

Hi-lume® 3D Overview

Hi-lume® 3D architectural electronic dimming ballasts are designed to meet the most demanding lighting requirements. By providing industry leading performance with a full-range of 100% to less than 1% fluorescent dimming, Hi-lume® 3D ballasts enable you to provide the ideal visual environment for any application.

Features

- Continuous, flicker-free dimming from 100% to 0.7% for T8, 1% for T5 and T5HO, and 5% for T5 twin-tube.
- 100% compatible with all Lutron® 3-wire fluorescent controls and EcoSystem® digital controls for consistent fixture-to-fixture dimming performance.
- Compatible with Energi Savr Node™ with EcoSystem® devices, GRAFIK Eye® QS control unit, PowPak® dimming module with EcoSystem® connection, and Quantum® software, allowing for integration into an existing or planned EcoSystem® lighting control solution.
- Programmed rapid-start design preheats lamp cathodes before applying full arc voltage to ensure full-rated lamp life while dimming and cycling.
- Lamps turn on to any dimmed level without going 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 kHz and 42 kHz.
- Inrush current limiting circuitry eliminates circuit breaker tripping, switch arcing, and relay failure.
- Ballasts maintain consistent light output for different lamp lengths, ensuring fixture-to-fixture uniformity.
- Ultra-quiet operation.
- Ballast protected from miswires of any input power to control lead, or from lamp leads to each other and/or ground.



Hi-lume® 3D, case type C
 1.18 in (30 mm) W × 1.00 in (25 mm) H ×
 18.00 in (457 mm) L



Hi-lume® 3D, case type G
 2.38 in (60 mm) W × 1.00 in (25 mm) H ×
 9.50 in (241 mm) L

- 100% performance-tested and burned-in at factory.
- Non-volatile memory restores all ballast settings after power failure.
- Buy American Act (BAA) models available; see Model List for specific availability.
- RoHS compliant.
- NOM certified models available; see Model List for specific availability.
- Custom ballast factors available for UL® or CSA-listed products. Design tool and specifications can be found at www.lutron.com/ballasttool.

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

Regulatory Approvals

- California Energy Commission Listed*
- UL-listed (evaluated to the requirements of UL935)
- CSA certified (evaluated to the requirements of C22.2 No. 74) (specific model numbers only)
- Class P thermally protected
- Meets ANSI C82.11 High Frequency Ballast Standard
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- Meets ANSI C62.41 Category A surge protection standards up to and including 4 kV
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20
- Lutron® Quality Systems registered to ISO9001.2008

Environment

- Minimum lamp starting temperature: 50 °F (10 °C)
- Relative humidity: less than 90% non-condensing
- Sound Rating: Class A
- Maximum ballast case temperature: 75 °C

Ballast Wiring and Mounting

- Ballast is grounded via a mounting screw to the fixture
- Ballast mounts using two screws (or sheet metal feature and one screw) within a fluorescent fixture.
- Power and lamp wiring terminals accept one 18 to 16 AWG (0.75 to 1.5 mm²) solid copper wire per terminal.

Lamp Seasoning

- Refer to the lamp manufacturer's requirements for lamp seasoning requirements prior to dimming.

Warranty

- 5-year limited warranty with Lutron® field service commissioning (3-year standard warranty) from date of purchase. For additional Warranty information, please visit:
www.lutron.com/TechnicalDocumentLibrary/Ballast%20and%20Driver%20Warranty.pdf

Performance

- Dimming Range: 100% to 0.7% measured relative light output (RLO) for T8, 100% to 1% measured RLO for T5 and T5HO, and 100% to 5% measured RLO for T5 twin-tube.
- Lamp Starting: programmed rapid-start
- Lamp Current Crest Factor: less than 1.7
- Lamp Flicker: none visible
- Light Output Variation: constant ±2% light output for line voltage variations of ±10%
- Lamp Life: average lamp life meets or exceeds rating of lamp manufacturer
- Power Factor: greater than 0.95
- Typical Total Harmonic Distortion (THD) less than 10%**
- Maximum Inrush Current: 7 A per ballast at 120 V~, 3 A per ballast at 277 V~
- Operating Voltage: Universal input 120, 220/240, 277 V~ at 50/60 Hz
- Frequency of Operation: greater than 42 KHz
- Ballast Factor (BF): 1.0/1.17 for T8 lamps and 1.0 for T5, T5HO, and T5 twin-tube lamps

Dimming Range for T5 and T5HO lamps:

BF	Dimming Range (Max/Min [BF])	Dimming Ratio
1.0	1.00 / 0.01	100:1

Dimming Range for T8 lamps:

BF	Dimming Range (Max/Min [BF])	Dimming Ratio
1.17	1.17 / 0.0085	138:1
1.0	1.00 / 0.0085	118:1

Dimming Range for T5 Twin Tube lamps:

BF	Dimming Range (Max/Min [BF])	Dimming Ratio
1.0	1.00 / 0.05	100:5

* Not required for T5 twin tube models.

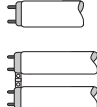
** Typical THD for models H3DT817CU110, H3DT514CU110 and H3DT521CU110 less than 15%.

Job Name:	Model Numbers:
Job Number:	

Hi-lume® 3D Ballasts for Linear and U-Bent T8 Lamps

For proper dimming, all lamps must comply with accepted standards: 17, 25, 32, 40 W (NEMA LL9-2009)

Not for use with reduced-wattage lamps.

Lamp Type	Lamp Watts (length)	Lamps per Ballast	Case Size	Hi-lume® 3D Model Number	Input Voltage (V~)	Ballast Current (A)	Ballast Factor (BF)	Input Power (W)	System Lumens ³ (lm)	System Efficacy ³ (lm/W)	Ballast Efficacy Factor (BEF)	Relative System Efficacy (RSE)
	40 W (60 in [1524 mm])	1	C	H3D T840 C U 1 10	120	0.38	1.00	43.8	3800	87	2.28	0.91
					240	0.18	1.00	43.0	3800	88	2.33	0.93
					277	0.16	1.00	42.8	3800	89	2.34	0.94
		1	C	H3D T840 C U 1 17	120	0.42	1.17	50.6	4446	88	2.31	0.92
					240	0.21	1.17	49.4	4446	90	2.37	0.95
					277	0.18	1.17	49.6	4446	90	2.36	0.92
		2	C	H3D T840 C U 2 10	120	0.76	1.00	90.9	7600	84	1.10	0.90
					240	0.37	1.00	88.4	7600	86	1.13	0.91
	277	0.32	1.00	88.9	7600	86	1.13	0.94				
	2	C	H3D T840 C U 2 17	120	0.85	1.17	100.3	8892	89	1.17	0.93	
				240	0.41	1.17	97.2	8892	92	1.20	0.96	
	277	0.36	1.17	98.2	8892	91	1.19	0.95				
	32 W (48 in [1219 mm])	1	C	H3D T832 C U 1 10 ^{1,2}	120	0.29	1.00	34.8	3000	86	2.87	0.92
					240	0.14	1.00	33.6	3000	89	2.98	0.95
					277	0.12	1.00	33.2	3000	90	3.01	0.96
			G	H3D T832 G U 1 10 ^{1,2}	120	0.30	1.00	34.8	3000	86	2.87	0.92
240					0.15	1.00	35.0	3000	86	2.85	0.91	
277					0.13	1.00	35.1	3000	85	2.85	0.91	
1		C	H3D T832 C U 1 17 ^{1,2}	120	0.34	1.17	40.8	3510	86	2.87	0.92	
				240	0.17	1.17	40.8	3510	86	2.87	0.92	
277		0.15	1.17	41.6	3510	84	2.82	0.90				
G		H3D T832 G U 1 17 ¹	120	0.34	1.17	39.7	3510	88	2.95	0.94		
			240	0.17	1.17	40.0	3510	88	2.92	0.94		
277		0.15	1.17	40.1	3510	88	2.92	0.93				
2		C	H3D T832 C U 2 10 ^{1,2}	120	0.57	1.00	68.4	6000	88	1.46	0.94	
				240	0.28	1.00	67.2	6000	89	1.49	0.95	
	277	0.24	1.00	66.5	6000	90	1.50	0.96				
	G	H3D T832 G U 2 10 ^{1,2}	120	0.58	1.00	68.9	6000	91	1.52	0.97		
240			0.28	1.00	66.3	6000	90	1.51	0.97			
277	0.24	1.00	66.5	6000	90	1.50	0.96					
2	C	H3D T832 C U 2 17 ^{1,2}	120	0.65	1.17	78.0	7020	90	1.50	0.96		
			240	0.32	1.17	76.8	7020	91	1.52	0.98		
	277	0.28	1.17	77.6	7020	91	1.51	0.97				
	G	H3D T832 G U 2 17 ¹	120	0.67	1.17	75.4	7020	93	1.55	0.99		
240			0.31	1.17	76.5	7020	92	1.53	0.98			
277	0.28	1.17	76.9	7020	91	1.52	0.97					
3	G	H3D T832 G U 3 10 ^{1,2}	120	0.83	1.00	99.6	9000	90	1.00	0.96		
			240	0.40	1.00	96.0	9000	94	1.04	1.00		
277	0.37	1.00	102.5	9000	88	0.98	0.94					
3	G	H3D T832 G U 3 17 ¹	120	0.95	1.17	114.0	10,530	92	1.03	0.99		
			240	0.47	1.17	112.8	10,530	93	1.04	1.00		
			277	0.41	1.17	113.6	10,530	93	1.03	0.99		

(Continued on next page)

Notes

- ¹ BAA models available. Add a "U" to prefix of model number when ordering (e.g., **UH3D T832 C U 1 10**).
- ² NOM approved models available. Add an "N" to suffix of model number when ordering (e.g., **H3D T832 C U 1 10N**).
- ³ Actual number may vary with lamp model. Please consult lamp manufacturer for lamp-specific data.

Job Name:	Model Numbers:
Job Number:	