

Catalog # :

Project :

Prepared By :

Date :

Type :



LPEC 2'x4'

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

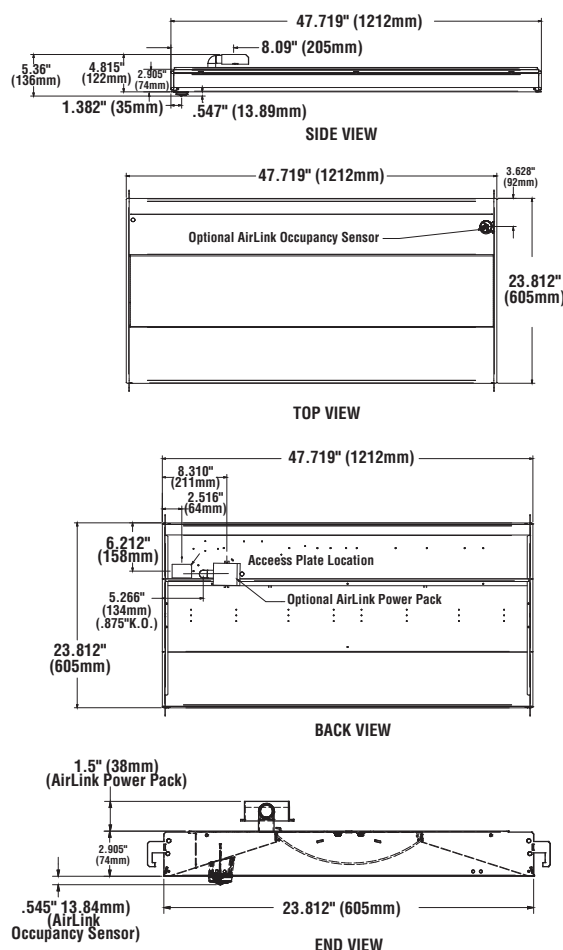
- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (1% - 100%) standard.
- Standard Universal voltage (120-277 Vac) Input 50/60 Hz or optional High voltage (347Vac).
- L70 Calculated Life: >100k Hours (See Lumen Maintenance 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.
- DesignLights Consortium® (DLC) Premium and/or standard qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- 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	
30L	2940	123.0	3070	128.5	3033	126.9	3264	136.6	23.9
35L	3440	122.0	3592	127.4	3549	125.9	3820	135.4	28.2
40L	3891	121.2	4063	126.6	4014	125.0	4320	134.6	32.1
48L	4700	129.5	4908	135.2	4849	133.6	5219	143.8	36.3
55L	5378	128.0	5616	133.7	5548	132.1	5971	142.2	42.0
60L	5873	126.8	6133	132.5	6059	130.9	6521	140.8	46.3
65L	6322	126.7	6602	132.3	6522	130.7	7019	140.7	49.9
72L	7120	124.9	7436	130.5	7346	128.9	7906	138.7	57.0
80L	7832	123.5	8179	129.0	8080	127.4	8696	137.2	63.4
85L	8314	129.3	8682	135.0	8577	133.4	9231	143.6	64.3
90L	8800	128.5	9190	134.2	9079	132.5	9771	142.6	68.5

*LED Chips are frequently updated therefore values are nominal.

ELECTRICAL DATA*							
Lumens	Watts	120V	208V	240V	277V	347V	
30L	23.9	0.199	0.115	0.100	0.086	0.069	
35L	28.2	0.235	0.136	0.118	0.102	0.081	
40L	32.1	0.268	0.154	0.134	0.116	0.093	
48L	36.3	0.303	0.175	0.151	0.131	0.105	
55L	42.0	0.350	0.202	0.175	0.152	0.121	
60L	46.3	0.386	0.223	0.193	0.167	0.133	
65L	49.9	0.416	0.240	0.208	0.180	0.144	
72L	57.0	0.475	0.274	0.238	0.206	0.164	
80L	63.4	0.528	0.305	0.264	0.229	0.183	
85L	64.3	0.536	0.309	0.268	0.232	0.185	
90L	68.5	0.571	0.329	0.285	0.247	0.197	

*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%	95.14%	92.57%	90.07%	87.64%

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
48L	12' x 10'	4848	134	0.363	45	16
48L	10' x 8'	4848	134	0.454	56	20
48L	10' x 6'	4848	134	0.544	67	24

*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: **LPEC24 LED 48L UNV DIM1 40 ALC EM U**

Family/Size	LED Gen	Lumen Package*	Voltage	Driver	Color Temperature	Controls	Options	Packaging
LPEC24 - (2x4)	LED	30L - 3000	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
		35L - 3500						
		40L - 4000	HV - 347V ¹	LDE1 - Hi-Lume 1% ⁴ (With Soft On Fade To Black)	35 - 3500K	ALC - AirLink Controller	FC1 - 6' 3/8" (3) #18 Leads (For Use In Non-Dimming Applications)	
		48L - 4800						
		55L - 5500	*Consult factory for programmable wattages and lumen packages.	L3D -Lutron Hi-Lume 1% ⁴ LDE5 - Lutron 5-Series ⁴ SR - Sensor Ready ⁴ SD50 - Step Dimming Driver to 50%	40 - 4000K	ALOS - AirLink Controller w/ Occupancy Sensor	FC15D - 6' 3/8" (5) #18 Leads (For Use In Dimming Applications)	
		60L - 6000						
		65L - 6500						
		72L - 7200						
		80L - 8000						
		85L - 8500						
90L - 9000								
90C - 90 CRI ^{3,4}								

Accessory Ordering Information (Accessories are field installed)

Description	Order Number
Flange Kit 2x4	FK24

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 ft², Ceiling Mount	624094
			Wireless 180° 3000 ft², Wall Mount	632617
Wireless Photocell controls	Catalog number	Part Number	Wireless 90° 2500 ft², Corner Mount	624096
On/Off & Dimming	ALCM-W-PC	624090	Wireless, Hallway 150 ft Length	632620
Commission Laser Kit (See Laser warnings)		634574		

Footnotes:

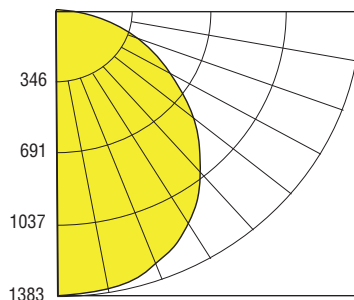
- 1 - Not available with AirLink
- 2 - Available colors are White, Ivory and Light Almond (WH, IV, LA)
- 3 - Consult Factory for lead times
- 4 - Consult with factory

Photometry

LPEC24 LED 48L 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	509.3	10.5
0-30	1,107.4	22.8
0-40	1,862.4	38.4
0-60	3,494.6	72.1
0-80	4,664.7	96.2
0-90	4,848.5	100.0
10-90	4,719.1	97.3
20-40	1,353.1	27.9
20-50	2,181.1	45.0
40-70	2,317.3	47.8
60-80	1,170.1	24.1
70-80	485.0	10.0
80-90	183.8	3.8
90-180	0.0	0
0-180	4,848.5	100.0



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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.)

