

Hi-lume Compact™

Includes Hi-lume Compact SE Ballasts

5% HIGH PERFORMANCE
ELECTRONIC FLUORESCENT
DIMMING BALLASTS

120/277 Volt
T5 Twin Tube Compact Lamps
T4 Quad and Triple Tube

rev hi-compact-1a 3.7.01

3-Wire Control, 120, 277 Volt T5 Twin Tube Compact Lamps, T4 Quad Tube and T4 Triple Tube

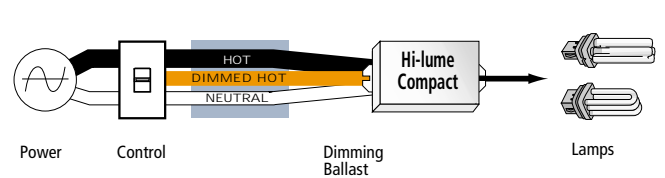
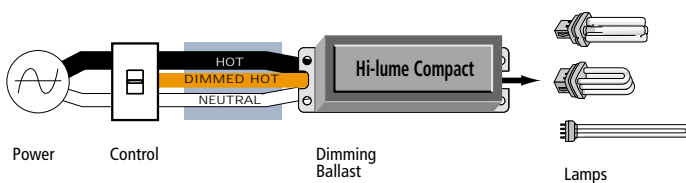


2.38" w (60mm) x 1.50" h (38mm) x 9.50" l (241mm)



T4 - One Lamp
3.00" w (76mm) x 1.00" h (25mm) x 4.90" l (124mm)

T4 - Two Lamp
3.00" w (30mm) x 1.00" h (25mm) x 6.75" l (171mm)



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DESCRIPTION

- Continuous, flicker-free, 100%-5% high-performance dimming to meet the needs of a wide variety of lighting designs
- 3-wire line-voltage control technology for consistent fixture-to-fixture dimming performance
- Low harmonic distortion throughout entire dimming range maintains power quality
- Inrush current limiting circuitry eliminates circuit breaker tripping, switch arcing, and relay failure
- Lamps turn on at any dimmed level without flashing to full light eliminates nuisance flashing
- Miswire protection eliminates potential failure caused by improper installation
- 100% performance tested prior to shipment
- 3-Year warranty
- Field service commissioning (optional) – extends warranty to 5 years (limited)
- Designed and assembled in the USA
- Ballasts that dim T4 compact fluorescent lamps are intended for factory installation by Lutron OEM fixture partners
- Ultra quiet operation

PERFORMANCE

- Dimming range: 100% - 5%
- T5 ballast factor > .85
- T4 ballast factor > .90
- Total harmonic distortion less than 10%
- Power factor greater than .95
- Lamp current crest factor less than 1.7
- Class A sound rating
- Maximum continuous ballast case operating temperature 75°C
- Minimum ballast starting temperature 10°C

STANDARDS

- UL listed, CSA approved, Class P thermally protected
- Meets ANSI C82.11 Ballast Standard
- Meets FCC Part 18 EMI/RFI requirements
- Meets ANSI C62.41 Category A surge protection standards
- ISO 9001 registered

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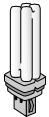

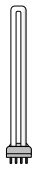
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DIMMING BALLASTS

120/277 Volt
T5 Twin Tube Compact Lamps
T4 Quad and Triple Tube

rev hi-compact-3a 3.7.01

HI-LUME COMPACT BALLASTS

LAMPS			120 VOLTS		277 VOLTS	
	WATTS/ LENGTH	LAMPS PER BALLAST	BALLAST CURRENT ¹	HI-LUME MODEL NUMBER	BALLAST CURRENT ¹	HI-LUME MODEL NUMBER
T4 4-PIN QUAD TUBE  1/2" Diameter	18W	1	.20A	FDB-CF18-120-1-B ²	.08A	FDB-CF18-277-1-
		2	.34A	FDB-CF18-120-2-B ²	.13A	FDB-CF18-277-2-B ²
		1	.20A	FDB-CF18-120-1-E ²	.08A	FDB-CF18-277-1-E ²
		2	.34A	FDB-CF18-120-2-E ²	.13A	FDB-CF18-277-2-E ²
	26W	1	.23A	FDB-CF26-120-1-B ²	.10A	FDB-CF26-277-1-B ²
		2	.44A	FDB-CF26-120-2-B ²	.18A	FDB-CF26-277-2-B ²
		1	.23A	FDB-CF26-120-1-E ²	.10A	FDB-CF26-277-1-E ²
		2	.44A	FDB-CF26-120-2-E ²	.18A	FDB-CF26-277-2-E ²
T4 4-PIN TRIPLE TUBE  1/2" Diameter	32W	1	.33A	FDB-CT32-120-1-B ²	.14A	FDB-CT32-277-1-B ²
		1	.33A	FDB-CT32-120-1-E ²	.14A	FDB-CT32-277-1-E ²
	42W	1	.39A	FDB-CT42-120-1-B ^{2,3}	.20A	FDB-CT42-277-1-B ^{2,3}
		1	.39A	FDB-CT42-120-1-E ^{2,3}	.20A	FDB-CT42-277-1-E ^{2,3}
T5 TWIN TUBE  5/8" Diameter	39W/16"	1	.33A	FDB-1643-120-1	.14A	FDB-1643-277-1
		2	.58A	FDB-1643-120-2	.25A	FDB-1643-277-2
		3	.85A	FDB-1643-120-3	.35A	FDB-1643-277-3
	40W/22"	1	.33A	FDB-2227-120-1	.14A	FDB-2227-277-1
		2	.61A	FDB-2227-120-2	.25A	FDB-2227-277-2
		3	.88A	FDB-2227-120-3	.38A	FDB-2227-277-3
	50W/22"	1	.38A	FDB-2243-120-1	.17A	FDB-2243-277-1
		2	.69A	FDB-2243-120-2	.32A	FDB-2243-277-2

¹ For maximum number of ballasts per control, divide the control's capacity by the sum total of all ballast currents.

² Suffix E or B in model number denotes wires exit END or BASE of Ballast.

Models with suffix B include mounting studs. Example: FDB-CF18-120-1-B.

³ Use Phillips 42W 4-pin lamp only (PL-T42W/4P). Contact Lutron for other lamps.



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Hi-lume Compact™

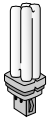

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T5 Twin Tube Compact Lamps

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HI-LUME COMPACT SE BALLASTS

LAMPS	120 VOLTS			
	WATTS/ LENGTH	LAMPS PER BALLAST	BALLAST CURRENT ¹	HI-LUME MODEL NUMBER
T4 4-PIN QUAD TUBE  1/2" Diameter	18W	2	.42A	FDB-T418-120-2-S
	26W	1 2	.26A .50A	FDB-T426-120-1-S FDB-T426-120-2-S
T4 4-PIN TRIPLE TUBE  1/2" Diameter	18W	2	.42A	FDB-T418-120-2-S
	26W	1 2	.26A .50A	FDB-T426-120-1-S FDB-T426-120-2-S
	32W	1 2	.31A .59A	FDB-T432-120-1-S FDB-T432-120-2-S

Suffix S denotes inclusion of 8-32 threaded mounting studs



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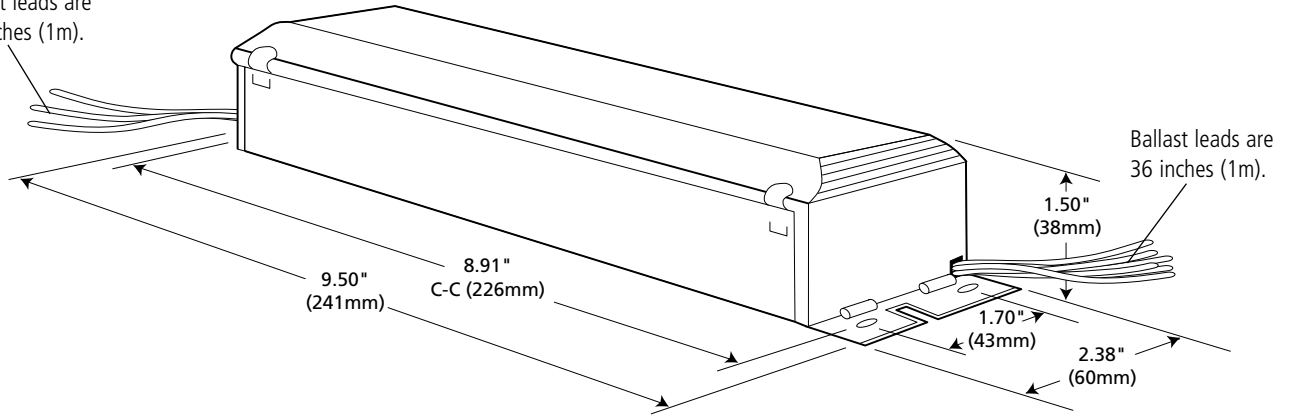
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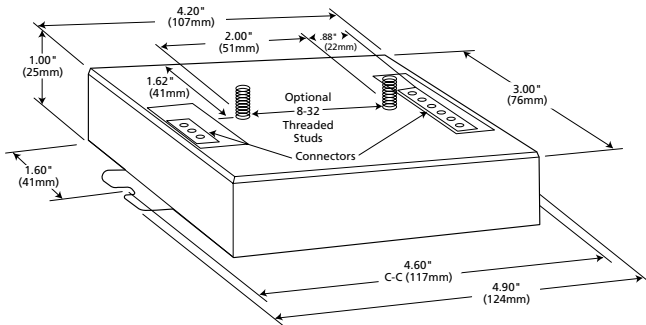
HI-LUME COMPACT™ BALLASTS

Ballast leads are
36 inches (1m).

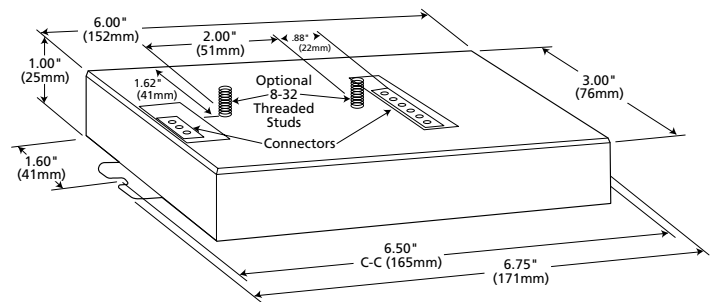


Note: For T4 Compact and T5 Twin Tube lamps, maximum lamp to ballast wire length is 3 feet (1m).

One Lamp T4 Compact Ballasts



Two Lamp T4 Compact Ballasts



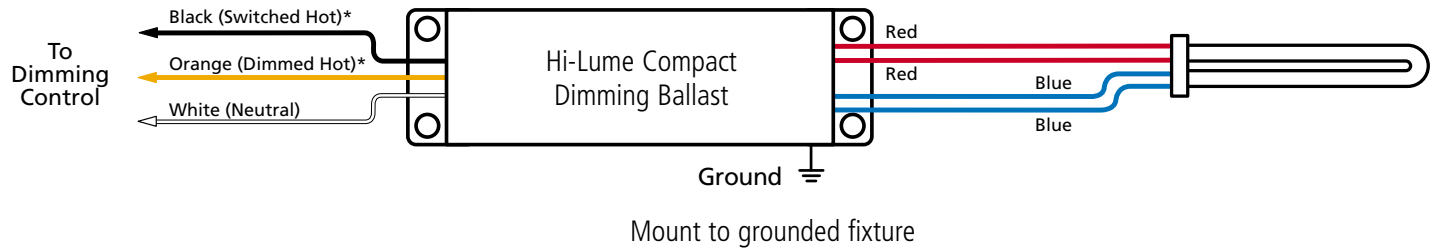
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BALLAST WIRING

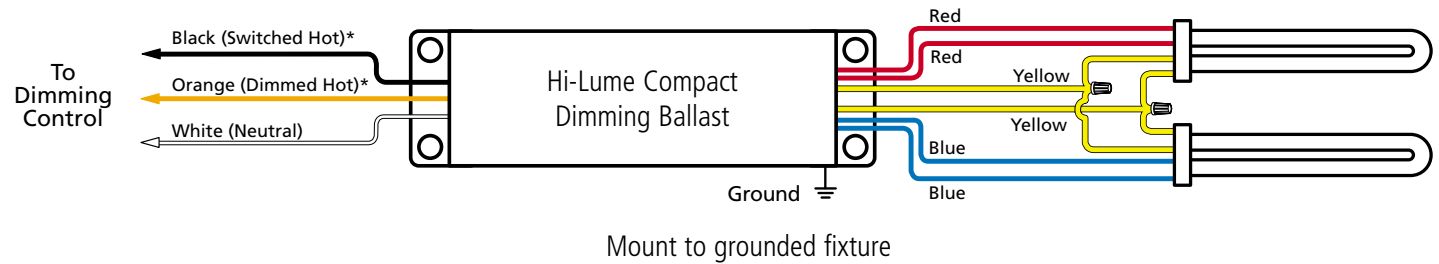
Note: For T5 Twin Tube Compact lamps, T4 Quad Tube and T4 Triple Tube maximum lamp to ballast wire length is 3 feet (1m).

Note: Wire colors shown are for Lutron controls and ballasts only.

One Lamp Compact Fluorescent



Two Lamp Compact Fluorescent



*Control wire colors do not necessarily match ballast wire colors (e.g. control "dimmed hot" may be yellow and ballast "dimmed hot" may be orange).

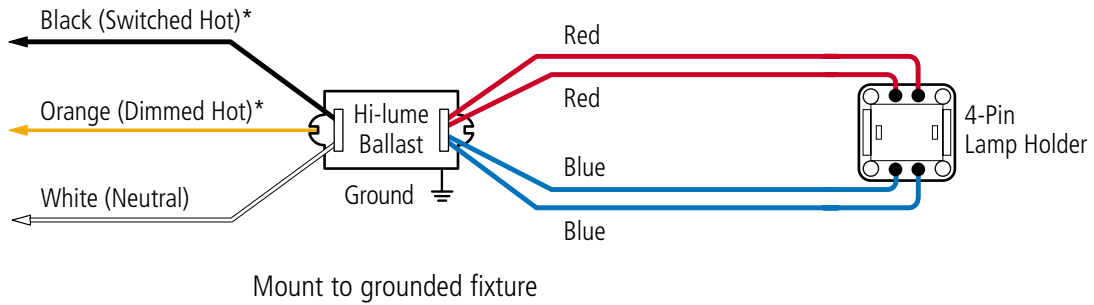
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BALLAST WIRING

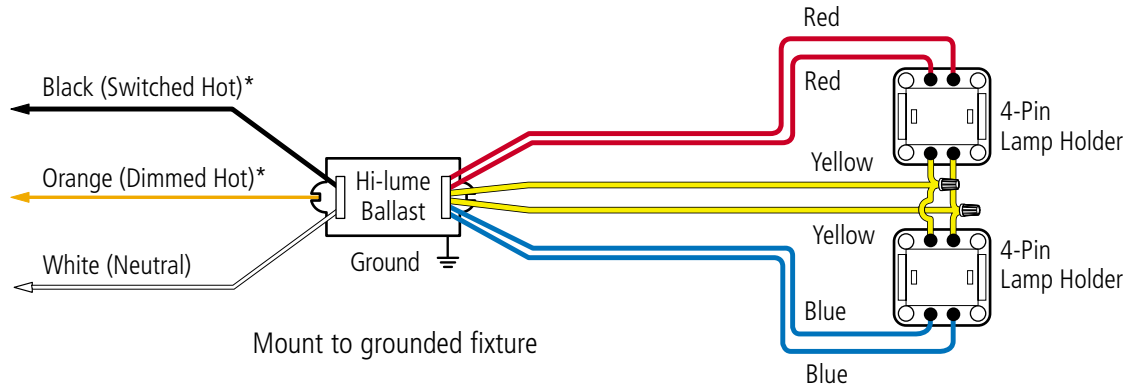
Note: Wire colors shown are for Lutron controls and ballasts only.

Note: For T5 Twin Tube Compact lamps, T4 Quad Tube and T4 Triple Tube maximum lamp to ballast wire length is 3 feet (1m).

One Lamp Compact Fluorescent



Two Lamp Compact Fluorescent



Control wire colors do not necessarily match ballast wire colors (e.g. control "dimmed hot" may be yellow and ballast "dimmed hot" may be orange).

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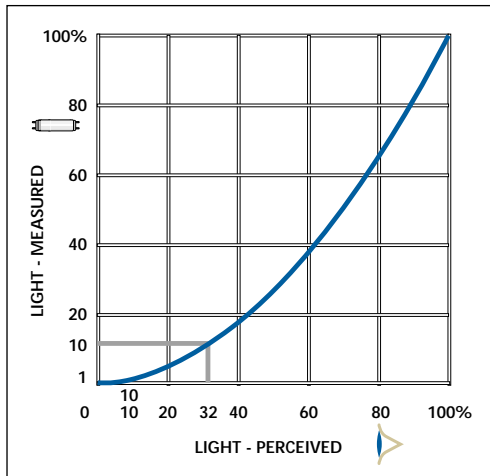


ATTENTION SPECIFIERS:

APPLICATION NOTES

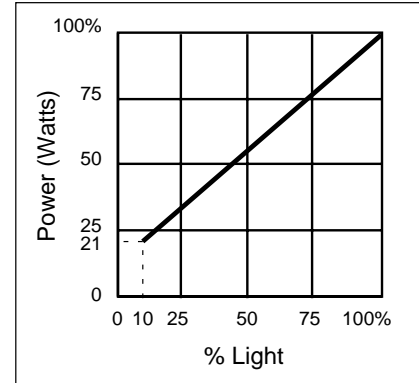
Perceived vs. Actual Light

An important aspect of lighting control is the difference between measured and perceived light levels. For example, a light dimmed to 10% output is perceived by the eye as 32%. A light dimmed to 1% is perceived as 10%. This "Square Law" phenomenon takes advantage of how the human eye functions to achieve significant energy savings, while improving the visual environment.



Power vs. Light

The nearly linear relationship between fluorescent light levels and power consumption saves energy proportionately as lights are dimmed.



SPECIFICATIONS

Rapid-Start Sockets Must Be Used

Rapid-start type sockets must be used to provide proper lamp filament heating and dimming operation.

Mixing Ballast and Lamps per Circuit

For optimal dimming performance, do not mix ballast lamp types (T4, or T8) on a given circuit.

Do not mix ballast types on a given circuit (i.e., mix Hi-lume with Eco-10 or Tu-Wire).

Number of Ballasts per Control

For maximum number of ballasts per control, divide control's current capacity by the individual ballast current. Certain controls also have a specific number of ballast maximums.

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**ATTENTION CONTRACTORS
AND ELECTRICIANS:**

INSTALLATION

Ballast/Socket Leads

Lead lengths from electronic dimming ballast to socket must not exceed 3' (0.9m) for T5 Twin Tube Compact, T4 Quad Tube and T4 Triple Tube lamps.

Lamp Mounting

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 outside edge of the lamp to be 1/2" +/- 1/4" 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.

Wiring and Grounding

All wiring from the dimming control to the Hi-lume® Ballasts is Class 1 and may be run together in the same conduit.

Ballast and lighting fixture must have a positive electrical contact with ground.

Ballasts must be installed per national and local electrical codes.



ATTENTION FACILITIES MANAGER:

PERFORMANCE

Lamps Must Be Seasoned

New Lamps must be operated ("seasoned") for 100 hours at full light output prior to dimming to achieve proper dimming performance and ensure average rated lamp life.

Ballast Operating Temperature

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

SERVICE

Replacement Parts

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

Further Information

Ballasts for other lamp types and voltages may be available; consult Lutron for further information.

For further information on dimming ballast applications, consult Lutron's Ballast Fluorescent Dimming Systems Guide (publication 366-606).

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