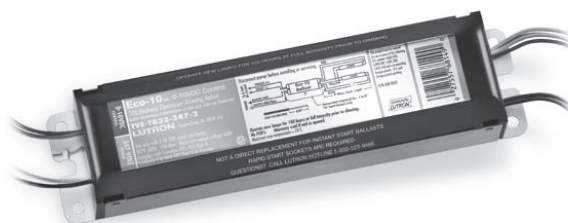


TVE Overview

The (*Eco-10*) TVE is a 10% fluorescent dimming ballast for applications using a 0-10 V control. TVE ballasts are also designed to work seamlessly with 0-10 V lighting management systems, including daylight harvesting and occupancy detection schemes.



Eco-10 TVE, case type F

2.38 in. W (60 mm) x 1.50 in. H (38 mm) x 9.50 in. L (241 mm)

Features

- Continuous, flicker-free dimming from 100% to 10%
- Low-voltage 0-10 V_{AC} control technology
- Models available for T8 lamps at 347 V
- Programmed rapid start design will preheat lamp cathodes before applying full arc voltage
- Lamps turn on to any dimmed level without flashing to full brightness
- Low harmonic distortion throughout the entire dimming range maintains power quality
- Frequency of operation ensures that ballast does not interfere with infrared devices operating between 38 and 42 kHz
- Inrush current limiting circuitry eliminate circuit breaker tripping, switch arcing, and relay failure
- Ballasts maintain consistent light output for different lamp lengths
- Ultra quiet operation
- Protected from miswires of any input power to control lead
- 100% compatible with all Lutron 0-10 V fluorescent controls
- 100% performance tested at factory
- 5-year limited warranty with Lutron field service commissioning (3-year standard warranty) from date of purchase

<p>Job Name:</p> <p>Job Number:</p>	<p>Model Numbers:</p>
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Specifications

Performance


- Dimming Range: 100% to 10% measured relative light output (RLO)
- Lamp Starting: programmed rapid start
- Minimum Lamp Starting Temperature: 50 °F (10 °C)
- Ambient Temperature Operating Range: 50 °F (10 °C) to 140 °F (60 °C)
- Relative Humidity: maximum 90% noncondensing
- Operating Voltage: 347 V, 60 Hz nominal line
- Dimming Control: Ballast must be dimmed using a low voltage ballast control. A maximum of 60 *Eco-10 TVE* ballasts can be wired to one control.
- Relays: If wiring for ON/OFF and dimming, the low-voltage control must be used with the Lutron PP-20 Power Pack
- Lamp Current Crest Factor: less than 1.7
- Lamp Flicker: none visible
- Light Output: constant ±2% light output for line voltage variations of ±10%
- Lamp Life: average lamp life meets or exceeds rating of lamp manufacturer
- Ballast Factor: greater than .85
- Power Factor: greater then .95
- Total Harmonic Distortion (THD): less than 20%
- Frequency of Operation: greater than 25 kHz
- Maximum Inrush Current: 7 amps per ballast at 120 V, 3 amps per ballast at 277 V and 347 V
- Sound Rating: Inaudible in a 27 dB ambient

Standards

- UL Listed (evaluated to the requirements of UL935)
- CSA certified (evaluated to the requirements of C22.2 No. 74)
- Class P thermally protected
- Meets ANSI C82.11 High Frequency Ballast Standard
- Meets FCC Part 18 Non-Consumer for EMI/RFI emissions requirements
- Meets ANSI C62.41 Category A surge protection standards to 4KV
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20
- Lutron Quality Systems registered to ISO 9001:2000

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TVE Ballast Models

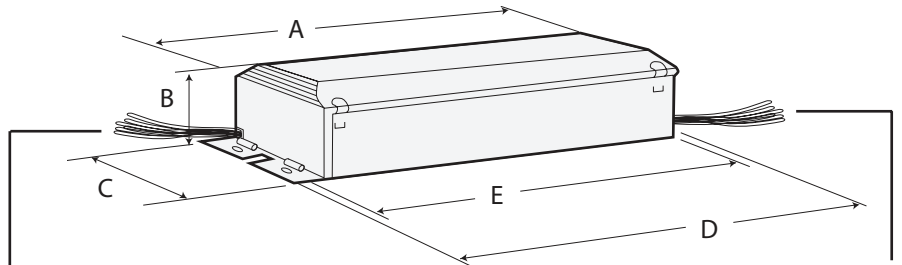
Lamp Type				347 VOLTS	
	Lamp Watts (length)	Lamps per ballast	Case Type	Ballast Current (amps)	TVE Model Number
T8 linear and U-bent  1 in. diameter	32 W (48 in)	1 2	F F	0.11 0.19	TVE-T832-347-1 TVE-T832-347-2



Job Name:	Model Numbers:
Job Number:	

Case Dimensions

F



Lamp wires are
35 in (0.90 m)

Power and control
wires are 18 in
(0.45 m)

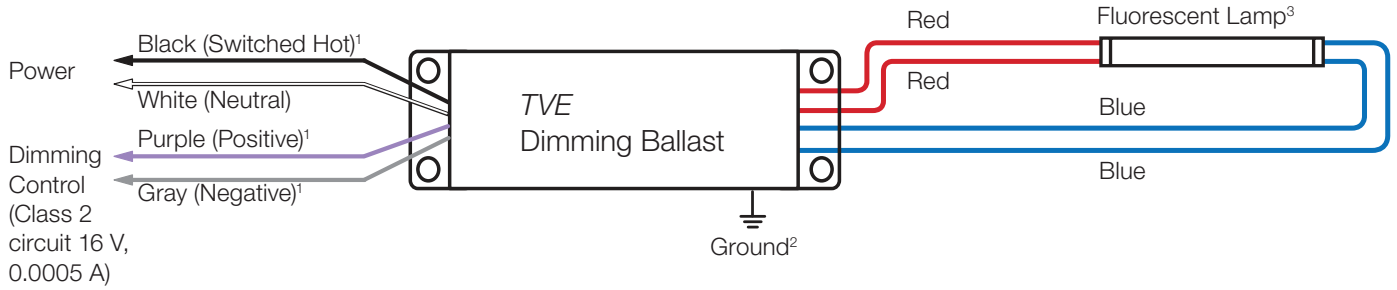
- A 8.30 in (211 mm)
- B 1.50 in (38 mm)
- C 2.38 in (60 mm)
- D 9.50 in (241 mm)
- E 8.91 in (226 mm)
(slot mounting centers)

If using four hole mount, mounting
centers are 9.21 in (234 mm) x
1.70 in (43 mm).

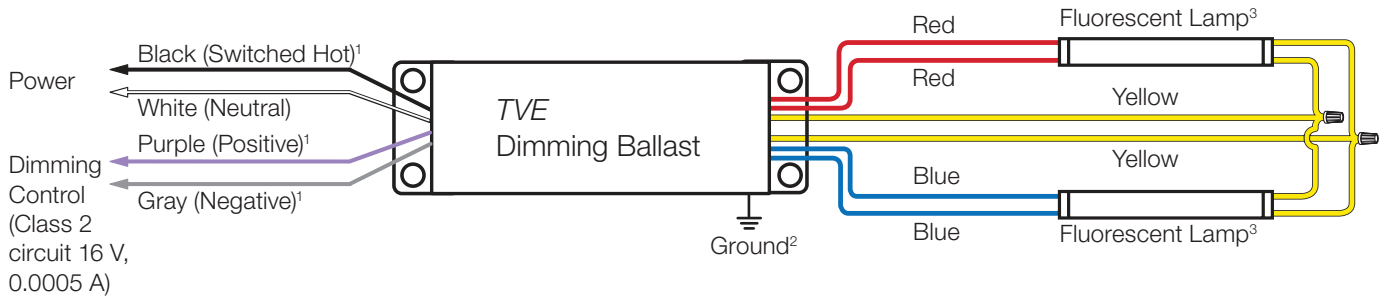
<p>Job Name:</p> <p>Job Number:</p>	<p>Model Numbers:</p>
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Wiring Diagrams

One T8 Lamp



Two T8 Lamps



¹ Dimming control wire colors do not necessarily match ballast wire colors (e.g. control “positive” may be blue and ballast “positive” may be purple). Wire colors shown are for Lutron ballasts and controls only.

² Ballast and lighting fixture must be effectively grounded.

³ Includes 6 in. T8 U-bent lamps.

Note: For T8 lamps, the maximum lamp-to-ballast wire length is 7 feet (2 m).

Job Name:	Model Numbers:
Job Number:	



ATTENTION ELECTRICIANS AND CONTRACTORS

Ballast/Socket Leads

Lead lengths from ballast to socket must not exceed 7 ft. (2 m) for T8 linear lamps.

Lamp Sockets

Quality lamp sockets are required to ensure positive lamp-pin to socket contact. T8 lamps require knife-edge sockets. U-bent lamps require locking sockets and proper lamp support to hold lamp pins in full contact with the socket.

Lamp Mounting for T8

Many fluorescent lamp sockets are available with mounting slots to vary the height of the lamp away from the grounded metal surface. Use these slots to get the lamp glass to be 1/2 in. ± 1/4 in. away from the grounded metal surface.

Having a fluorescent lamp too close to the grounded metal will make the minimum intensity too low and will reduce lamp life. Having a fluorescent lamp too far away from the grounded metal will make the lamp flicker or not turn on at all.

Ballast Operating Temperature

Ballast case temperature must not exceed 75 °C at any point on the ballast.

Wiring and Grounding

The low-voltage positive and negative wires from the dimming control to the ballast are Class 2 rated and need to be run separately from the power wires.

Power wires from the PP-20 to the dimming ballast is line voltage (Class 1).

Ballast and lighting fixture must be effectively grounded. Ballasts must be installed per national and local electrical codes.

Number of Ballasts Per Control

To calculate the maximum number of ballasts allowed per control, divide control's current capacity by individual ballast current. Certain controls allow a specific maximum number of ballasts.



ATTENTION FACILITIES MANAGERS

PERFORMANCE

Lamp Seasoning Requirements

Some fluorescent lamp manufacturers recommend that new fluorescent lamps be operated at full output ("seasoned") before they can be dimmed, to render lamp impurities inert, ensuring proper dimming performance and average rated lamp life. Please contact your lamp manufacturer for seasoning requirements.

SERVICE

Replacement Parts

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

Further Information

For further information, please visit us at www.lutron.com/ballasts or contact our 24-hour Technical Support Center at 1-800-523-9466.

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