Customer Service at

+44.(0)20.7702.0657 (Europe)
+1.610.282.3800 (USA Headquarters)

Please provide exact model number when calling.

Job Name:	Model Numbers:	
Job Number:		