



# Fluorescent dimming systems

Selection Guide



# Lutron® | fluorescent dimming systems



## Innovation and quality from the world leader in lighting controls

Lutron invented the world's first electronic dimming ballast over 30 years ago. Lutron continues to lead the industry with innovative and energy-saving fluorescent dimming options, offering an extensive selection of ballasts and controls, and providing complete fluorescent dimming solutions.

The EcoSystem® H-Series is a cost-effective, digitally addressable ballast designed to expand the market for energy-saving light controls. It combines superior 1% dimming performance with easy setup, and increased flexibility (see page 8 for more information).



# Table of contents

- 2 | Why dim fluorescent?
- 3 | Measured light vs. perceived light
- 4 | Fluorescent dimming applications
- 5 | Lutron® quality
- 6 | Lutron ballast control types
- 7 | EcoSystem® digital link
- 8 | EcoSystem H-Series
- 10 | Hi-lume® 3D
- 12 | Hi-lume
- 14 | Compact SE™
- 16 | Tu-Wire®
- 18 | EcoSystem
- 20 | Eco-10®
- 22 | Ballasts by lamp type
- 42 | Case types and dimensions
- 44 | Control options
- 46 | Control options by ballast type

## Worldwide sales and service

The Lutron Team is here to support you wherever and whenever you need us.

Technical Support:  
24 Hours/7 Days  
1.800.523.9466

Customer Service:  
8 am–8 pm ET  
1.888.LUTRON1

Internet Support:  
[www.lutron.com](http://www.lutron.com)

Lighting Control Institute:  
1.610.282.6280

Field Service:  
1.800.523.9466

## How to use this selection guide

The Fluorescent Dimming Systems Selection Guide helps you:

- Determine the dimming range required for your application
- Choose the appropriate Lutron dimming ballast
- Choose the appropriate Lutron fluorescent control



Please visit [www.lutron.com/ballasts](http://www.lutron.com/ballasts) for more information on fluorescent dimming ballast installation and wiring.

# Why dim fluorescent?

## Create the perfect ambiance

Dimming creates a rich, visual experience and adds flexibility to any room, providing the right lighting environment for a variety of activities.

## Save electricity and maintain lamp life

Dimming saves electricity and reduces the demand on HVAC systems. Dimming fluorescent lighting instead of repeated switching helps to maintain expected long lamp life.

## Give employees greater personal control

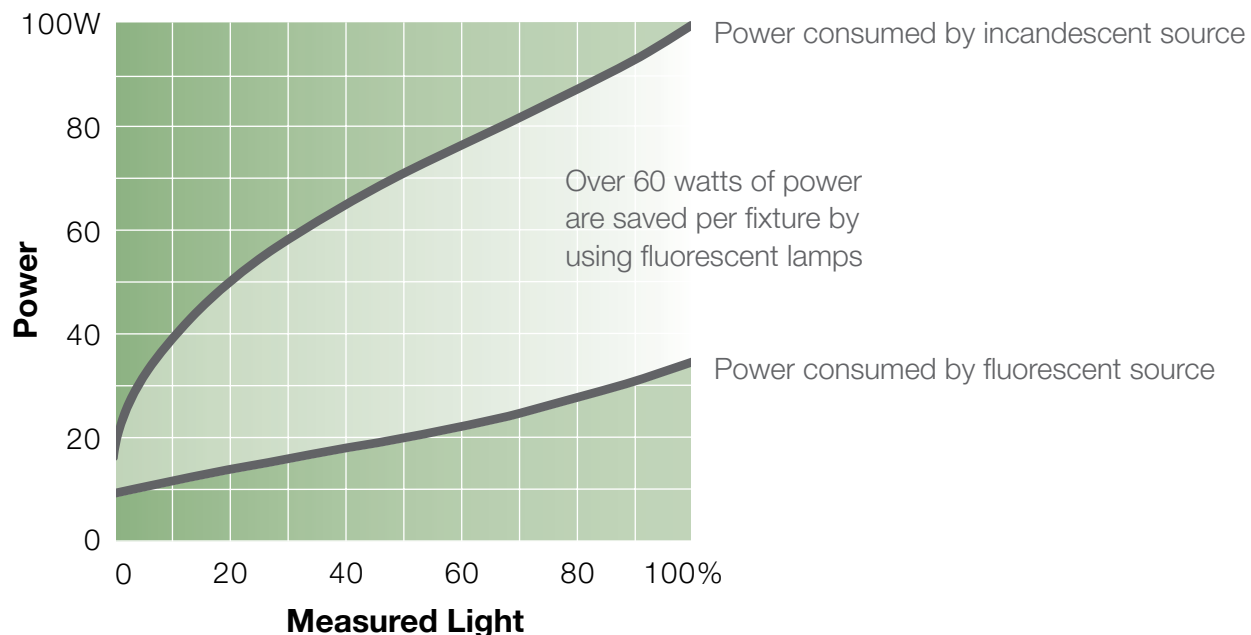
Allowing employees to set preferred light levels for specific tasks results in greater employee comfort and improved productivity.

## Combine lighting control strategies to enhance building performance

Using tuning (high-end trim), occupancy/vacancy sensors, daylight sensors and automated time-based controls with fluorescent dimming helps manage the lighting in an entire building and further reduce electric demand.

## Dimming fluorescent light saves energy

Fluorescent lighting uses much less power than incandescent lighting. In a typical installation, a 32 watt compact fluorescent lamp provides approximately the same light output as a 100 watt incandescent lamp. As both sources are dimmed, fluorescent lamps continue to be a more energy efficient light source.



# Measured light vs. perceived light

The human eye responds to low light levels by enlarging the pupil, allowing more light to enter the eye. This response results in a difference between measured and perceived light levels.

A lamp that is dimmed to 10% of its maximum measured light output is perceived as being dimmed to only 32%. Likewise, a lamp dimmed to 1% is perceived to be at 10%.

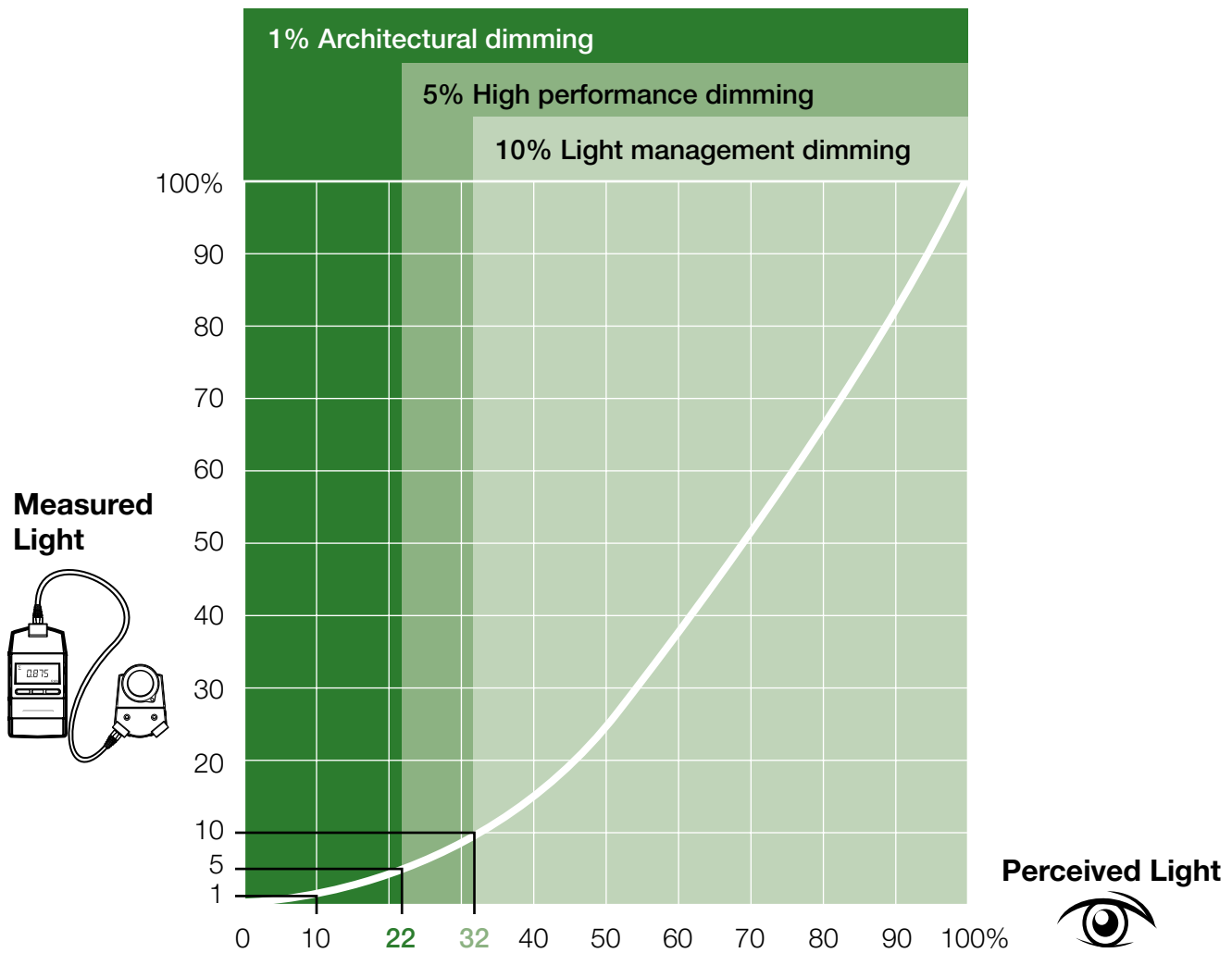
## Design example

At full brightness, the measured light in a space is 60 foot-candles. At the lowest dimmed level, 10% perceived light is desired.

**1% measured light (0.6 fcd) is perceived as 10% (desired result)**

**5% measured light (3 fcd) is perceived as 22% (2x brighter than desired)**

**10% measured light (6 fcd) is perceived as 32% (3x brighter than desired)**



# Fluorescent dimming applications

## 1% Architectural dimming (Highest performance)

- Conference rooms/boardrooms
- Lecture halls
- Patient/examination rooms and treatment areas
- Houses of worship
- Theaters
- Convention areas
- Restaurants
- Air traffic control centers
- Industrial control rooms
- Graphic art workstations
- CAD/CAM workstations
- Retail spaces
- Presentation spaces
- Critical task spaces
- Light management dimming

## 5% High performance dimming

- Small meeting rooms
- Lobbies
- Hotel guest rooms
- Light management dimming

## 10% Light management dimming

- Large open offices
- Private offices
- Corridors/stairwells
- Utility rooms
- Restrooms
- Customer service areas/call centers
- Classrooms

## Dimming by Lutron OEM program

Lutron offers on-site factory training to fixture manufacturers through the Dimming by Lutron OEM program. Additionally, the program allows fixture manufacturers to work with Lutron to grow sales, strengthen customer loyalty and satisfaction, and differentiate products.

dimming by



For more information on the Dimming by Lutron OEM Program, please contact your Lutron OEM account representative.



**NEW**

Updated Ballast Selection Tool with Custom Ballast Factor. Find the ballast that best fits your project.

# Lutron quality

## Superior components

Lutron ballasts are manufactured to the highest level of quality, using carefully selected components. Maximum ballast lifetime is achieved by using only long-life components with significant performance history. In many cases, Lutron works with component suppliers to design custom parts in order to improve overall ballast quality.

Additionally, Lutron uses only metal ballast enclosures, allowing for optimal heat transfer to the lighting fixture.

## 100% Test

Lutron tests the performance of every ballast prior to shipment. This important step eliminates ballasts that do not meet specifications.

## 100% Burn-in

Lutron “burns in” every ballast prior to shipment. Defects due to faulty components are screened out in this process, resulting in a dramatic reduction of early failures in the field.

## Extending ballast lifetime

All electronic ballasts use components with a finite lifetime. A major factor for ballast lifetime is operating temperature. For every 10°C reduction in ballast case temperature, the ballast lifetime will be doubled. Lutron dimming ballasts are designed to maximize ballast lifetime by operating at a lower temperature, either through design or fixture choice.

## Thermal Foldback

Lutron-patented Thermal Foldback technology is included in high-power ballasts, and actively monitors the ballast temperature.

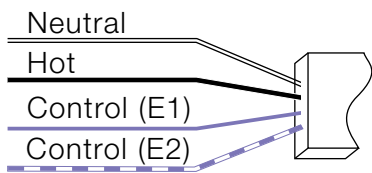
When necessary, power delivery to the lamps is automatically reduced, or “folded back”, to regulate ballast temperature, with minimal impact on light output. Thermal Foldback is designed to activate only if the ballast is operated in an environment that exceeds the ballast temperature rating. This technology prevents premature ballast failure due to overheating. In a properly designed application, Thermal Foldback will not activate.



Components in a Hi-lume® 1% dimming ballast for compact fluorescent lamps

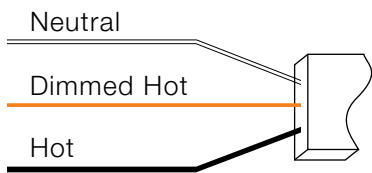
# Lutron ballast control types

In addition to offering ballasts with different low-end dimming levels, Lutron offers dimming ballasts with a variety of control options.



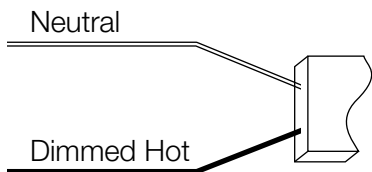
## **EcoSystem® digital link (EcoSystem H-Series, EcoSystem and Hi-lume® 3D)**

The EcoSystem digital link is a wired communication technology that facilitates individual ballast addressing, connection of multiple control devices, and control of ballasts individually or in groups. The digital communication wires are polarity insensitive and may be wired in any topology. They may be run with the line-voltage wiring (Class 1) or separately from the line-voltage wiring (Class 2). The EcoSystem digital link allows for the quick connection of devices and re-configurability.



## **3-wire (EcoSystem, Hi-lume, Hi-lume 3D, Compact SE™ and Eco-10®)**

3-wire control is a line-voltage phase-control dimming method. Along with Hot and Neutral, the dimming signal is communicated via a third wire called Dimmed Hot. All three wires are rated Class 1 and can be run within the same conduit. 3-wire control is stable over long wire runs, allows for maximum circuit loading, and is very easy to wire.



## **2-wire (Tu-Wire®)**

2-wire control is a line-voltage phase-control dimming method. The ballast receives the dimming signal through the Dimmed Hot wire. Intended for small-scale retrofit applications, the 2-wire control method is often the easiest way to implement dimming in existing fluorescent fixtures.



# EcoSystem® digital link

## A revolution in fluorescent lighting control

A breakthrough in fluorescent lighting control, EcoSystem control solutions start with a simple but essential building block—a digitally addressable dimming ballast—which replaces a non-dim ballast in a fixture. EcoSystem H-Series, EcoSystem and Hi-lume 3D are examples of digitally addressable ballasts.

## Digitally addressable solutions

### Simple to design

- Topology and polarity-free control wiring
- No interfaces required
- Flexible control options

### Easy to maintain

- Automatic reprogramming when components are replaced
- Re-configurability without rewiring power circuits

### Cost effective

- Costs less than other digital solutions available today
- Fewer parts and pieces to install

### Learn more about Lutron digitally addressable ballasts

For details on EcoSystem® H-Series, visit [www.lutron.com/hseries](http://www.lutron.com/hseries)

For details on EcoSystem, visit [www.lutron.com/ecosystem](http://www.lutron.com/ecosystem)

For details on Hi-lume® 3D, visit [www.lutron.com/3d](http://www.lutron.com/3d)



# EcoSystem® H-Series | dimming to 1%



## EcoSystem H-Series

EcoSystem H-Series digitally addressable ballasts offer a low-cost, flexible solution in any application. Providing industry-leading dimming to less than 1%, H-Series ballasts meet the needs of the most demanding applications. The EcoSystem digital link also provides individual control, which eliminates the need to rewire, reduces design time, and provides a scalable solution from a small area to an entire building.

## System compatibility:

H-Series ballasts are compatible with the PowPak™ dimming module with EcoSystem, Energi Savr Node™ with EcoSystem, GRAFIK Eye® QS and Quantum®, and allow integration into an existing/planned EcoSystem lighting control solution.



## Compatible lamp types:

- T8 linear
- T8 U-bent
- T5 linear
- T5 HO linear

[www.lutron.com/hseries](http://www.lutron.com/hseries)



Refer to the EcoSystem Design and Application Guide (P/N 367-1533) for more detailed information on the EcoSystem light control solution.



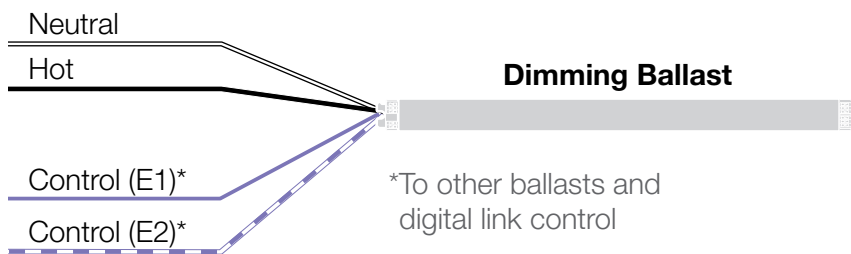
# EcoSystem® H-Series | highest performance

## Performance

- Continuous, flicker-free dimming down to 0.7% of full light output for T8 lamps, 1% for T5 lamps
- EcoSystem digital link control allows for re-zoning without rewiring
- Lamps turn on at any dimmed level without flashing to full brightness
- Miswire protection of EcoSystem digital link
- Slim-profile design
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

## Specifications

- Architectural dimming from 100% to 0.7% (T8) or 1.0% (T5) relative light output
- Universal input voltage (120V, 220/240V, 277V at 50/60Hz)
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 10%
- Power factor greater than .95
- Ballast factor equal to 1.0 or 1.17 for T8 lamps
- Ballast factor equal to 1.0 for T5 and T5 HO lamps
- Factory-tuned reduced ballast factor available ([www.lutron.com/ballasts/custom](http://www.lutron.com/ballasts/custom))
- Frequency of operation greater than 42 kHz
- Sound rating: Class A
- Built-in inrush current-limiting circuitry (maximum of 7 amps at 120V and 3 amps at 277V)
- Minimum lamp starting temperature 10°C (50°F)
- Maximum ballast case temperature 75°C (167°F)

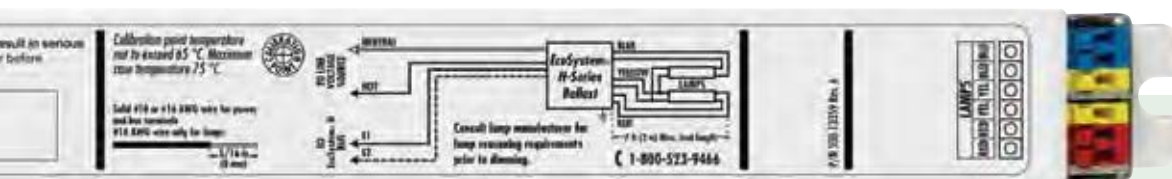


### EcoSystem H-Series offering

For the complete listing of EcoSystem H-Series ballasts, please see pages 22, 29, and 33.

### EcoSystem digital controls

For the full offering of Lutron controls for EcoSystem H-Series, please see page 49.



# Hi-lume<sup>®</sup> 3D | dimming to 1%



## Hi-lume 3D

Hi-lume 3D is a high-performance, energy-efficient, digitally addressable dimming ballast for demanding architectural applications. Hi-lume 3D is the world's first fluorescent dimming ballast that dims lights to 1% or less for T8 lamps. With Hi-lume 3D you get the highest performance fluorescent dimming with the same efficiency as non-dim ballasts.

## 3 Dimensions of innovation

**Performance:** broadest dimming range, 100% to 0.7% of full light output for T8 lamps.

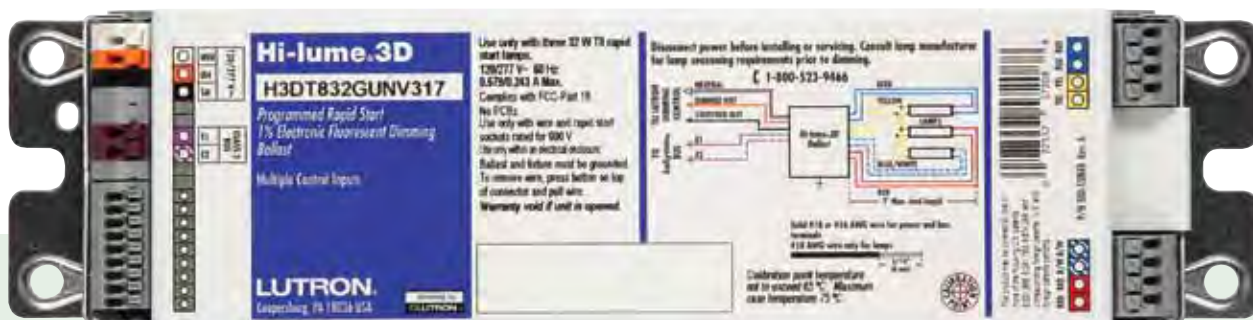
**Versatility:** compatible with a broad range of 3-wire controls and digital controls. Universal voltage input and small, 1" high profile to fit any fixture.

**Efficiency:** industry-leading ballast efficacy of up to 100 lumens per watt.

## Compatible lamp types:

- T8 linear
- T8 U-bent
- T5 linear
- T5 HO linear
- T5 twin-tube

[www.lutron.com/3d](http://www.lutron.com/3d)



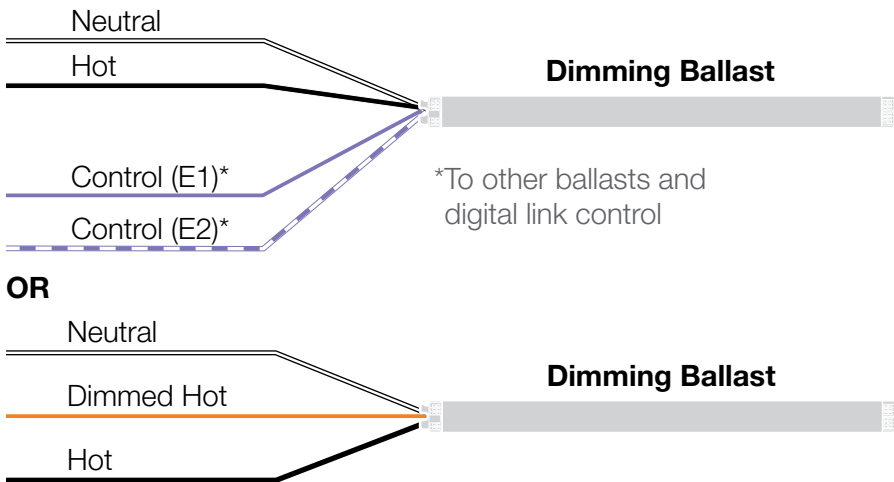
# Hi-lume® 3D | highest performance

## Performance

- Continuous, flicker-free dimming down to 0.7% of full light output for T8 lamps, 1% for T5 and T5 HO lamps, and 5% for T5 twin-tube
- EcoSystem® digital link control allows for re-zoning without rewiring
- 3-wire line-voltage control for consistent fixture-to-fixture dimming
- Lamps turn on at any dimmed level without flashing to full brightness
- Miswire protection of EcoSystem digital link
- Slim-profile design
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

## Specifications

- Architectural dimming from 100% to 0.7% (T8), 1.0% (T5), or 5% T5 twin-tube relative light output
- Universal input voltage (120V, 220/240V, 277 V at 50/60Hz)
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 10%
- Power factor greater than .95
- Ballast factor equal to 1.0 or 1.17 for T8 lamps
- Ballast factor equal to 1.0 for T5 lamps
- Factory-tuned reduced ballast factor available ([www.lutron.com/ballasts/custom](http://www.lutron.com/ballasts/custom))
- Frequency of operation greater than 42 kHz
- Sound rating: Class A
- Built-in inrush current-limiting circuitry (maximum of 7 amps at 120V and 3 amps at 277V)
- Minimum lamp starting temperature 10°C (50°F)
- Maximum ballast case temperature 75°C (167°F)



### Hi-lume 3D offering

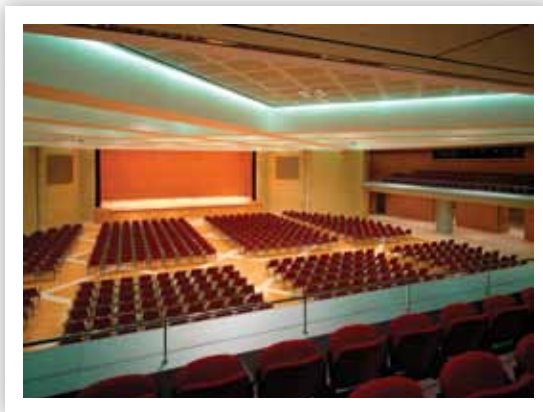
For the complete listing of Hi-lume 3D ballasts, please see pages 23, 24, 30, 33 and 36.

### Multi-input digital controls and 3-wire controls

For the full offering of Lutron controls for Hi-lume 3D, please see pages 46, 47, and 49.



# Hi-lume® | dimming to 1%



## Hi-lume

Experience the benefits of full-range, 100% to 1% fluorescent dimming. Designed to meet the most demanding lighting requirements, Hi-lume ballasts enable you to provide the ideal visual environment for any application.

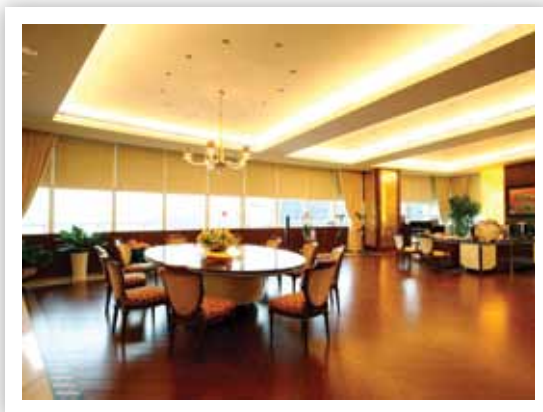
The Hi-lume family is extensive, featuring the world's only 100% to 1% dimming ballasts for T4 compact fluorescent lamps. Integrating Hi-lume 1% technology into your designs affords you full control over the lighting in any space.

For maximum flexibility, Lutron offers a full line of Hi-lume 3D ballasts that are compatible with 3-wire and digital controls.

## Compatible lamp types:

- T5 HO linear
- T4 triple-tube CFL

[www.lutron.com/hilume](http://www.lutron.com/hilume)



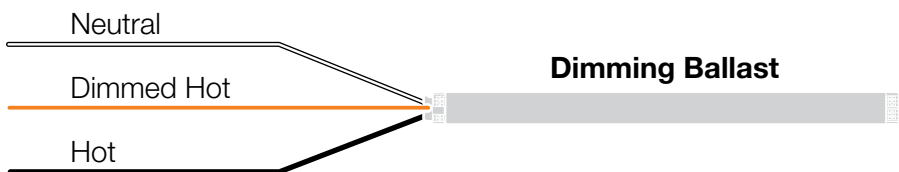
# Hi-lume® | highest performance

## Performance

- Continuous, flicker-free dimming from 100% to 1%
- Models available for T4 triple-tube CFL and T5-HO lamps
- 3-wire line-voltage control for consistent fixture-to-fixture dimming
- Lamps turn on at any dimmed level without flashing to full brightness
- Miswire protection
- Slim-profile design
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

## Specifications

- Architectural dimming from 100% to 1% relative light output
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 10%
- Power factor greater than .95
- Ballast factor equal to .95 for T4 lamps
- Ballast factor equal to 1.0 for T5-HO lamps
- Frequency of operation greater than 42kHz
- Inaudible in 27 dBA ambient environment
- Built-in inrush current-limiting circuitry (maximum of 7 amps at 120V and 3 amps at 277V)
- Minimum lamp starting temperature 10°C (50°F)
- Maximum ballast case temperature 75°C (167°F)

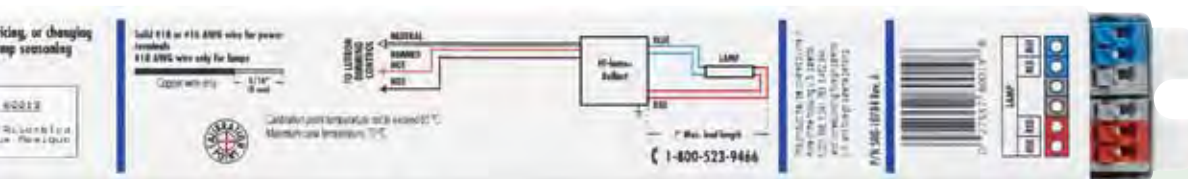


### Hi-lume offering

For the complete listing of Hi-lume ballasts, please see pages 34 and 39.

### 3-wire controls

For the full offering of Lutron controls for Hi-lume ballasts, please see pages 46 and 47.



# Compact SE™ | dimming to 5%



## Compact SE

For designs requiring the energy savings and aesthetic appeal of dimmed compact fluorescent lamps, Compact SE dimming ballasts are your solution.

The Compact SE product family includes ballasts for nearly every type of compact fluorescent lamp. Compact SE dimming ballasts deliver high performance 100% to 5% dimming, making them ideal for use in a variety of applications. In addition, Compact SE ballasts are compatible with the full line of 3-wire controls by Lutron.



## Compatible lamp types:

- T5 twin-tube
- T4 quad-tube CFL
- T4 triple-tube CFL

[www.lutron.com/compactse](http://www.lutron.com/compactse)





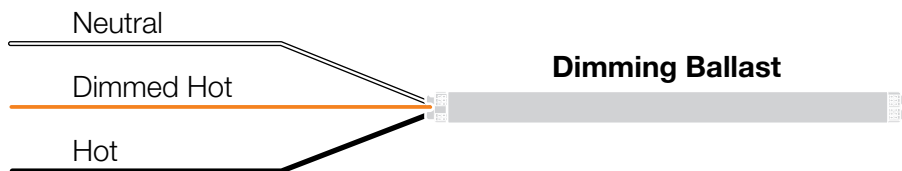
# Compact SE™ | high performance

## Performance

- Continuous, flicker-free dimming from 100% to 5%
- 3-wire line-voltage control for consistent fixture-to-fixture dimming
- Lamps turn on at any dimmed level without flashing to full brightness
- Miswire protection
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

## Specifications

- Architectural dimming from 100% to 5% relative light output
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 10%
- Power factor greater than .95
- Ballast factor greater than .95
- Frequency of operation greater than 42kHz
- Inaudible in 27 dBA ambient environment
- Built-in inrush current-limiting circuitry (maximum of 7 amps at 120V and 3 amps at 277V)
- Minimum lamp starting temperature 10°C (50°F)
- Maximum ballast case temperature 75°C (167°F)



### Compact SE offering

For the complete listing of Compact SE ballasts, please see pages 37 and 41.

### 3-wire controls

For the full offering of Lutron controls for Compact SE ballasts, please see pages 46 and 47.



# Tu-Wire® | dimming to 5%



## Tu-Wire

Tu-Wire ballasts offer high performance 100% to 5% dimming for linear and compact fluorescent lamps. Retrofit applications can benefit from the ease of installation offered by Lutron Tu-Wire dimming ballasts.

Tu-Wire ballasts require only two wires (hot and neutral) for power and control. Lutron offers a wide range of compatible Tu-Wire controls, making Tu-Wire ballasts a perfect choice for many applications. Additionally, one-lamp T4 models have been designed to meet FCC Part 18 consumer requirements for residential applications.

## Compatible lamp types:

- T8 linear
- T8 U-bent
- T4 quad-tube CFL
- T4 triple-tube CFL

[www.lutron.com/tuwire](http://www.lutron.com/tuwire)



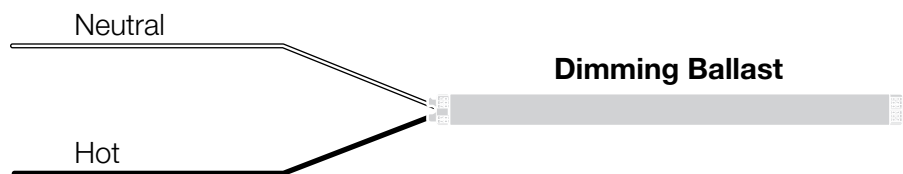
# Tu-Wire® | high performance

## Performance

- Continuous, flicker-free dimming from 100% to 5%
- 2-wire line-voltage control ideal for retrofit
- Lamps turn on at any dimmed level without flashing to full brightness
- Slim-profile design
- One-lamp T4 models meet FCC Part 18 consumer requirements for residential use
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

## Specifications

- High performance dimming from 100% to 5% relative light output
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 20%
- Power factor greater than .95
- Ballast factor greater than .85 for T4 lamps
- Ballast factor equal to 1.0 for T8 lamps
- Frequency of operation greater than 42 kHz
- Inaudible in 27 dBA ambient environment
- Built-in inrush current-limiting circuitry (maximum of 7 amps inrush current per ballast)
- Minimum lamp starting temperature 10° C (50° F)
- Maximum ballast case temperature 75° C (167° F)



### Tu-Wire ballast offering

For the complete listing of Tu-Wire ballasts, please see pages 25 and 41.

### 2-wire controls

For the full offering of Lutron controls for Tu-Wire ballasts, please see page 48.



# EcoSystem® | dimming to 10%



## EcoSystem

EcoSystem digitally addressable dimming ballasts employ revolutionary technology allowing each device to listen, think, decide, remember, and react to its environment.

EcoSystem fluorescent lighting control solutions are built on a simple building block architecture of fluorescent dimming ballasts, sensors, and controls, free from interfaces and power packs. EcoSystem redefines fluorescent lighting control as easy to design, easy to install, easy to maintain, and cost effective.



## Compatible lamp types:

- T8 linear
- T8 U-bent
- T8 reduced wattage
- T5 linear
- T5 HO linear
- T5 twin-tube
- T4 quad-tube CFL
- T4 triple-tube CFL

[www.lutron.com/ecosystem](http://www.lutron.com/ecosystem)



Refer to the EcoSystem Design and Application Guide (P/N 367-1533) for more detailed information on the EcoSystem light control solution.



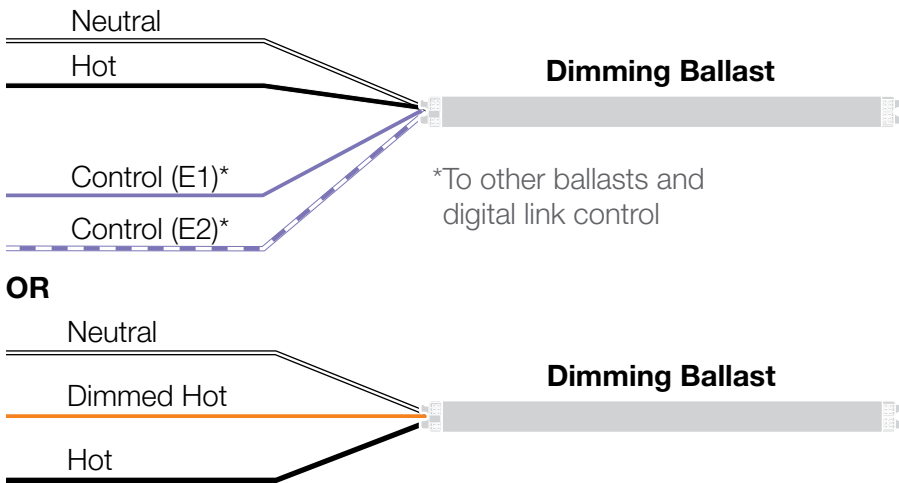
# EcoSystem® | light management performance

## Performance

- Continuous, flicker-free dimming from 100% to 10% (T8, T5, T5 HO, T5 twin-tube) or 5% (T4)
- Models available for T8, T5, T5 HO, T5 twin-tube, T4 quad-tube lamps, and T4 triple-tube lamps
- EcoSystem digital link control allows for re-zoning without rewiring
- Lamps turn on at any dimmed level without flashing to full brightness
- Miswire protection of EcoSystem digital link
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

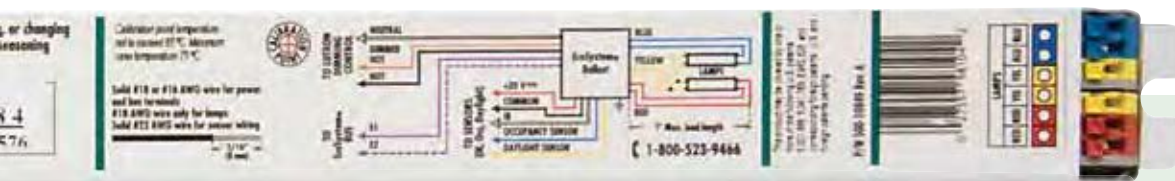
## Specifications

- Lighting management dimming from 100% to 10% (5% for T4) relative light output
- Universal voltage input (120V, 220/240V, 277V at 50/60Hz)
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 10%
- Power factor greater than .95
- Ballast factor equal to .85 or 1.17 for T8 lamps
- Ballast factor equal to 1.0 for T5 and T5 HO lamps
- Ballast factor equal to .95 for T4 lamps
- Factory-tuned reduced ballast factor available ([www.lutron.com/ballasts/custom](http://www.lutron.com/ballasts/custom))
- Frequency of operation greater than 42kHz
- Sound rating: Class A
- Built-in inrush current-limiting circuitry (maximum of 7 amps at 120V and 3 amps at 277V)
- Minimum lamp starting temperature 10°C (50°F)
- Maximum ballast case temperature 75°C (167°F)



**EcoSystem ballast offering**  
For the complete listing of EcoSystem ballasts, please see pages 26, 29, 31, 35, 38 and 40.

**Multi-input digital controls and 3-wire controls**  
For the full offering of Lutron controls for EcoSystem ballasts, please see pages 46, 47 and 49.



# Eco-10® | dimming to 10%



## Eco-10

To maximize the benefits of a lighting management system, use Eco-10 dimming ballasts. Eco-10 offers 100% to 10% dimming, and is ideal for use in any space where saving energy is the primary goal, and critical performance is secondary.

Eco-10 ballasts are available for a large range of lamps, making them an ideal choice for applications with many different fixture types. In addition, Eco-10 ballasts are fully compatible with the complete line of Lutron 3-wire fluorescent controls.

## Compatible lamp types:

- T8 linear
- T8 U-bent
- T5 linear
- T5 HO linear

[www.lutron.com/eco10](http://www.lutron.com/eco10)



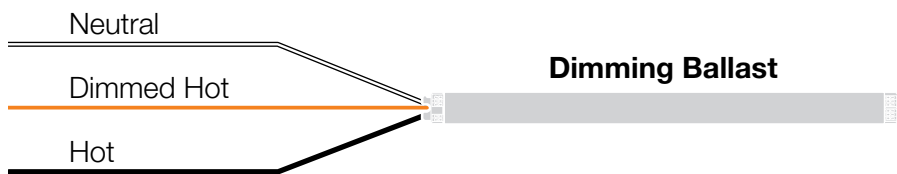
# Eco-10® | light management performance

## Performance

- Continuous, flicker-free dimming from 100% to 10%
- 3-wire line-voltage control for consistent fixture-to-fixture dimming
- Lamps turn on at any dimmed level without flashing to full brightness
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- 100% performance tested including burn-in at the manufacturer
- 5-year limited warranty with field service commissioning (3-year warranty standard)

## Specifications

- Lighting management dimming from 100% to 10% relative light output
- Smooth and continuous dimming with no visible flicker
- Total Harmonic Distortion (THD) less than 20%
- Power factor greater than .95
- Ballast factor equal to 1.0
- Frequency of operation greater than 42 kHz
- Inaudible in 27 dBA ambient environment
- Built-in inrush current-limiting circuitry (maximum of 7 amps at 120V and 3 amps at 277V)
- Minimum lamp starting temperature 10° C (50° F)
- Maximum ballast case temperature 75° C (167° F)

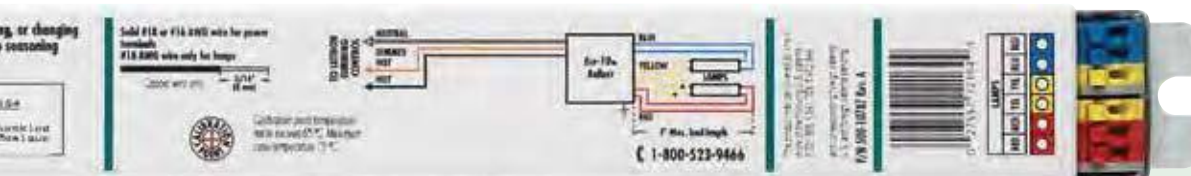


### Eco-10 offering

For the complete listing of Eco-10 ballasts, please see pages 27, 28, 32 and 34.

### 3-wire controls

For the full offering of Lutron controls for Eco-10 ballasts, please see pages 46 and 47.



# Ballasts by lamp type

## T8 and U-bent

### EcoSystem® H-Series (1% or less dimming) universal voltage digital dimming ballasts

- Architectural dimming to 1% or less
- Compatible with Lutron EcoSystem digital controls
- Energy saving and cost-effective

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
32W (48 in)	1	<b>EHD T832 C U 1 10</b>	C	277	0.13	34.8	1.00	3,000	86	2.87	0.92
				240	0.15	35.0	1.00	3,000	86	2.85	0.91
				120	0.30	35.1	1.00	3,000	85	2.85	0.91
		<b>EHD T832 C U 1 17</b>	C	277	0.15	39.7	1.17	3,510	88	2.95	0.94
				240	0.17	40.0	1.17	3,510	88	2.92	0.94
				120	0.34	40.1	1.17	3,510	88	2.92	0.93
		<b>EHD T832 C 347 110</b>	C	347	0.10	34.4	1.00	3,000	87	2.91	0.93
				<b>EHD T832 C 347 117</b>	C	347	0.12	41.2	1.17	3,510	85
		2	<b>EHD T832 C U 2 10</b>	C	277	0.24	65.7	1.00	6,000	91	1.52
	240				0.28	66.3	1.00	6,000	90	1.51	0.97
	120				0.58	66.5	1.00	6,000	90	1.50	0.96
	<b>EHD T832 C U 2 17</b>		C	277	0.28	75.4	1.17	7,020	93	1.55	0.99
				240	0.31	76.5	1.17	7,020	92	1.53	0.98
				120	0.67	76.9	1.17	7,020	91	1.52	0.97
	<b>EHD T832 C 347 2 10</b>		C	347	0.19	65.3	1.00	6,000	92	1.53	0.98
				<b>EHD T832 C 347 2 17</b>	C	347	0.22	75.6	1.17	7,020	93
	3		<b>EHD T832 G U 3 10</b>	G	277	0.37	93.5	1.00	9,000	96	1.07
		240			0.40	94.9	1.00	9,000	95	1.05	1.01
		120			0.83	95.4	1.00	9,000	94	1.05	1.01
		<b>EHD T832 G U 3 17</b>	G	277	0.41	105.7	1.17	10,530	100	1.11	1.06
				240	0.47	106.5	1.17	10,530	99	1.10	1.05
120				0.95	106.8	1.17	10,530	99	1.10	1.05	

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.



# T8 and U-bent (continued)

## Hi-lume® 3D (1% or less dimming) universal voltage digital dimming ballasts

- Architectural dimming to 1% or less
- Compatible with Lutron 3-wire fluorescent controls and EcoSystem® digital controls
- Energy saving

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm)†	System Efficacy (lm/W)†	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
17W (24 in)	1	H3D T817 C U 1 10 H3D T817 G U 1 10	C	277	0.08	22.9	1.00	1,300	57	4.37	0.74	
			G	240	0.09	22.6	1.00	1,300	58	4.42	0.75	
				120	0.19	22.8	1.00	1,300	57	4.39	0.75	
		H3D T817 C U 1 17 H3D T817 G U 1 17	C	277	0.09	25.3	1.17	1,521	60	4.62	0.79	
			G	240	0.10	25.3	1.17	1,521	60	4.62	0.79	
				120	0.20	25.6	1.17	1,521	59	4.57	0.78	
	2	H3D T817 C U 2 10 H3D T817 G U 2 10	C	277	0.14	38.7	1.00	2,600	67	2.58	0.88	
			G	240	0.16	38.4	1.00	2,600	68	2.60	0.89	
				120	0.32	39.1	1.00	2,600	66	2.56	0.87	
		H3D T817 C U 2 17 H3D T817 G U 2 17	C	277	0.15	41.8	1.17	3,042	73	2.80	0.95	
			G	240	0.18	41.7	1.17	3,042	73	2.81	0.95	
				120	0.36	43.1	1.17	3,042	71	2.71	0.92	
	3	H3D T817 G U 3 10	G		277	0.21	57.2	1.00	3,900	68	1.75	0.89
					240	0.25	56.9	1.00	3,900	69	1.76	0.90
					120	0.48	57.5	1.00	3,900	68	1.74	0.89
		H3D T817 G U 3 17	G		277	0.23	64.4	1.17	4,563	71	1.75	0.93
					240	0.27	64.9	1.17	4,563	70	1.76	0.92
					120	0.55	65.6	1.17	4,563	70	1.74	0.91
25W (36 in)	1	H3D T825 C U 1 10	C	277	0.11	29.1	1.00	1,900	65	3.44	0.86	
				240	0.12	28.9	1.00	1,900	66	3.46	0.87	
				120	0.25	29.9	1.00	1,900	64	3.34	0.84	
		H3D T825 C U 1 17	C	277	0.12	33.5	1.17	2,223	66	3.49	0.87	
				240	0.14	33.1	1.17	2,223	67	3.53	0.88	
				120	0.29	33.8	1.17	2,223	66	3.46	0.87	
	2	H3D T825 C U 2 10	C	277	0.22	56.0	1.00	3,800	68	1.79	0.89	
				240	0.24	56.0	1.00	3,800	68	1.79	0.89	
				120	0.49	59.0	1.00	3,800	64	1.69	0.85	
		H3D T825 C U 2 17	C	277	0.24	62.3	1.17	4,446	71	1.88	0.94	
				240	0.27	61.8	1.17	4,446	72	1.89	0.95	
				120	0.55	64.0	1.17	4,446	69	1.83	0.91	

Note that the model numbers for Hi-lume 3D ballasts have changed (e.g., from H3DT817CUNV110 to H3DT817CU110). Please use the model numbers listed above. The products themselves have not changed.

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

†Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T8 and U-bent (continued)

<b>(cont.) Hi-lume® 3D (1% or less dimming) universal voltage digital dimming ballasts</b>												
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
32W (48 in)	1	<b>H3D T832 C U 1 10</b> <b>H3D T832 G U 1 10</b>	C	277	0.13	34.8	1.00	3,000	86	2.87	0.92	
			G	240	0.15	35.0	1.00	3,000	86	2.85	0.91	
			G	120	0.30	35.1	1.00	3,000	85	2.85	0.91	
		<b>H3D T832 C U 1 17</b> <b>H3D T832 G U 1 17</b>	C	277	0.15	39.7	1.17	3,510	88	2.95	0.94	
			G	240	0.17	40.0	1.17	3,510	88	2.92	0.94	
			G	120	0.34	40.1	1.17	3,510	88	2.92	0.93	
	2	<b>H3D T832 C U 2 10</b> <b>H3D T832 G U 2 10</b>	C	277	0.24	65.7	1.00	6,000	91	1.52	0.97	
			G	240	0.28	66.3	1.00	6,000	90	1.51	0.97	
			G	120	0.58	66.5	1.00	6,000	90	1.50	0.96	
		<b>H3D T832 C U 2 17</b> <b>H3D T832 G U 2 17</b>	C	277	0.28	75.4	1.17	7,020	93	1.55	0.99	
			G	240	0.31	76.5	1.17	7,020	92	1.53	0.98	
			G	120	0.67	76.9	1.17	7,020	91	1.52	0.97	
	3	<b>H3D T832 G U 3 10</b>	G	277	0.37	93.5	1.00	9,000	96	1.07	1.03	
				240	0.40	94.9	1.00	9,000	96	1.05	1.01	
				120	0.83	95.4	1.00	9,000	96	1.05	1.01	
<b>H3D T832 G U 3 17</b>		G	277	0.41	105.7	1.17	10,530	100	1.11	1.06		
			240	0.47	106.5	1.17	10,530	99	1.10	1.05		
			120	0.95	106.8	1.17	10,530	99	1.10	1.05		
40W (60 in)	1	<b>H3D T840 C U 1 10</b>	C	277	0.16	42.8	1.00	3,800	89	2.34	0.94	
			G	240	0.18	43.0	1.00	3,800	88	2.33	0.93	
			G	120	0.37	43.8	1.00	3,800	87	2.28	0.91	
		<b>H3D T840 C U 1 17</b>	C	277	0.18	49.6	1.17	4,446	90	2.36	0.94	
			G	240	0.21	49.4	1.17	4,446	90	2.37	0.95	
			G	120	0.43	50.6	1.17	4,446	88	2.31	0.92	
	2	<b>H3D T840 C U 2 10</b>	C	277	0.32	88.9	1.00	7,600	86	1.13	0.90	
				G	240	0.37	88.4	1.00	7,600	86	1.13	0.91
				G	120	0.77	90.9	1.00	7,600	84	1.10	0.88
		<b>H3D T840 C U 2 17</b>	C	277	0.36	98.2	1.17	8,892	91	1.19	0.95	
				G	240	0.41	97.2	1.17	8,892	92	1.20	0.96
				G	120	0.84	100.3	1.17	8,892	89	1.17	0.93

Note that the model numbers for Hi-lume 3D ballasts have changed (e.g., from H3DT817**CUNV**110 to H3DT817**CU**110). Please use the model numbers listed above. The products themselves have not changed.

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

## T8 and U-bent (continued)

### Tu-Wire (5% dimming) 120V dimming ballasts

- High performance 5% dimming
- Designed for retrofit applications
- Compatible with Lutron 2-wire fluorescent controls
- Energy saving

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
25W (36 in)	1	<b>2W-T825-120-1</b>	C	120	0.30	36.0	0.85	1,828	51	2.36	0.76
	2	<b>2W-T825-120-2</b>	C	120	0.50	60.0	0.85	3,655	61	1.42	0.91
32W (48 in)	1	<b>2W-T832-120-1</b>	C	120	0.37	44.4	0.85	2,550	57	1.91	0.61
	2	<b>2W-T832-120-2</b>	C	120	0.70	84.0	0.85	5,100	61	1.01	0.65

\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T8 and U-bent (continued)

<b>EcoSystem® (10% dimming) universal voltage digital dimming ballasts</b>														
<ul style="list-style-type: none"> <li>• Energy-saving 10% dimming</li> <li>• Easy integration of low-voltage sensors and wall controls</li> <li>• Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls</li> <li>• Integral sensor connections</li> </ul>														
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm)†	System Efficacy (lm/W)†	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)			
17W (24 in)	1	<b>EC5 T817 J UNV 1</b>	J	277	0.08	20.6	0.85	1,190	58	4.13	0.70			
				240	0.08	20.0	0.85	1,190	60	4.25	0.72			
				120	0.17	20.1	0.85	1,190	59	4.23	0.72			
	2	<b>EC5 T817 J UNV 2</b>	J	277	0.13	36.2	0.85	2,380	66	2.35	0.80			
				240	0.15	37.0	0.85	2,380	64	2.30	0.78			
				120	0.31	37.0	0.85	2,380	64	2.30	0.78			
25W (36 in)	1	<b>EC5 T825 J UNV 1</b>	J	277	0.10	27.6	0.85	1,828	66	3.08	0.77			
				240	0.11	27.0	0.85	1,828	68	3.15	0.79			
				120	0.23	26.9	0.85	1,828	68	3.16	0.79			
	2	<b>EC5 T825 J UNV 2</b>	J	277	0.18	48.9	0.85	3,665	75	1.74	0.87			
				240	0.20	49.0	0.85	3,665	75	1.73	0.87			
				120	0.41	49.0	0.85	3,665	75	1.73	0.87			
32W (48 in)	1	<b>EC5 T832 J UNV 1</b>	J	277	0.11	31.6	0.85	2,550	81	2.69	0.86			
				240	0.13	31.0	0.85	2,550	82	2.74	0.87			
				120	0.26	31.3	0.85	2,550	81	2.72	0.87			
				2	<b>EC5 T832 J UNV 2</b>	J	277	0.21	57.4	0.85	5,100	89	1.48	0.95
							240	0.25	59.0	0.85	5,100	86	1.44	0.92
							120	0.49	59.1	0.85	5,100	86	1.44	0.92
	2	<b>EC5 T832 G UNV 2L††</b>	G	277	0.22	59.6	0.85	5,100	86	1.43	0.91			
				240	0.25	57.6	0.85	5,100	89	1.48	0.94			
				120	0.49	58.8	0.85	5,100	87	1.45	0.93			
				3	<b>EC5 T832 G UNV 3L††</b>	G	277	0.31	86.5	0.85	7,650	88	0.98	0.94
							240	0.36	84.0	0.85	7,650	89	1.01	0.97
							120	0.72	85.9	0.85	7,650	89	0.99	0.95
	3	<b>EC5 T832 G UNV 317L††</b>	G	277	0.41	105.7	1.17	10,530	100	1.11	1.06			
				240	0.47	106.5	1.17	10,530	99	1.10	1.05			
				120	0.95	106.8	1.17	10,530	99	1.10	1.05			

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

†Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

††Ballast ships with leads.

# T8 and U-bent (continued)

<b>Eco-10® (10% dimming) universal voltage dimming ballasts</b>												
<ul style="list-style-type: none"> <li>• Energy-saving 10% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls</li> </ul>												
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
17W (24 in)	1	<b>EC3 T817 G U 1 10</b> <b>EC3 T817 C U 1 10</b>	G	277	0.08	22.9	1.00	1,300	57	4.37	0.74	
			C	240	0.09	22.6	1.00	1,300	58	4.42	0.75	
				120	0.19	22.8	1.00	1,300	57	4.39	0.75	
	2	<b>EC3 T817 G U 2 10</b> <b>EC3 T817 C U 2 10</b>	G	277	0.14	38.7	1.00	2,600	67	2.58	0.88	
			C	240	0.16	38.4	1.00	2,600	68	2.60	0.89	
				120	0.32	39.1	1.00	2,600	66	2.56	0.87	
		3	<b>EC3 T817 G U 3 10</b>	G	277	0.21	57.2	1.00	3,900	68	1.75	0.89
					240	0.25	56.9	1.00	3,900	69	1.76	0.90
					120	0.48	57.5	1.00	3,900	68	1.74	0.89
25W (36 in)	1	<b>EC3 T825 C U 1 10</b>	C	277	0.11	29.1	1.00	1,900	65	3.44	0.86	
				240	0.12	28.9	1.00	1,900	66	3.46	0.87	
				120	0.25	29.9	1.00	1,900	64	3.34	0.84	
	2	<b>EC3 T825 C U 2 10</b>	C	277	0.22	56.0	1.00	3,800	68	1.79	0.89	
				240	0.24	56.0	1.00	3,800	68	1.79	0.89	
				120	0.49	59.0	1.00	3,800	64	1.69	0.85	
32W (48 in)	1	<b>EC3 T832 G U 1 10</b> <b>EC3 T832 C U 1 10</b>	G	277	0.13	34.8	1.00	3,000	86	2.87	0.92	
			C	240	0.15	35.0	1.00	3,000	86	2.85	0.91	
				120	0.30	35.1	1.00	3,000	85	2.85	0.91	
		<b>EC3 T832 G U 1 17</b> <b>EC3 T832 C U 1 17</b>	G	277	0.15	39.7	1.17	3,510	88	2.95	0.94	
			C	240	0.17	40.0	1.17	3,510	88	2.92	0.94	
				120	0.34	40.1	1.17	3,510	88	2.92	0.93	
	2	<b>EC3 T832 G U 2 10</b> <b>EC3 T832 C U 2 10</b>	G	277	0.24	65.7	1.00	6,000	91	1.52	0.97	
			C	240	0.28	66.3	1.00	6,000	90	1.51	0.97	
				120	0.58	66.5	1.00	6,000	90	1.50	0.96	
		<b>EC3 T832 G U 2 17</b> <b>EC3 T832 C U 2 17</b>	G	277	0.28	75.4	1.17	7,020	93	1.55	0.99	
			C	240	0.31	76.5	1.17	7,020	92	1.53	0.98	
				120	0.67	76.9	1.17	7,020	91	1.52	0.97	
	3	<b>EC3 T832 G U 3 10</b>	G	277	0.37	93.5	1.00	9,000	96	1.07	1.03	
				240	0.40	94.9	1.00	9,000	96	1.05	1.01	
				120	0.83	95.4	1.00	9,000	96	1.05	1.01	
<b>EC3 T832 G U 3 17</b>		G	277	0.41	105.7	1.17	10,530	100	1.11	1.06		
			240	0.47	106.5	1.17	10,530	99	1.10	1.05		
			120	0.95	106.8	1.17	10,530	99	1.10	1.05		

Select Eco-10 ballasts have been discontinued.

\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## Reduced Wattage T8 and U-bent

### EcoSystem® (10% dimming) universal voltage digital dimming ballasts

- Specially designed for reduced-wattage (energy saving) lamps
- Easy integration of low-voltage sensors and wall controls
- Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls
- Integral sensor connections

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
25W (48 in)	1	<b>EC5 T8RW J UNV 1</b>	J	277	0.09	24.8	0.85	2,061	83	3.43	0.86
				240	0.10	24.5	0.85	2,061	84	3.47	0.87
				120	0.21	24.9	0.85	2,061	83	3.41	0.85
	2	<b>EC5 T8RW J UNV 2</b>	J	277	0.17	46.6	0.85	4,123	88	1.82	0.91
				240	0.19	45.9	0.85	4,123	90	1.85	0.93
				120	0.38	46.5	0.85	4,123	89	1.83	0.91
	3	<b>EC5 T8RW G UNV 3L<sup>††</sup></b>	G	277	0.25	67.9	0.85	6,184	91	1.25	0.94
				240	0.28	67.4	0.85	6,184	92	1.26	0.95
				120	0.58	69.0	0.85	6,184	90	1.23	0.92
28W (48 in)	1	<b>EC5 T8RW J UNV 1</b>	J	277	0.10	26.3	0.85	2,202	84	3.23	0.90
				240	0.11	26.2	0.85	2,202	84	3.24	0.91
				120	0.22	26.5	0.85	2,202	83	3.21	0.90
	2	<b>EC5 T8RW J UNV 2</b>	J	277	0.18	48.9	0.85	4,403	90	1.74	0.97
				240	0.20	48.6	0.85	4,403	91	1.75	0.98
				120	0.42	50.0	0.85	4,403	88	1.70	0.95
	3	<b>EC5 T8RW G UNV 3L<sup>††</sup></b>	G	277	0.26	71.1	0.85	6,605	93	1.20	1.00
				240	0.30	70.4	0.85	6,605	94	1.21	1.01
				120	0.60	71.6	0.85	6,605	92	1.19	1.00
30W (48 in)	1	<b>EC5 T8RW J UNV 1</b>	J	277	0.11	28.9	0.85	2,350	81	2.94	0.88
				240	0.12	28.7	0.85	2,350	82	2.96	0.89
				120	0.24	29.2	0.85	2,350	80	2.91	0.87
	2	<b>EC5 T8RW J UNV 2</b>	J	277	0.19	52.5	0.85	4,701	90	1.62	0.97
				240	0.22	52.5	0.85	4,701	90	1.62	0.97
				120	0.44	53.4	0.85	4,701	88	1.59	0.96
	3	<b>EC5 T8RW G UNV 3L</b>	G	277	0.28	76.3	0.85	7,051	92	1.11	1.00
				240	0.32	76.3	0.85	7,051	92	1.11	1.00
				120	0.65	78.1	0.85	7,051	90	1.09	0.98

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# T5 Linear

## EcoSystem® H-Series (1% or less dimming) universal voltage digital dimming ballasts

- Architectural dimming to 1% or less
- Compatible with Lutron EcoSystem digital controls
- Energy saving and cost-effective

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)		
28W (45.2 in)	1	<b>EHD T528 C U 1 10</b>	C	277	0.12	32.6	1.00	2,900	89	3.07	0.86		
				240	0.14	32.9	1.00	2,900	88	3.04	0.85		
				120	0.27	32.9	1.00	2,900	88	3.04	0.85		
	2	<b>EHD T528 C 347 1 10</b>	C	347	0.09	30.9	1.00	2,900	94	3.23	0.91		
				<b>EHD T528 C U 2 10</b>	C	277	0.23	64.5	1.00	5,800	90	1.55	0.87
						240	0.27	65.0	1.00	5,800	89	1.54	0.86
		<b>EHD T528 C 347 2 10</b>	C	120	0.54	65.2	1.00	5,800	89	1.53	0.86		
			C	347	0.17	58.4	1.00	5,800	99	1.71	0.96		

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T5 Linear (continued)

<b>Hi-lume® 3D (1% dimming) universal voltage digital dimming ballasts</b>											
<ul style="list-style-type: none"> <li>• Architectural dimming to 1% or less</li> <li>• Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls</li> <li>• Energy saving</li> </ul>											
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
14W (21.6 in)	1	<b>H3D T514 C U 1 10</b>	C	277	0.07	19.1	1.00	1,350	71	5.24	0.73
				240	0.08	18.5	1.00	1,350	73	5.41	0.76
				120	0.16	18.8	1.00	1,350	72	5.32	0.74
	2	<b>H3D T514 C U 2 10</b>	C	277	0.13	35.4	1.00	2,700	76	2.82	0.79
				240	0.15	35.2	1.00	2,700	77	2.84	0.80
				120	0.29	35.3	1.00	2,700	76	2.83	0.79
21W (33.4 in)	1	<b>H3D T521 C U 1 10</b>	C	277	0.09	25.2	1.00	2,100	83	3.97	0.83
				240	0.10	24.9	1.00	2,100	84	4.02	0.84
				120	0.22	25.8	1.00	2,100	81	3.88	0.81
	2	<b>H3D T521 C U 2 10</b>	C	277	0.18	48.6	1.00	4,200	86	2.06	0.86
				240	0.20	47.9	1.00	4,200	88	2.09	0.88
				120	0.41	49.2	1.00	4,200	85	2.03	0.85
28W (45.2 in)	1	<b>H3D T528 C U 1 10</b>	C	277	0.12	32.1	1.00	2,900	89	3.07	0.86
				240	0.13	32.2	1.00	2,900	88	3.04	0.85
				120	0.27	32.5	1.00	2,900	88	3.04	0.85
	2	<b>H3D T528 C U 2 10</b>	C	277	0.23	64.1	1.00	5,800	90	1.55	0.87
				240	0.26	64.0	1.00	5,800	89	1.54	0.86
				120	0.54	65.0	1.00	5,800	89	1.53	0.86

Note that the model numbers for Hi-lume 3D ballasts have changed (e.g., from H3DT514**CUNV**110 to H3DT514**CU**110). Please use the model numbers listed above. The products themselves have not changed.

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.



## T5 Linear (continued)

### EcoSystem® (10% dimming) universal voltage digital dimming ballasts

- Energy-saving 10% dimming
- Easy integration of low-voltage sensors and wall controls
- Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls
- Integral sensor connections

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
14W (21.6 in)	1	<b>EC5 T514 J UNV 1</b>	J	277	0.07	19.0	1.00	1,350	71	5.26	0.74
				240	0.08	19.2	1.00	1,350	70	5.21	0.74
				120	0.16	19.2	1.00	1,350	70	5.21	0.74
	2	<b>EC5 T514 J UNV 2</b>	J	277	0.12	32.8	1.00	2,700	82	3.05	0.85
				240	0.14	33.3	1.00	2,700	81	3.00	0.85
				120	0.28	33.3	1.00	2,700	81	3.00	0.85
21W (33.4 in)	1	<b>EC5 T521 J UNV 1</b>	J	277	0.09	24.9	1.00	2,100	84	4.01	0.84
				240	0.12	28.8	1.00	2,100	73	3.47	0.73
				120	0.22	26.4	1.00	2,100	80	3.79	0.80
	2	<b>EC5 T521 J UNV 2</b>	J	277	0.17	46.0	1.00	4,200	91	2.17	0.91
				240	0.20	47.2	1.00	4,200	89	2.12	0.89
				120	0.39	47.2	1.00	4,200	89	2.12	0.89
28W (45.2 in)	1	<b>EC5 T528 J UNV 1</b>	J	277	0.12	32.6	1.00	2,900	89	3.07	0.86
				240	0.14	32.9	1.00	2,900	88	3.04	0.85
				120	0.27	32.9	1.00	2,900	88	3.04	0.85
	2	<b>EC5 T528 J UNV 2</b>	J	277	0.23	64.5	1.00	5,800	90	1.55	0.87
				240	0.27	65.0	1.00	5,800	89	1.54	0.86
				120	0.54	65.2	1.00	5,800	89	1.53	0.86
35W (57.1 in)	1	<b>EC5 T535 J UNV 1</b>	J	277	0.15	41.6	1.00	3,650	88	2.40	0.84
				240	0.18	43.2	1.00	3,650	84	2.31	0.81
				120	0.35	42.0	1.00	3,650	87	2.38	0.83

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T5 Linear (continued)

<b>Eco-10® (10% dimming) 120V and 277V dimming ballasts</b>												
<ul style="list-style-type: none"> <li>• Energy-saving 10% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls and cost-effective</li> </ul>												
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Ballast Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
14W (21.6 in)	1	<b>E 3 T514 C 277 1</b>	C	277	0.08	22.2	1.00	1,350	61	4.51	0.63	
		<b>E 3 T514 C 120 1</b>		120	0.18	20.4	1.00	1,350	66	4.90	0.69	
	2	<b>E 3 T514 C 277 2</b>	C	277	0.14	38.8	1.00	2,700	70	2.58	0.72	
		<b>E 3 T514 C 120 2</b>		120	0.32	38.4	1.00	2,700	70	2.60	0.73	
21W (33.4 in)	1	<b>E 3 T521 C 277 1</b>	C	277	0.11	30.5	1.00	2,100	69	3.28	0.69	
		<b>E 3 T521 C 120 1</b>		120	0.25	30.0	1.00	2,100	70	3.33	0.70	
	2	<b>E 3 T521 C 277 2</b>	C	277	0.19	52.6	1.00	4,200	80	1.90	0.80	
		<b>E 3 T521 C 120 2</b>		120	0.44	51.6	1.00	4,200	81	1.94	0.81	
28W (45.2 in)	1	<b>ECO-T528-277-1</b>	C	277	0.14	38.8	1.00	2,900	75	2.58	0.72	
		<b>ECO-T528-120-1</b>		120	0.30	36.0	1.00	2,900	81	2.78	0.78	
	2	<b>ECO-T528-277-2</b>	C	277	0.25	69.3	1.00	5,800	84	1.44	0.81	
		<b>ECO-T528-120-2</b>		120	0.55	66.0	1.00	5,800	88	1.52	0.85	

Select Eco-10 ballasts have been discontinued.

\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# T5-HO Linear

## EcoSystem® H-Series (1% or less dimming) universal voltage digital dimming ballasts

- Architectural dimming to 1% or less
- Compatible with Lutron EcoSystem digital controls

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
54W (45.2 in)	1	<b>EHD T554 C U 1 10</b>	C	277	0.21	56.5	1.00	5,000	88	1.77	0.96
				240	0.24	58.0	1.00	5,000	86	1.72	0.93
		120		0.48	57.9	1.00	5,000	86	1.73	0.93	
		<b>EHD T554 C 347 110</b>		347	0.17	58.4	1.00	5,000	86	1.71	0.92
	2	<b>EHD T554 C U 2 10</b>	C	277	0.40	110.1	1.00	10,000	91	0.91	0.98
				240	0.52	119.0	1.00	10,000	84	0.84	0.91
				120	0.99	119.3	1.00	10,000	84	0.84	0.91
				<b>EHD T554 C 347 210</b>	347	0.34	116.8	1.00	10,000	86	0.86

## Hi-lume® 3D (1% or less dimming) universal voltage digital dimming ballasts

- Architectural dimming to 1% or less
- Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
24W (21.6 in)	1	<b>H3D T524 C U 1 10</b>	C	277	0.11	29.1	1.00	2,000	69	3.44	2.75
				240	0.12	28.0	1.00	2,000	71	3.57	2.85
				120	0.24	28.7	1.00	2,000	70	3.48	2.78
	2	<b>H3D T524 C U 2 10</b>	C	277	0.19	51.0	1.00	4,000	78	1.96	0.78
				240	0.22	51.6	1.00	4,000	78	1.94	1.55
				120	0.44	51.9	1.00	4,000	77	1.93	1.54
39W (33.4 in)	1	<b>H3D T539 C U 1 10</b>	C	277	0.16	43.6	1.00	3,500	80	2.29	1.83
				240	0.18	43.5	1.00	3,500	80	2.30	1.84
				120	0.38	44.7	1.00	3,500	78	2.24	1.79
	2	<b>H3D T539 C U 2 10</b>	C	277	0.29	79.5	1.00	7,000	88	1.26	0.50
				240	0.34	81.3	1.00	7,000	86	1.23	0.98
				120	0.69	81.7	1.00	7,000	86	1.22	0.98
54W (45.2 in)	1	<b>H3D T554 C U 1 10</b>	C	277	0.20	55.7	1.00	5,000	90	1.80	1.44
				240	0.27	64.6	1.00	5,000	77	1.55	0.62
				120	0.51	60.8	1.00	5,000	82	1.64	0.66
	2	<b>H3D T554 C U 2 10</b>	C	277	0.41	112.2	1.00	10,000	89	0.89	0.36
				240	0.51	121.9	1.00	10,000	82	0.82	0.33
				120	0.98	116.4	1.00	10,000	86	0.86	0.34

Note that the model numbers for Hi-lume 3D ballasts have changed (e.g., from H3DT524**CUNV**110 to H3DT524**CU**110). Please use the model numbers listed above. The products themselves have not changed.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T5-HO Linear (continued)

<b>Hi-lume® (1% dimming) 120V and 277V dimming ballasts</b>												
<ul style="list-style-type: none"> <li>• Architectural 1% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls</li> </ul>												
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
24W (21.6 in)	1	FDB-T524-277-1	C	277	0.15	36.0	1.00	2,000	56	2.78	0.67	
		FDB-T524-120-1		120	0.31	31.2	1.00	2,000	64	3.21	0.77	
	2	FDB-T524-277-2	C	277	0.24	55.4	1.00	4,000	72	1.81	0.87	
		FDB-T524-120-2		120	0.62	54.0	1.00	4,000	74	1.85	0.89	
39W (33.4 in)	1	FDB-T539-277-1	C	277	0.19	47.1	1.00	3,500	74	2.12	0.83	
		FDB-T539-120-1		120	0.38	45.6	1.00	3,500	77	2.19	0.86	
	2	FDB-T539-277-2	C	277	0.32	85.9	1.00	7,000	82	1.16	0.91	
		FDB-T539-120-2		120	0.76	91.2	1.00	7,000	77	1.10	0.86	
54W (45.2 in)	1	FDB-T554-277-1	C	277	0.25	69.3	1.00	5,000	72	1.44	0.78	
		FDB-T554-120-1		120	0.58	69.6	1.00	5,000	72	1.44	0.78	
	2	FDB-T554-277-2	C	277	0.45	124.7	1.00	10,000	80	0.80	0.87	
		FDB-T554-120-2		120	1.10	132.0	1.00	10,000	76	0.76	0.82	

Select Hi-lume ballasts have been discontinued. Please visit [www.lutron.com/hilume](http://www.lutron.com/hilume) for information.

<b>Eco-10® (10% dimming) 120V and 277V dimming ballasts</b>												
<ul style="list-style-type: none"> <li>• Energy-saving 10% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls</li> </ul>												
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
24W (21.6 in)	1	ECO-T524-277-1	C	277	0.13	36.0	1.00	2,000	56	2.78	0.67	
		ECO-T524-120-1		120	0.31	31.2	1.00	2,000	64	3.21	0.77	
	2	ECO-T524-277-2	C	277	0.20	55.4	1.00	4,000	72	1.81	0.87	
		ECO-T524-120-2		120	0.62	54.0	1.00	4,000	74	1.85	0.89	
39W (33.4 in)	1	ECO-T5H39-277-1	C	277	0.17	47.1	1.00	3,500	74	2.12	0.68	
		ECO-T5H39-120-1		120	0.38	45.6	1.00	3,500	77	2.19	0.70	
	2	ECO-T5H39-277-2	C	277	0.31	85.9	1.00	7,000	82	1.16	0.37	
		ECO-T5H39-120-2		120	0.76	91.2	1.00	7,000	77	1.10	0.35	
54W (45.2 in)	1	ECO-T554-277-1	C	277	0.25	69.3	1.00	5,000	72	1.44	0.46	
		ECO-T554-120-1		120	0.58	69.6	1.00	5,000	72	1.44	0.46	
	2	ECO-T554-277-2	C	277	0.45	124.7	1.00	10,000	80	0.80	0.26	
		ECO-T554-120-2		120	1.10	132.0	1.00	10,000	76	0.76	0.24	

Select Eco-10 ballasts have been discontinued.

\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

## T5-HO Linear (continued)

### EcoSystem® (10% dimming) universal voltage digital dimming ballasts

- Energy-saving 10% dimming
- Easy integration of low-voltage sensors and wall controls
- Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls
- Integral sensor connections

Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
24W (21.6 in)	1	<b>EC5 T524 J UNV 1</b>	J	277	0.11	30.0	1.00	2,000	67	3.33	0.80
				240	0.13	28.8	1.00	2,000	69	3.47	0.83
				120	0.24	28.8	1.00	2,000	69	3.47	0.83
	2	<b>EC5 T524 J UNV 2</b>	J	277	0.20	54.8	1.00	4,000	73	1.82	0.89
				240	0.23	54.0	1.00	4,000	74	1.85	0.89
				120	0.45	53.9	1.00	4,000	74	1.86	0.89
39W (33.4 in)	1	<b>EC5 T539 J UNV 1</b>	J	277	0.16	43.3	1.00	3,500	81	2.31	0.90
				240	0.18	44.0	1.00	3,500	80	2.27	0.89
				120	0.37	44.0	1.00	3,500	80	2.27	0.89
	2	<b>EC5 T539 J UNV 2</b>	J	277	0.30	83.0	1.00	7,000	84	1.20	0.94
				240	0.35	84.0	1.00	7,000	83	1.19	0.93
				120	0.70	84.3	1.00	7,000	83	1.19	0.93
54W (45.2 in)	1	<b>EC5 T554 J UNV 1</b>	J	277	0.21	56.5	1.00	5,000	88	1.77	0.96
				240	0.24	58.0	1.00	5,000	86	1.73	0.93
				120	0.48	57.9	1.00	5,000	86	1.73	0.93
	2	<b>EC5 T554 J UNV 2</b>	J	277	0.40	110.1	1.00	10,000	91	0.91	0.98
				240	0.52	119.0	1.00	10,000	84	0.84	0.91
				120	0.99	119.3	1.00	10,000	84	0.84	0.91

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T5 Twin-Tube

<b>Hi-lume® 3D (5% dimming) universal voltage digital dimming ballasts</b>												
<ul style="list-style-type: none"> <li>• High performance 5% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls and EcoSystem® digital controls</li> <li>• Energy saving</li> </ul>												
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
36 W (15.5 in)	1	<b>H3D T536 G U 1 10</b>	G	277	0.14	38.4	1.00	2,850	74	2.60	1.04	
				240	0.17	40.4	1.00	2,850	71	2.48	1.98	
				120	0.33	39.2	1.00	2,850	73	2.55	2.04	
	2	<b>H3D T536 G U 2 10</b>	G	277	0.26	71.3	1.00	5,700	80	1.40	1.12	
				240	0.31	73.7	1.00	5,700	77	1.36	1.09	
				120	0.61	72.5	1.00	5,700	79	1.38	1.10	
40 W (22.5 in)	1	<b>H3D T540 G U 1 10</b>	G	277	0.16	43.9	1.00	3,100	71	2.28	0.91	
				240	0.18	42.8	1.00	3,100	72	2.34	1.87	
				120	0.36	42.8	1.00	3,100	72	2.34	1.87	
	2	<b>H3D T540 G U 2 10</b>	G	277	0.27	74.0	1.00	6,200	84	1.35	1.08	
				240	0.32	76.0	1.00	6,200	82	1.32	1.05	
				120	0.64	76.0	1.00	6,200	82	1.32	1.05	
	3	<b>H3D T540 G U 3 10</b>	G	277	0.40	109.7	1.00	9,300	85	0.91	1.09	
				240	0.47	111.7	1.00	9,300	83	0.90	0.72	
				120	0.95	112.9	1.00	9,300	82	0.89	0.71	
50 W (22.5 in)	1	<b>H3D T550 G U 1 10</b>	G	277	0.20	54.8	1.00	4,000	73	1.82	0.73	
				240	0.23	54.6	1.00	4,000	73	1.83	0.73	
				120	0.45	53.5	1.00	4,000	75	1.87	0.75	
	2	<b>H3D T550 G U 2 10</b>	G	277	0.36	98.7	1.00	8,000	81	1.01	0.81	
				240	0.42	99.8	1.00	8,000	80	1.00	0.40	
				120	0.84	99.8	1.00	8,000	80	1.00	0.40	

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

## T5 Twin-Tube (continued)

<b>Compact SE™ (5% dimming) universal voltage dimming ballasts</b>											
<ul style="list-style-type: none"> <li>• High performance 5% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls</li> <li>• Energy saving</li> </ul>											
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
36/39W (15.5 in)	1	<b>EC3 T536 G U 1 10</b>	G	277	0.14	38.8	1.00	2,850	74	2.57	0.93
				240	0.17	39.6	1.00	2,850	72	2.53	0.91
				120	0.33	39.6	1.00	2,850	72	2.53	0.91
	2	<b>EC3 T536 G U 2 10</b>	G	277	0.26	72.0	1.00	5,700	79	1.39	1.00
				240	0.31	73.2	1.00	5,700	78	1.37	0.98
				120	0.61	73.2	1.00	5,700	78	1.37	0.98
40W (22.5 in)	1	<b>EC3 T540 G U 1 10</b>	G	277	0.16	44.3	1.00	3,100	70	2.26	0.90
				240	0.18	43.2	1.00	3,100	72	2.31	0.93
				120	0.36	43.2	1.00	3,100	72	2.31	0.93
	2	<b>EC3 T540 G U 2 10</b>	G	277	0.27	74.8	1.00	6,200	83	1.34	1.07
				240	0.32	76.8	1.00	6,200	81	1.30	1.04
				120	0.64	76.8	1.00	6,200	81	1.30	1.04
	3	<b>EC3 T540 G U 3 10</b>	G	277	0.40	111.3	1.00	9,300	84	0.90	1.08
				240	0.47	112.4	1.00	9,300	83	0.89	1.07
				120	0.95	113.2	1.00	9,300	82	0.88	1.06
50W (22.5 in)	1	<b>EC3 T550 G U 1 10</b>	G	277	0.20	55.4	1.00	4,000	72	1.81	0.90
				240	0.23	54.0	1.00	4,000	72	1.85	0.93
				120	0.45	54.0	1.00	4,000	74	1.85	0.93
	2	<b>EC3 T550 G U 2 10</b>	G	277	0.36	99.7	1.00	8,000	80	1.00	1.00
				240	0.42	100.8	1.00	8,000	79	0.99	0.99
				120	0.84	100.8	1.00	8,000	79	0.99	0.99

Select Compact SE ballasts have been discontinued.

\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

# Ballasts by lamp type

## T5 Twin-Tube (continued)

<b>EcoSystem® (10% dimming) universal voltage digital dimming ballasts</b>											
<ul style="list-style-type: none"> <li>• Energy-saving 10% dimming</li> <li>• Easy integration of low-voltage sensors and wall controls</li> <li>• Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls</li> <li>• Integral sensor connections</li> </ul>											
Lamp Watts (Length)	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy (BEF)	Relative System Efficacy (RSE)
36/39W (15.5 in)	1	<b>EC5 T536 J UNV 1</b>	J	277	0.14	38.8	1.00	2,850	73	2.57	0.93
				240	0.17	39.6	1.00	2,850	72	2.53	0.91
				120	0.33	39.6	1.00	2,850	72	2.53	0.91
	2	<b>EC5 T536 J UNV 2</b>	J	277	0.26	72.0	1.00	5,700	79	1.39	1.00
				240	0.31	73.2	1.00	5,700	78	1.37	0.98
				120	0.61	73.2	1.00	5,700	78	1.37	0.98
40W (22.5 in)	1	<b>EC5 T540 J UNV 1</b>	J	277	0.16	44.3	1.00	3,100	70	2.26	0.90
				240	0.18	43.2	1.00	3,100	72	2.31	0.93
				120	0.36	43.2	1.00	3,100	72	2.31	0.93
	2	<b>EC5 T540 J UNV 2</b>	J	277	0.27	74.8	1.00	6,200	83	1.34	1.07
				240	0.32	76.8	1.00	6,200	81	1.30	1.04
				120	0.64	76.8	1.00	6,200	81	1.30	1.04
	3	<b>EC5 T540 G UNV 3L<sup>††</sup></b>	G	277	0.40	111.3	1.00	9,300	84	0.90	1.08
				240	0.47	112.4	1.00	9,300	83	0.89	1.07
				120	0.95	113.2	1.00	9,300	82	0.88	1.06
50W (22.5 in)	1	<b>EC5 T550 J UNV 1</b>	J	277	0.20	55.4	1.00	4,000	72	1.81	0.90
				240	0.23	54.0	1.00	4,000	72	1.85	0.93
				120	0.45	54.0	1.00	4,000	74	1.85	0.93
	2	<b>EC5 T550 J UNV 2</b>	J	277	0.36	99.7	1.00	8,000	80	1.00	1.00
				240	0.42	100.8	1.00	8,000	79	0.99	0.99
				120	0.84	100.8	1.00	8,000	79	0.99	0.99
55W (20.7 in)	1	<b>EC5 T555 J UNV 1</b>	J	277	0.20	55.4	0.90	4,320	78	1.62	0.89
				240	0.23	55.2	0.90	4,320	78	1.63	0.90
				120	0.46	55.2	0.90	4,320	78	1.63	0.90
	2	<b>EC5 T555 J UNV 2</b>	J	277	0.40	110.8	0.90	8,640	78	0.81	0.90
				240	0.46	110.4	0.90	8,640	78	0.82	0.90
				120	0.92	110.4	0.90	8,640	78	0.82	0.90

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

<sup>††</sup>Ballast ships with leads.



# T4 Compact

## Hi-lume® (1% dimming) 120 V and 277 V dimming ballasts

- World's only 1% dimming ballast for T4 lamps
- Compatible with Lutron 3-wire fluorescent controls
- Energy saving

Lamp Watts	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
26W (Triple Tube)	1	<b>HL3-T426-277-1-S<sup>‡</sup></b>	A	277	0.12	33.2	0.95	1,710	51	2.86	0.74
		<b>HL3-T426-120-1-S<sup>‡</sup></b>		120	0.26	31.2	0.95	1,710	55	3.04	0.79
32W (Triple Tube)	1	<b>HL3-T432-277-1-S<sup>‡</sup></b>	A	277	0.13	36.0	0.95	2,280	63	2.64	0.84
		<b>HL3-T432-120-1-S<sup>‡</sup></b>		120	0.35	37.2	0.95	2,280	61	2.55	0.82

Select Hi-lume ballasts have been discontinued.

\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

<sup>‡</sup>Mounting studs standard. Delete -S suffix in the model number if mounting studs are not needed.

# Ballasts by lamp type

## T4 Compact (continued)

<b>EcoSystem® (5% dimming) universal voltage digital dimming ballasts</b>												
<ul style="list-style-type: none"> <li>• High performance 5% dimming</li> <li>• Universal input voltage</li> <li>• Compatible with Lutron 3-wire fluorescent controls and EcoSystem digital controls</li> <li>• Energy saving</li> </ul>												
Lamp Watts	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)**	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)	
18W (Triple/ Quad Tube)	1	<b>EC3D T418 K U 1 S<sup>‡</sup></b>	K	277	0.08	20.8	0.95	1,140	55	4.57	0.82	
				240	0.09	21.4	0.95	1,140	53	4.44	0.80	
				120	0.18	21.3	0.95	1,140	54	4.46	0.80	
	2	<b>EC3D T418 K U 2 S<sup>‡</sup></b>	K	277	0.15	39.9	0.95	2,280	57	2.38	0.86	
				240	0.17	39.4	0.95	2,280	58	2.41	0.87	
				120	0.34	41.1	0.95	2,280	56	2.31	0.83	
26W (Triple/ Quad Tube)	1	<b>EC3D T4MW K U 1 S<sup>‡</sup></b>	K	277	0.10	27.0	0.95	1,710	63	3.52	0.92	
				240	0.11	26.9	0.95	1,710	64	3.54	0.92	
				120	0.22	26.4	0.95	1,710	65	3.60	0.94	
	2	<b>EC3D T4MW K U 2 S<sup>‡</sup></b>	K	277	0.19	51.4	0.95	3,420	67	1.85	0.96	
				240	0.21	50.6	0.95	3,420	68	1.88	0.98	
				120	0.43	51.6	0.95	3,420	66	1.84	0.96	
32W (Triple Tube)	1	<b>EC3D T4MW K U 1 S<sup>‡</sup></b>	K	277	0.12	33.2	0.95	2,280	69	2.86	0.91	
				240	0.14	33.6	0.95	2,280	68	2.83	0.90	
				120	0.29	34.8	0.95	2,280	66	2.73	0.87	
	2	<b>EC3D T4MW K U 2 S<sup>‡</sup></b>	K	277	0.24	65.5	0.95	4,560	70	1.45	0.93	
				240	0.26	63.0	0.95	4,560	72	1.51	0.96	
				120	0.55	66.0	0.95	4,560	69	1.44	0.92	
42W (Triple Tube)	1	<b>EC3D T442 K U 1 S<sup>‡</sup></b>	K	277	0.15	42.6	0.95	3,040	71	2.23	0.94	
				240	0.18	42.7	0.95	3,040	71	2.23	0.93	
				120	0.36	43.2	0.95	3,040	70	2.20	0.92	
	2	<b>EC3D T442 K U 2 S<sup>‡</sup></b>	K	277	0.31	85.4	0.95	6,080	71	1.11	0.93	
				240	0.35	85.1	0.95	6,080	72	1.12	0.94	
				120	0.73	87.6	0.95	6,080	69	1.08	0.91	

\*For case type information see pages 42 and 43.

\*\*Factory-tuned ballast factors available.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

<sup>‡</sup>Mounting studs standard. Delete -S suffix in the model number if mounting studs are not needed.

## T4 Compact (continued)

<b>Compact SE™ (5% dimming) 120V and 277V dimming ballasts</b>											
<ul style="list-style-type: none"> <li>• High performance 5% dimming</li> <li>• Compatible with Lutron 3-wire fluorescent controls</li> </ul>											
Lamp Watts	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
18W (Triple/ Quad Tube)	1	<b>FDB-T418-277-1-S<sup>‡</sup></b>	A	277	0.08	22.2	0.95	1,140	51	4.29	0.77
		<b>FDB-T418-120-1-S<sup>‡</sup></b>	A	120	0.20	24.0	0.95	1,140	48	3.96	0.71
26W (Triple/ Quad Tube)	1	<b>FDB-T426-277-1-S<sup>‡</sup></b>	A	277	0.11	33.2	0.95	1,710	51	2.86	0.74
		<b>FDB-T426-120-1-S<sup>‡</sup></b>	A	120	0.30	31.2	0.95	1,710	55	3.04	0.79
32W (Triple Tube)	1	<b>FDB-T432-277-1-S<sup>‡</sup></b>	A	277	0.13	36.0	0.95	2,280	63	2.64	0.84
		<b>FDB-T432-120-1-S<sup>‡</sup></b>	A	120	0.35	37.2	0.95	2,280	61	2.55	0.82

Select Compact SE ballasts have been discontinued. Please visit [www.lutron.com/compactse](http://www.lutron.com/compactse) for information.

<b>Tu-Wire® (5% dimming) 120V dimming ballasts</b>											
<ul style="list-style-type: none"> <li>• High performance 5% dimming</li> <li>• Designed for retrofit applications</li> <li>• Compatible with Lutron Tu-Wire fluorescent controls</li> </ul>											
Lamp Watts	Lamps per Ballast	Model Number	Case Type*	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm) <sup>†</sup>	System Efficacy (lm/W) <sup>†</sup>	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
18W (Triple/ Quad Tube)	2	<b>2W-T418-120-2-S<sup>‡</sup></b>	B	120	0.41	49.2	0.95	2,280	46	1.93	0.70
26W (Triple/ Quad Tube)	1	<b>2W-T426-120-1-S<sup>‡</sup></b>	A	120	0.27	32.4	0.95	1,710	53	2.93	0.76
	2	<b>2W-T426-120-2-S<sup>‡</sup></b>	B	120	0.53	63.6	0.95	3,420	54	1.49	0.78
32W (Triple Tube)	1	<b>2W-T432-120-1-S<sup>‡</sup></b>	A	120	0.33	39.6	0.95	2,280	58	2.40	0.77
	2	<b>2W-T432-120-2-S<sup>‡</sup></b>	B	120	0.58	69.6	0.95	4,560	66	1.36	0.87

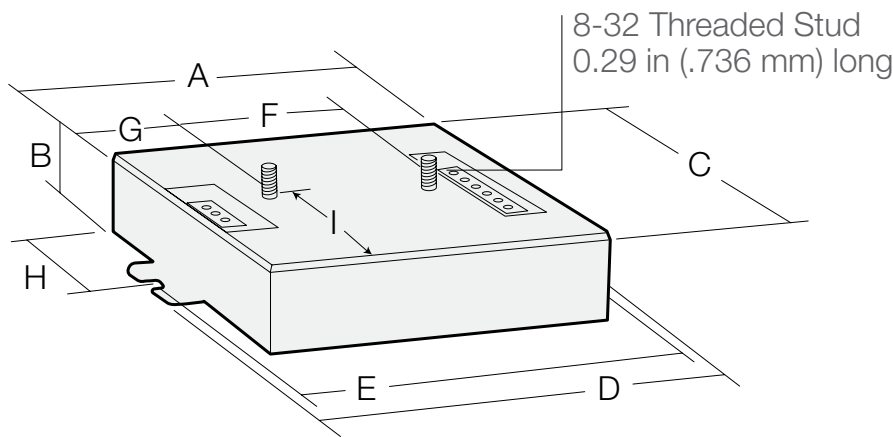
\*For case type information see pages 42 and 43.

<sup>†</sup>Actual number may vary with lamp model. Please consult the lamp manufacturer for lamp-specific data.

<sup>‡</sup>Mounting studs standard. Delete -S suffix in the model number if mounting studs are not needed.

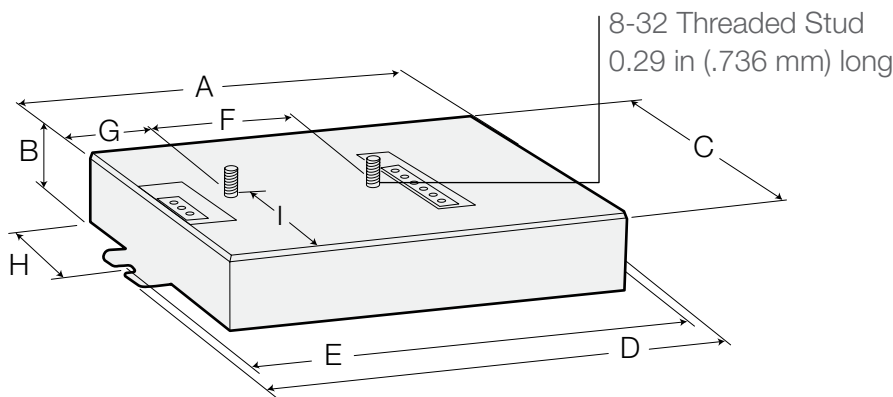
# Case types and dimensions

**A**



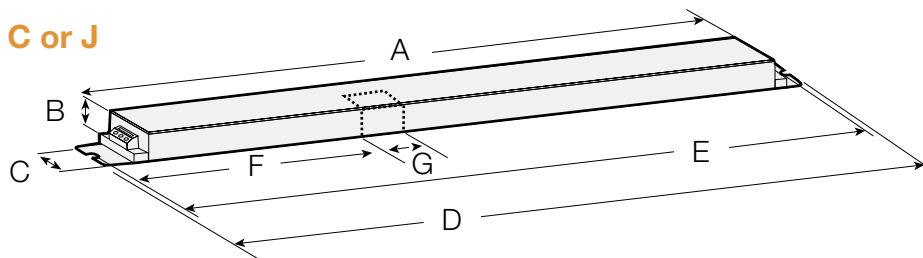
A	4.20 in (107 mm)
B	1.00 in (25 mm)
C	3.00 in (76 mm)
D	4.90 in (124 mm)
E	4.60 in (117 mm) C-C (mounting centers)
F	2.00 in (51 mm)
G	1.08 in (27 mm)
H	1.60 in (41 mm)
I	1.39 in (35 mm)

**B**



A	6.00 in (152 mm)
B	1.00 in (25 mm)
C	3.00 in (76 mm)
D	6.75 in (171 mm)
E	6.50 in (165 mm) C-C (mounting centers)
F	2.00 in (51 mm)
G	1.16 in (29 mm)
H	1.60 in (41 mm)
I	1.39 in (35 mm)

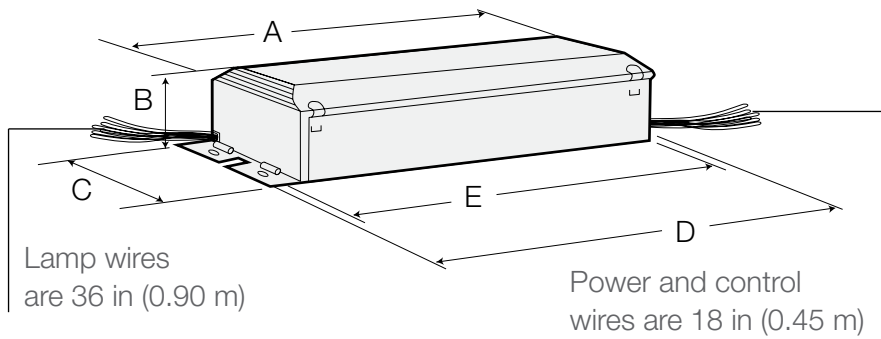
**C or J**



A	16.12 in (409 mm)
B	1.00 in (25 mm)
C	1.18 in (30 mm)
D	18.00 in (457 mm)
E	17.70 in (450 mm) C-C (mounting centers)
F	6.82 in (173 mm) (J only)
G	0.394 in (10 mm) (J only)

NOTE: Dotted area for sensor attachment applies for EcoSystem® J case only.

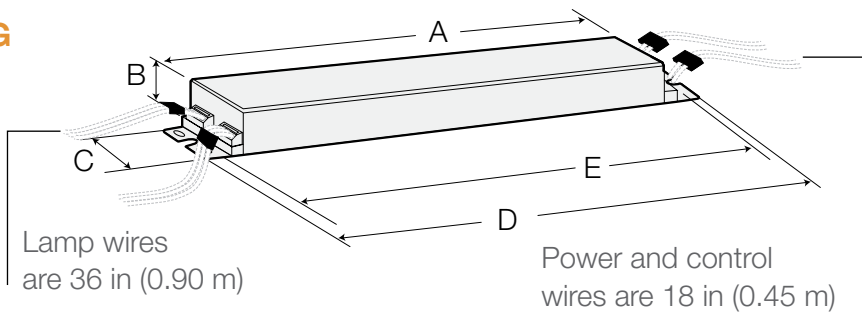
F



- A 8.30 in (211 mm)
- B 1.50 in (38 mm)
- C 2.38 in (60.5 mm)
- D 9.50 in (241 mm)
- E 8.91 in (226 mm)

Slot mounting centers  
 If using 4-hole mount, mounting centers are 9.21 in (234 mm) X 1.70 in (43 mm).

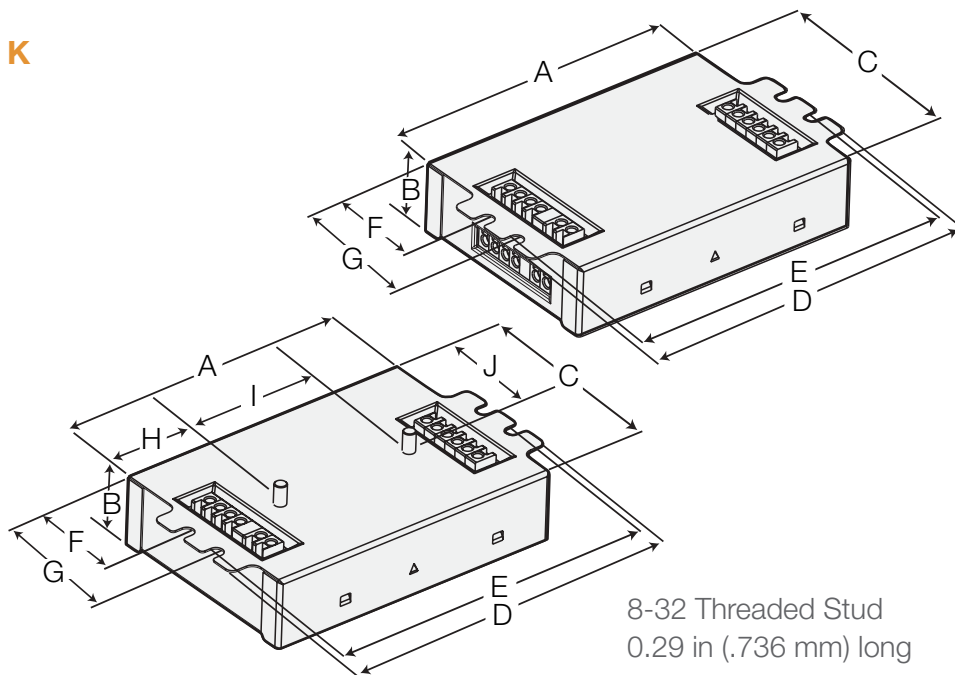
G



- A 7.13 in (181 mm)
- B 1.00 in (25 mm)
- C 2.38 in (60.5 mm)
- D 9.50 in (241 mm)
- E 8.91 in (226 mm)

Slot mounting centers  
 If using 4-hole mount, mounting centers are 9.00 in (229 mm) X 1.06 in (27 mm).

K



- A 4.20 in (107 mm)
- B 1.00 in (25 mm)
- C 3.00 in (76 mm)
- D 4.90 in (124 mm)
- E 4.60 in (117 mm)
- (mounting centers)
- F 1.42 in (36 mm)
- G 1.99 in (51 mm)

Side entry connector located on both sides

For Studded Models Only:

- H 1.09 in (28 mm)
- I 2.00 in (51 mm)
- J 1.60 in (41 mm)

# Control options



## Wallbox controls (3-wire control)

Lutron dimmers provide reliability and performance unsurpassed anywhere in the industry. The light control that comes with Lutron wallbox dimming is a wise investment and durable addition to any space that requires lighting control. Lutron dimmers are 100% quality tested and designed to meet the most demanding requirements.

### Fluorescent wallbox control options:

- Ariadni®
- Diva®
- Lyneo® LX
- Nova T®
- Maestro®
- Vareo®
- Verti®

[www.lutron.com/wallbox](http://www.lutron.com/wallbox)



## Maestro Wireless® (3-wire control)

With quick and easy setup, Maestro Wireless is a light control system that is ideal for creating custom solutions for residential and commercial spaces requiring retrofitability. Maestro Wireless uses reliable Lutron Clear Connect RF Technology™ which allows Pico® wireless controls and Radio Powr Savr™ sensors to communicate with dimmers and switches.

[www.lutron.com/maestrowireless](http://www.lutron.com/maestrowireless)



## PowPak™ dimming module with EcoSystem®

The PowPak dimming module with EcoSystem is a load controller that allows for easy integration of digital lighting loads with wireless occupancy and daylight sensors as well as wireless controls. It uses Lutron exclusive EcoSystem technology in intelligent fluorescent and LED lighting control solutions to create flexibility in a space that adjusts to the changing needs of any building.



### **GRAFIK Eye® QS with EcoSystem®**

Fully customizable, GRAFIK Eye QS adjusts lights and shades for any task or activity – at the touch of a button. You'll save energy while meeting the aesthetic, functional and regulatory needs of any project or space. GRAFIK Eye QS with EcoSystem includes direct control of EcoSystem, EcoSystem H-Series and Hi-lume® 3D ballasts. Now with wireless technology, GRAFIK Eye QS can also eliminate communication wiring to shades, sensors, and wireless controls.

[www.lutron.com/qs](http://www.lutron.com/qs)



### **Energi Savr Node™ with EcoSystem**

Energi Savr Node with EcoSystem allows for easy integration of occupancy sensors, daylight sensors and EcoSystem H-Series digital ballasts. It communicates with wireless devices through the new QS sensor module to minimize wiring for easy installation. Energi Savr Node with EcoSystem is simple to setup and manually customize and has the option of preconfigured occupancy sensing and daylight modes.

[www.lutron.com/esn](http://www.lutron.com/esn)



### **Quantum® Total Light Management**








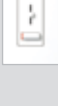
Quantum manages both electric light and daylight to not only save energy and simplify operations, but also to improve the comfort and productivity of the people in your building.

Quantum automatically dims or switches all electric lighting and controls daylight using automated window shades. It manages, monitors, and reports on all the lighting usage in your building for optimal energy performance and productivity while minimizing maintenance and operating costs.

[www.lutron.com/quantum](http://www.lutron.com/quantum)

# Control options by ballast type

3-wire controls for Hi-lume®, Hi-lume 3D,  
Compact SE™, Eco-10®, and EcoSystem® ballasts

	Control Family	Control Model Number	Description	Ballast Voltage	Control Capacity
	<b>Nova T<sup>☆</sup></b> Thin Profile Slide-To-Off Dimmer	<b>NTF-10-XX<sup>1</sup></b> <b>NTF-10-277-XX<sup>1</sup></b> <b>NTF-103P-XX<sup>1</sup></b> <b>NTF-103P-277-XX<sup>1</sup></b>	single pole single pole single pole, 3-way, preset single pole, 3-way, preset	120V 277V 120V 277V	16A 8A 8A 6A
	<b>Nova</b> Standard Profile Slide-To-Off Dimmer	<b>NF-10-XX<sup>1</sup></b> <b>NF-10-277-XX<sup>1</sup></b> <b>NF-103P-XX<sup>1</sup></b> <b>NF-103P-277-XX<sup>1</sup></b>	single pole single pole single pole, 3-way, preset single pole, 3-way, preset	120V 277V 120V 277V	16A 8A 8A 6A
	<b>Vareo</b> Tapswitch/Preset Slide Dimmer	<b>VF-10-XX<sup>1</sup></b>	single pole, 3-way	120V	8A <sup>4,5</sup>
	<b>Diva</b> Paddle Switch/Preset Slide Dimmer	<b>DVF-103P-XX<sup>2</sup></b> <b>DVF-103P-277-XX<sup>2</sup></b> <b>DVSCF-103P-XX<sup>3</sup></b> <b>DVSCF-103P-277-XX<sup>3</sup></b>	single pole, 3-way single pole, 3-way single pole, 3-way single pole, 3-way	120V 277V 120V 277V	8A 6A 8A 6A
	<b>Skylark</b> Rocker Switch/Preset Slide Dimmer	<b>SF-10P-XX<sup>2</sup></b> <b>SF-12P-277-XX<sup>2</sup></b> <b>SF-103P-XX<sup>2</sup></b> <b>SF-12P-277-3-XX<sup>2</sup></b>	single pole single pole single pole, 3-way single pole, 3-way	120V 277V 120V 277V	8A 6A 8A 6A
	<b>Ariadni</b> Toggle Switch/ Preset Slide Dimmer	<b>AYF-103P-XX<sup>2</sup></b> <b>AYF-103P-277-XX<sup>2</sup></b>	single pole, 3-way single pole, 3-way	120V 277V	8A 6A
	<b>Vierti</b> Single-Touch Lighting Control	<b>VTF-6AM-<sup>6</sup>-XX<sup>1</sup></b>	single pole, multi-location	120/277V	6A <sup>5,7</sup>
	<b>Lyneo Lx</b> Push-button Preset Slide Dimmer	<b>LXF-103PL-XX<sup>2,3</sup></b> <b>LXF-103PL-277-XX<sup>2,3</sup></b>	single pole, 3-way, preset single pole, 3-way, preset	120V 277V	8A 6A

1 Architectural matte finish

2 Gloss finish

3 Satin finish

4 Not to exceed 20 Lutron 3-wire dimming ballasts






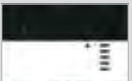

5 Must be derated if ganged

6 Insert LED bar color code

7 Not to exceed 60 Lutron 3-wire dimming ballasts



# 3-wire controls for Hi-lume®, Hi-lume 3D, Compact SE™, Eco-10®, and EcoSystem® ballasts











	Control Family	Control Model Number	Description	Ballast Voltage	Control Capacity
	<b>Maestro®</b> Digital Fade Tap Dimmer	<b>MAF-6AM-XX<sup>1</sup></b> <b>MAF-6AM-277-XX<sup>1</sup></b> <b>MSCF-6AM-XX<sup>2</sup></b> <b>MSCF-6AM-277-XX<sup>2</sup></b> <b>MA-R-XX<sup>1</sup></b> <b>MA-R-277-XX<sup>1</sup></b> <b>MSC-AD-XX<sup>2</sup></b> <b>MSC-AD-277-XX<sup>2</sup></b>	single, multi-location single, multi-location single, multi-location single, multi-location companion dimmer companion dimmer companion dimmer companion dimmer	120V 277V 120V 277V 120V 277V 120V 277V	20 ballasts/6A <sup>4,5</sup> 20 ballasts/6A <sup>4,5</sup> 20 ballasts/6A <sup>4,5</sup> 20 ballasts/6A <sup>4,5</sup> 6A 6A 6A 6A
	<b>Maestro Wireless®</b>	<b>MRF2-F6AN-DV-XX<sup>1</sup></b> <b>MA-R-XX<sup>1</sup></b> <b>MA-R-277-XX<sup>1</sup></b>	single, multi-location companion dimmer companion dimmer	120/277V 120V 277V	20 ballasts/6A 6A 6A
	<b>RadioTouch®</b> Wireless Multi-Zone Control	<b>Contact your Lutron representative for details</b>	controller wallbox transmitter tabletop transmitter	120/277V	16A
	<b>Spacer System®</b> Wireless Preset Scene Control	<b>SPSF-6A-XX<sup>1</sup></b> <b>SPSF-6A-277-XX<sup>1</sup></b> <b>SPSF-6AM-XX<sup>1</sup></b> <b>SPSF-6AM-277-XX<sup>1</sup></b> <b>SPS-4IT-RP</b>	single pole single pole multi-location <sup>7</sup> multi-location <sup>7</sup> remote control	120V 277V 120V 277V	6A <sup>5,6</sup> 6A <sup>5,6</sup> 6A <sup>5,6</sup> 6A <sup>5,6</sup>
	<b>GRAFIK Eye® QS</b> Light and Shade Control System	<b>Contact your Lutron representative for details</b>	control unit remote control (optional)	120/277V	16A per power module
	<b>GRAFIK Eye</b> Multi-Scene Preset Control	<b>Contact your Lutron representative for details</b>	control unit remote control (optional)	120/277V	16A per power module
	<b>Quantum®</b> Light Control System	<b>Contact your Lutron representative for details</b>	whole building light and energy management	120/277V	lighting hub Q-manager PC

1 Architectural matte finish  
2 Gloss finish  
3 Satin finish  
4 Not to exceed 20 Lutron 3-wire dimming ballasts

5 Must be derated if ganged  
6 Wallbox transmitter may be powered by 120 or 277V  
7 Also requires companion dimmers SPS-AD- or SPS-AD-277- for multi-location dimming (10 maximum)

# Control options by ballast type

## 2-wire controls for Tu-Wire® ballasts

	Control Family	Control Model Number	Description	Ballast Voltage	Control Capacity
	<b>Nova T</b> ® Thin Profile Slide-To-Off Dimmer	<b>NTFTU-5A-XX</b> <sup>1</sup> <b>NTFTU-5A-277-XX</b> <sup>1</sup>	single pole	120/ 277 V	5 A <sup>3</sup>
	<b>Nova</b> ® Standard Profile Slide-To-Off Dimmer	<b>NFTU-5A-XX</b> <sup>1</sup>	single pole	120 V	5 A <sup>3</sup>
	<b>Diva</b> ® Paddle Switch/ Preset Slide Dimmer	<b>DVFTU-5A3P-XX</b> <sup>2</sup> <b>DVSCFTU-5A3P-XX</b> <sup>2</sup>	single pole, 3-way	120 V	5 A <sup>3</sup>
	<b>Skylark</b> ® Rocker Switch/ Preset Slide Dimmer	<b>SFTU-5A3P-XX</b> <sup>2</sup>	single pole, 3-way	120 V	5 A <sup>3</sup>
	<b>RadioRA</b> ® Wireless Digital Fade Tap Dimmer	<b>RAN-FTU-5A</b>	single, multi-location	120 V	5 A <sup>3</sup>
	<b>RadioTouch</b> ® Wireless Multi-Zone Control	<b>Contact your Lutron representative for details</b>	controller wallbox transmitter tabletop transmitter	120 V	16 A <sup>3</sup>
	<b>Spacer System</b> ® Wireless Preset Scene Control	<b>SPSFTU-5A-XX</b> <sup>2</sup> <b>SPS-4IT-RP</b>	single pole remote control	120 V	5 A <sup>3</sup>
	<b>GRAFIK Eye</b> ® <b>QS</b> Light and Shade Control System	<b>QSG-</b> <sub>4</sub> <b>P120</b>	control unit remote control (optional)	120 V	16 A per unit, 6.7 A per zone
	<b>GRAFIK Eye</b> Multi-Scene Preset Control	<b>GRX-310</b> <sub>5</sub>	control unit remote control (optional)	120 V	16 A per unit, 6.7 A per zone
	<b>Quantum</b> ® Light Control System	<b>Contact your Lutron representative for details</b>	whole building light and energy management	120/ 277 V	lighting hub Q-manager PC

1 Architectural matte finish





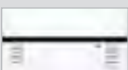

2 Gloss finish

3 Minimum capacity: 2 ballasts. Must be de-rated if ganged

4 Insert 3, 4, or 6 (number of zones)

5 Insert 2, 3, 4, or 6 (number of zones)

# Multi-input digital controls for Hi-lume® 3D, EcoSystem® H-Series and EcoSystem ballasts

	Control Family	Control Model Number	Description
	<b>EcoSystem</b> 1-Button with Raise/Lower	<b>CC-1BRL-WH<sup>1</sup></b>	wall control
	<b>EcoSystem</b> 4-Button with Raise/Lower	<b>CC-4BRL-WH<sup>1</sup></b>	wall control
	<b>PowPak™ dimming module with EcoSystem</b> Light control for single rooms	<b>RMJ-ECO32-DV-B</b>	remote-mount module
	<b>Energi Savr Node™ with EcoSystem</b> Multi-Zone Controller	<b>QSN-1ECO-S</b> <b>QSN-2ECO-S</b>	programmable module
	<b>GRAFIK Eye® QS with EcoSystem</b> Light and Shade Control System	<b>QSGRJ-<sup>2</sup>E</b> <b>GRX-IT</b>	control unit remote control (optional)
	<b>Quantum®</b> Whole-building light and energy management	<b>Contact your Lutron representative for details</b> <a href="http://www.lutron.com/quantum">www.lutron.com/quantum</a>	lighting hub Q-manager PC

1 Can only control EcoSystem ballasts directly. To control EcoSystem H-Series or Hi-lume 3D ballasts, Energi Savr Node with EcoSystem, Quantum, GRAFIK Eye with EcoSystem or PowPak dimming module with EcoSystem is required.

2 Gloss finish

# The Lutron® difference

## A history of sustainability, innovation, and quality



### **Sustainability**

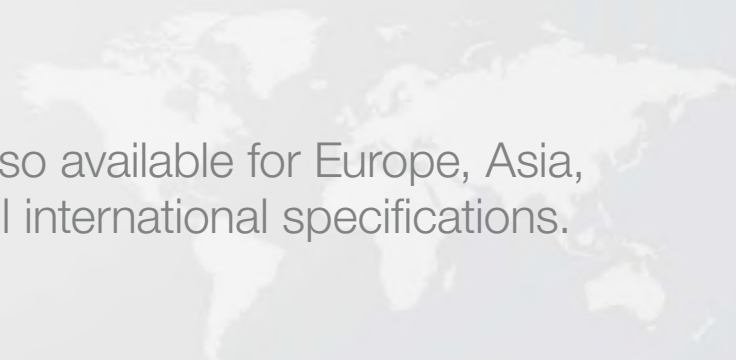
At Lutron, sustainability is not a new concept. Since 1961, we have been designing industry-leading technology that saves energy and reduces greenhouse gas emissions, and are a proud member of the U.S. Green Building Council.

### **Our philosophy**

Lutron is a company built on a belief in taking care of the people: customers, employees, and the community. We innovate in advance of emerging market needs and continually improve our quality, our delivery, and our value.

### **Innovation and quality**

Lutron owns over 1,700 patents and manufactures more than 15,000 products. For nearly 50 years, we have met and exceeded the highest standards of quality and service. Every one of our products is quality-tested before it leaves the factory.



Lutron products are also available for Europe, Asia, the Middle East and all international specifications.

save  
energy  
with  
Lutron™ ®