

Catalog # :

Project :

Prepared By :

Date :

Type :



LPEC 2'x2' LED Low Profile Recessed Troffer



The LPEC's low profile design makes it ideal for shallow plenum applications. Best in class configurable lumen packages and efficiencies that target DLC Standard/Premium. This fixture delivers even illumination with excellent, low angle brightness control throughout the space. Available in 1x4, 2x2, and 2x4.

Features & Specifications

Optical System

- High transmission impact resistant diffuse acrylic radius lens eliminates bright spots from individual LED's and provides high vertical illumination and visual comfort.
- Use of closely spaced medium-power, high brightness chips minimizes pixelation and provides uniform lens luminance.
- Available in 5000K, 4000K, 3500K and 3000K color temperatures.
- Minimum CRI of 80. Optional 90 CRI available, consult factory for lead times.

Electrical

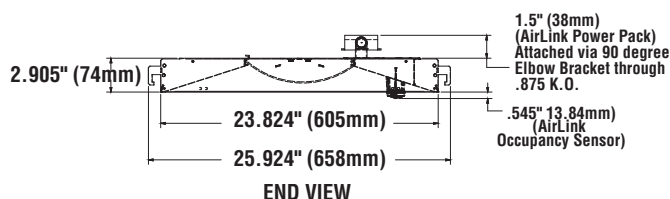
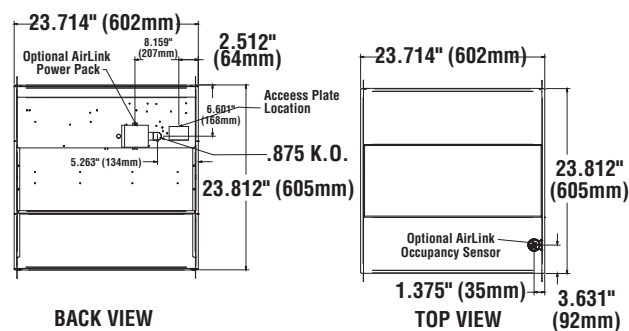
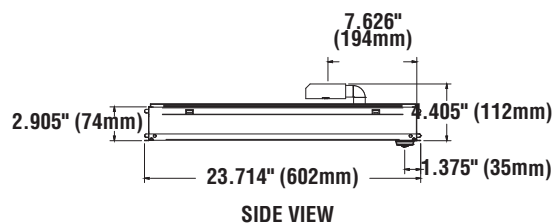
- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (1% - 100%) standard.
- Standard Universal voltage (120-277 Vac) Input 50/60 Hz or optional High voltage (347Vac).
- L70 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Power factor: >.95
- Input power stays constant over life.
- Optional 120v-277v integral emergency battery pack is available to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed in the housing for ease of maintenance.

Controls

- LSI AirLink™ controls featuring Lutron Clear Connect makes each luminaire controllable, creating a wireless communication with other AirLink™ control devices such as dimmers, switches, occupancy sensors and photocontrols. The integrated sensor is both a passive infrared motion detector and photocell. See Page 2 for coverage diagram.
- Step-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.
- Sensor Ready Drivers available; consult factory for limitations.



Dimensions





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Features & Specifications (Cont.)

Construction

- Rigid housing is die-formed 20-gauge cold rolled steel for consistency and strength.
- End plates come equipped with integral NEC compliant earthquake clips.
- Ultra-slim < 3" luminaire height and lightweight design effectively target a broad range of plenum/wall spaces and allow for easy installations.
- Below plenum room side access to optical chamber and driver compartment via pressure removable radius lens and side panel.
- Luminaire is proudly manufactured in the U.S.
- Luminaire is painted after fabrication following treatment with phosphate rust inhibitor. Finish coating of housing reflecting surfaces is with high-reflectance white (minimum 92%) polyester powder.

Installation

- Luminaire installs by lifting it through grid ceiling and resting it on the T-bars.
- Luminaire installs onto standard 15/16" and narrow 9/16" T-grid ceiling systems.
- An accessory flange kit is available for installing into drywall or plaster.

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on optional Battery Back Up. Test regularly in accordance with local codes.

Listings

- Listed to UL 1598 and UL 8750 for 25°C Ambient applications.
- IC Rated.
- RoHS Compliant.
- American Recovery and Reinvestment Act Funding Compliant.
- Lighting Facts Approved.
- Suitable For Damp Locations.

Performance

DELIVERED LUMENS*									
Lumens	3000K		3500K		4000K		5000K		Wattage
	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	
20L	1964	116.2	2078	123.0	2026	119.9	2238	132.4	16.9
25L	2491	117.0	2636	123.8	2570	120.7	2839	133.3	21.3
32L	3182	123.3	3367	130.5	3283	127.2	3627	140.6	25.8
39L	3763	123.0	3982	130.1	3882	126.9	4288	140.1	30.6
45L	4389	121.6	4644	128.6	4528	125.4	5002	138.6	36.1
50L	4937	121.3	5224	128.3	5093	125.1	5626	138.2	40.7
55L	5412	120.3	5727	127.3	5584	124.1	6168	137.1	45.0
60L	5831	120.0	6170	127.0	6016	123.8	6646	136.7	48.6
65L	6316	118.9	6683	125.9	6516	122.7	7198	135.6	53.1
70L	6895	117.7	7296	124.5	7113	121.4	7857	134.1	58.6
75L	7341	122.4	7768	129.5	7574	126.2	8367	139.4	60.0
80L	7760	121.6	8211	128.7	8006	125.5	8844	138.6	63.8

*LED Chips are frequently updated therefore values are nominal.

ELECTRICAL DATA*						
Lumens	Watts	120V	208V	240V	277V	347V
20L	16.9	0.1408	0.0813	0.0704	0.0610	0.0487
25L	21.3	0.1775	0.1024	0.0888	0.0769	0.0614
32L	25.8	0.2150	0.1240	0.1075	0.0931	0.0744
39L	30.6	0.2550	0.1471	0.1275	0.1105	0.0882
45L	36.1	0.3008	0.1736	0.1504	0.1303	0.1040
50L	40.7	0.3392	0.1957	0.1696	0.1469	0.1173
55L	45	0.3750	0.2163	0.1875	0.1625	0.1297
60L	48.6	0.4050	0.2337	0.2025	0.1755	0.1401
65L	53.1	0.4425	0.2553	0.2213	0.1917	0.1530
70L	58.6	0.4883	0.2817	0.2442	0.2116	0.1689
75L	60	0.5000	0.2885	0.2500	0.2166	0.1729
80L	63.8	0.5317	0.3067	0.2658	0.2303	0.1839

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

RECOMMENDED LUMEN MAINTENANCE ¹					
Ambient Temp C	0 hrs. ²	25K hrs. ²	50K hrs. ³	75K hrs. ³	100K hrs. ³
25	100.00%	94.70%	91.70%	88.80%	85.99%

1 - Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

APPLICATION REFERENCE*						
Lumens	Spacing	Lumens	LPW	W/FT ²	Avg Fc	# of Luminaires
32L	10' x 8'	3231	115	0.353	37	20
32L	8' x 8'	3231	115	0.441	47	25
32L	8' x 6'	3231	115	0.529	56	30

*Based on a 9' Mtg.Ht., 4K color Temp, 80/50/20 reflectances, 2.5' work plane, LLF:1.0, 40' x 40' Room



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Luminaire Ordering Guide

TYPICAL ORDER EXAMPLE: **LPEC22 LED 32L UNV DIM1 40 ALC EM U**

Family/Size	LED Gen	Lumen Package*	Voltage	Driver	Color Temperature	Controls	Options	Packaging
LPEC22 - (2x2)	LED	20L - 2000	UNV - 120-277V	DIM1 - Dims to 1% (0-10 volt dimming)	30 - 3000K ^{3,4}	BLANK - (No Controls)	EM10- 10 watt Emergency Battery Backup	U - Single Pack JP - Job Pack
		25L - 2500						
		32L - 3200	L3D -Lutron Hi-Lume 1% ⁴	40 - 4000K	ALOS - AirLink Controller w/ Occupancy Sensor	FC15D - 6' 3/8" (5) #18 Leads (For Use In Dimming Applications)		
		39L - 3900					LDE5 - Lutron 5-Series ⁴	
		45L - 4500	SR - Sensor Ready ⁴	SD50 - Step Dimming Driver to 50%				
		50L - 5000			*Consult factory for programmable wattages and lumen packages.			
		55L - 5500	80L - 8000					
		65L - 6500		75L - 7500				
		70L - 7000	70L - 7000					
		75L - 7500		80L - 8000				
80L - 8000	*Consult factory for programmable wattages and lumen packages.							

Accessory Ordering Information (Accessories are field installed)

Description	Order Number
Flange Kit 2x2	FK22

AirLink™ Control Accessories				
Order as separate catalog number. Visit http://www.lsi-airlink.com for complete listing of AirLink™ controls.				
Wireless switches	Catalog number	Part Number	Wireless Occupancy Sensors	Part Number
On/Off & Raise Lower	ALWS 3B-(color)-KIT ²	6241032	Wireless 360° 400 ft ² , Ceiling Mount	624094
			Wireless 180° 3000 ft ² , Wall Mount	632617
Wireless Photocell controls	Catalog number	Part Number	Wireless 90° 2500 ft ² , Corner Mount	Part Number
On/Off & Dimming	ALCM-W-PC	624090	Wireless, Hallway 150 ft Length	632620
Commission Laser Kit (See Laser warnings)		634574		

Footnotes:

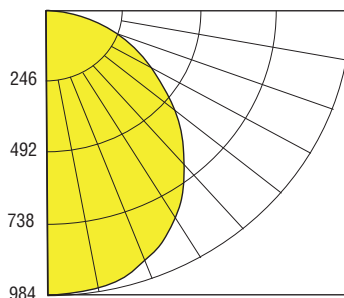
- 1 - Not available with AirLink
- 2 - Available colors are White, Ivory and Light Almond (WH, IV, LA)
- 3 - Consult Factory for lead times
- 4 - Consult with factory

Photometry

LPEC22 LED 32L 40

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See <http://www.lsi-industries.com/products/led-lighting-solutions.aspx> for detailed photometric data.



ZONAL LUMEN SUMMARY		
ZONE	LUMENS	% OF LUMINAIRE
0-20	362.0	11.0
0-30	783.0	23.8
0-40	1,307.2	39.8
0-60	2,411.5	73.4
0-80	3177.7	96.8
0-90	3,283.2	100.0
10-90	3,190.9	97.2
20-40	945.2	28.8
20-50	1,509.8	46.0
40-70	1,557.3	47.4
60-80	766.2	23.3
70-80	313.1	9.5
80-90	105.5	3.2
90-180	0.0	0
0-180	3,283.2	100.0



Controls



AirLink is LSI's wireless indoor lighting control system. This fixture is compatible with the AirLink system & contains a factory-installed fixture controller (ALC) & sensor (ALOS/ALVS). For further information on these components, you can view their specsheets at www.lsi-airlink.com/airlink

Applications

- Small offices, conference rooms, lounges, classrooms

Features

- Minimum Light Level Setting (optional). Certain applications, such as hallways, may require that the lights never turn off. For these areas, select the minimum light level option and the load will lower to programed low-end level
- Daylighting dims lights down to OFF. Occupancy sensor must go unoccupied (vacant) in order for the fixture sensor to turn the lights off
- Occupancy sensor timeout (fixture sensor): 15 minutes
- Power failure memory: If power is interrupted, connected loads will return to the previous level
- Low-end trim adjustment (default is 1V or ballasts/drivers minimum for Lutron EcoSystem ballasts/drivers). High-end trim adjustment (default is 10V or 100% for Lutron EcoSystem ballasts/drivers)
- Includes integrated power measurement circuit that provides data to the wireless hub with +/- 2% accuracy or 0.5W whichever is higher
- Passive infrared motion detection with exclusive Lutron XCT Technology for major and minor motion detection
- Up to 300 ft² (27.9 m²) major motion coverage and 150 ft² (13.9 m²) minor motion coverage & 360° field-of-view
- Daylight sensor has simple, automatic calibration straight out-of-the-box
- Designed to give a linear response to changes in perceived light level. Detects ambient light level changes from 0 to 150 fc (0 to 1600 lx)

Range

Wireless Sensors & Controls must be located within 60ft (18m) line of sight or 30ft (9m) through walls of the associated control module

Major motion: Movement of a person entering or passing through an area

Minor motion: Movement of a person occupying an area and engaging in small activities (e.g., reaching for a telephone, turning the pages of a book, etc.)

