

LED Panel Lighting 50mm Series

Clean Room Specific: CLASS10/100/1000/10000

LPL-0512

Features

- Design for no dust (<50um) accumulation
- High brightness LED as light source
- Light effect
 - 2* fluorescent lamp
 - 1 row of LED on one LED BAR
- High Power efficiency
 - DC 24V input: >97%
 - DC 40V input: >96%
- Easy for installation and maintainance
- High conductive heat sink
- Built-in constant current driver
- Dimming is available per requirement
- Network control option
 - 485 BUS interface
 - IR remote controller interface
 - Wireless remote controller interface
- Driver integrated inside
- Color temperature option available
- Super-thin luminaire body

Applications

- Clean room per CLASS10/100/1000/10000 requirement for semiconductor, military, foods, pharmaceuticals, beverage etc
- Super-class hotel, shopping-mall, meeting room, office building

- House lighting
- Clean surgery room and VIP ICU

Standards compliable

- EN61347-1
- EN61347-2-12
- EN61000-3-2
- EN61003-3-3
- EN55015
- EN61547
- GB7000.X
- GB 50034-2004
- GBJ73-84

Product description

As a specific designed luminaire for clean room application, the luminaire is finely tuned for no dust accumulation purpose, with an invention patent for the new product.

220V AC input is connected directly to the driver; DC input of 24V and 40V are options with changing of driver.

The luminaire is fixed tightly to the ceiling by 4 screws for general purpose application; for CLASS10/100/1000/10000 clean room, epoxy is used to seam the edge between the luminaire and ceiling, to seam all holes for cable through, and installtion screws.

LED Panel Lighting 50mm Series

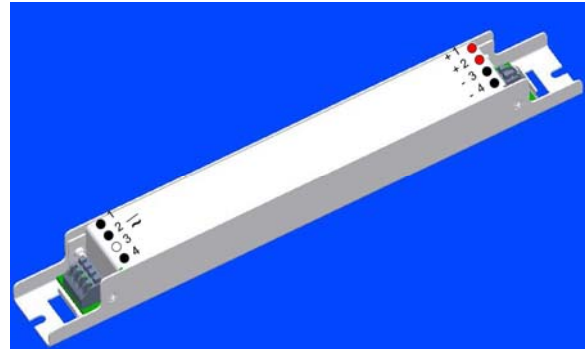
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LPL-0512

Light effect is like 2 fluorescent lamp without glare.

Long-time constant luminance is possible by inner timer PWM dimming of driver.

LED quantity has 10% margin per marked driver power.



Product Picture

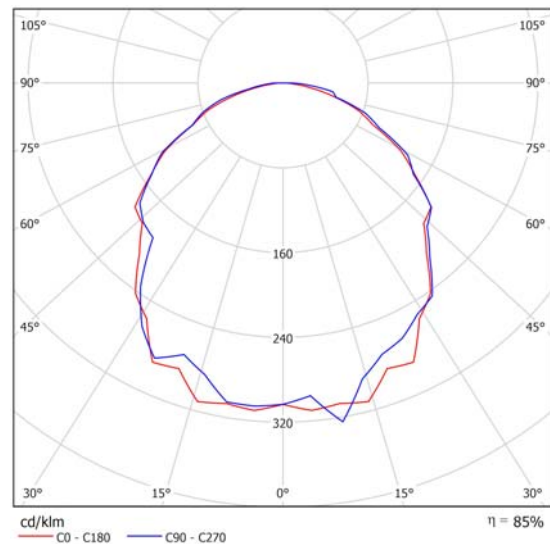


- Transparent part material option
 - PS
 - PC
- Transparent part effects
 - Carina crystal
 - Smooth transparent
 - Smooth transparent with white dapant
 - Curved surface

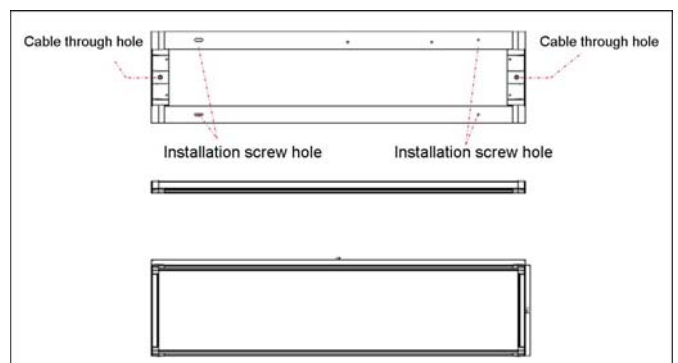
Connection Instruction

- Made from Al
- Fixed inside luminaire

Light Distribution Curve



Installation and Maintenance



The luminaire is an integrated product with few operations for installation and maintainance.

Installation steps:

LED Panel Lighting 50mm Series

Clean Room Specific: CLASS10/100/1000/10000

LPL-0512

- Remove the transparent part
- Fix 4 installation screws [different fixtures for different installation methods]
- Connect power cable
- Seam all holes
- Recover transparent part
- Seam the edges between luminaire and ceiling
- Power on

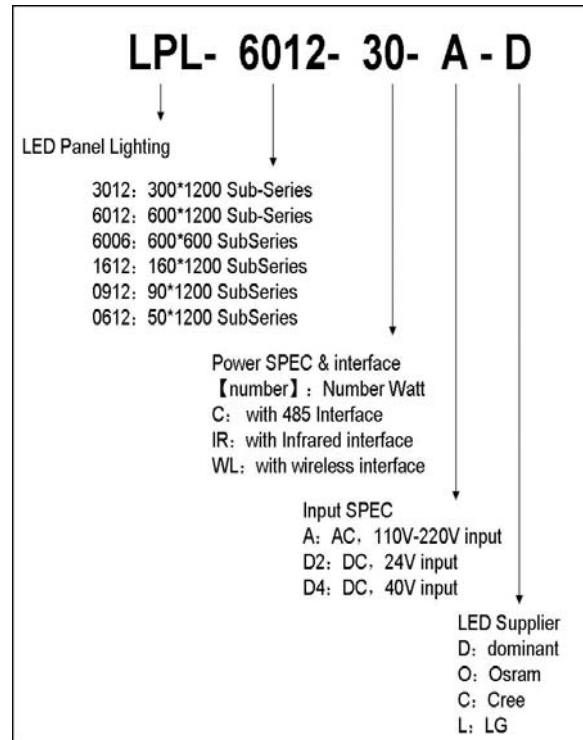
Nearly the same operations for maintenance, just replace the parts not working.

Certification

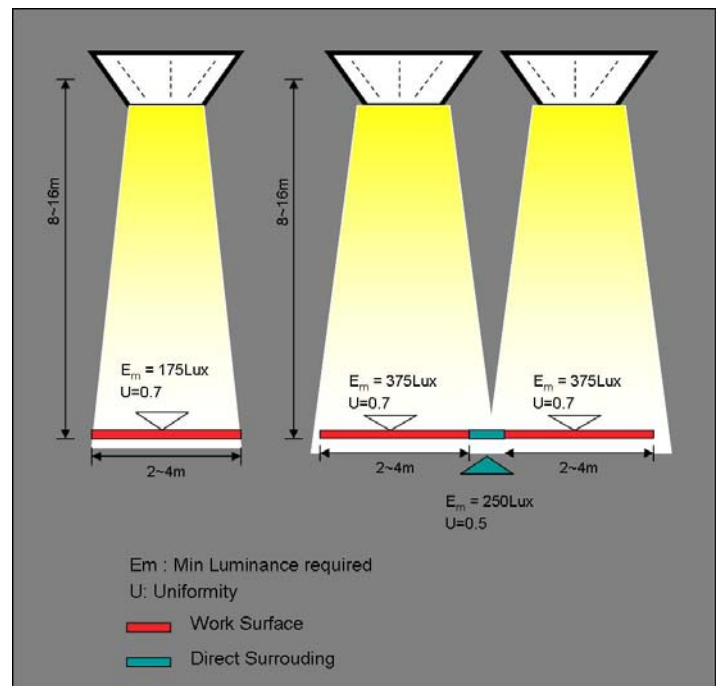
- CE (under test for approval)
- 3C (under test for approval)
- UL (under test for approval)

Ordering Guides

- Power SPEC can be extended to 40W
- Different installation fixtures are available with extra charge
- Different reflectors are available to meet luminance requirement with extra charge
- Different LED is available to meet CRI SPEC with extra charge
- Super-thin AC power driver is under development, only DC input driver is available



Application Demo



* Need adjustment of Power consumption

*Need extra reflector array, inside luminaire

LED Panel Lighting 50mm Series
Clean Room Specific: CLASS10/100/1000/10000
LPL-0512

Technical Parameters

LPL-0512-20

	Conditions	Unit	Min	Typ	Max
Mechanical parameters					
Length		mm		1198	1200
width		mm		48	50
Depth		mm		40	41
Highth, Cable hidden edge		mm		10	
Installation Screw holes		PCS		4	
Installation Cable holes		PCS		1	
Cable-lock clip		PCS		1	
Cable-lock clip -endurance		N		40	
Weight		Kg		1.2	
Electrical parameters					
Input Voltage-A		V	95	220	260
Input Voltage-D2				24	30
input voltage -D4				36	40
Output Voltage		V		22	24
Output Power		W		20	
Voltage Ripple		mV		150	
Switch Frequency		KHz		50	
Efficiency		%	85%		
Light Parameters					
LED TYPE				3528[4]	
LED Qty		PCS		84	
LED ARRAY				21*4	
LED Unit Format				7S3P	
Lum Flux Total	Test @25°C	Lm		1800	
Lum Flux Effective	Test @25°C	Lm	1500	1530	
Color Temperature		K	3500		6500
Color Rendering		Ra	68	70	
Light Angle		Degree	115	120	160
General					
Working temperature	Test @25°C	°C		42	
Working Life	Test @25°C	Year		3	

LPL-0512-30

	Conditions	Unit	Min	Typ	Max
Mechanical parameters					
Length		mm		1198	1200
width		mm		48	50
Depth		mm		40	41
Highth, Cable hidden edge		mm		10	
Installation Screw holes		PCS		4	
Installation Cable holes		PCS		1	
Cable-lock clip		PCS		1	
Cable-lock clip -endurance		N		40	
Weight		Kg		1.2	
Electrical parameters					
Input Voltage-A		V	95	220	260
Input Voltage-D2				24	30
input voltage -D4				36	40
Output Voltage		V		22	24
Output Power		W		30	
Voltage Ripple		mV		150	
Switch Frequency		KHz		50	
Efficiency		%	85%		
Light Parameters					
LED TYPE				3528[4]	
LED Qty		PCS		140	
LED ARRAY				35*4	
LED Unit Format				7S5P	
Lum Flux Total	Test @25°C	Lm		2700	
Lum Flux Effective	Test @25°C	Lm	2200	2295	
Color Temperature		K	3500		6500
Color Rendering		Ra	68	70	
Light Angle		Degree	115	120	160
General					
Working temperature	Test @25°C	°C		46	
Working Life	Test @25°C	Year		3	

LED Panel Lighting 50mm Series Clean Room Specific: CLASS10/100/1000/10000 LPL-0512

LPL-0512-40

	Conditions	Unit	Min	Typ	Max
Mechanical parameters					
Length		mm		1198	1200
width		mm		48	50
Depth		mm		40	41
Highth, Cable hidden edge		mm		10	
Installation Screw holes		PCS		4	
Installation Cable holes		PCS		1	
Cable-lock clip		PCS		1	
Cable-lock clip -endurance		N		40	
Weight		Kg		1.2	
Electrical parameters					
Input Voltage-A		V	95	220	260
Input Voltage-D2				24	30
input voltage -D4				36	40
Output Voltage		V		22	24
Output Power		W		40	
Voltage Ripple		mV		150	
Switch Frequency		KHz		50	
Efficiency		%	85%		
Light Parameters					
LED TYPE				3528[4]	
LED Qty		PCS		168	
LED ARRAY				42*4	
LED Unit Format				7S6P	
Lum Flux Total	Test @25°C	Lm		3600	
Lum Flux Effective	Test @25°C	Lm	3000	3060	
Color Temperature		K	3500		6500
Color Rendering		Ra	68	70	
Light Angle		Degree	115	120	160
General					
Working temperature	Test @25°C	°C		55	
Working Life	Test @25°C	Year		2	

* For requirement of Ra>70, there exist change of LED

Notes

- Though all the parts which hands can touch directly are under 24V, safe for operation with power on; the operation should be done by certified technicians
- The luminaire body has been connected to “GND” of AC input
- For cleaning, please use materials with “ESD Safety”
- Please do not focus eye on the luminaire for long time.

Company Information

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NOTE on Delivery Date and Price

BIN Tolerance	Price	Delivery Date
500K	Quotation *1.0	Normal Schedule
400K	Quotation *1.1	Schedule + 1 Weeks
300K	Quotation *1.3	Schedule + 4 Weeks
200K	Quotation *1.75	Schedule + 9 Weeks
100K	Quotation *2	Schedule + 12 Weeks

Product Series

NO.	Model	Function Description
1	LE-LPL-0512-40-D2	General purpose clean room luminaire, 40W, DC 24-28V input
2	LE-LPL-0512-30-D2	General purpose clean room luminaire, 30W, DC 24-28V input
3	LE-LPL-0512-20-D2	General purpose clean room luminaire, 20W, DC 24-28V input
4	LE-LPL-0512-40C-D2	Intelligent clean room luminaire, 40W, DC 24-28V input, 485 BUS interface
5	LE-LPL-0512-30C-D2	Intelligent clean room luminaire, 30W, DC 24-28V input, 485 BUS interface
6	LE-LPL-0512-20C-D2	Intelligent clean room luminaire, 20W, DC 24-28V input, 485 BUS interface
7	LE-LPL-0512-40IR-D2	Intelligent clean room luminaire, 40W, DC 24-28V input, Infrared transceiver
8	LE-LPL-0512-30IR-D2	Intelligent clean room luminaire, 30W, DC 24-28V input, Infrared transceiver
9	LE-LPL-0512-20IR-D2	Intelligent clean room luminaire, 20W, DC 24-28V input, Infrared transceiver
10	LE-LPL-0512-40WL-D2	Intelligent clean room luminaire, 40W, DC 24-28V input, wireless transceiver
11	LE-LPL-0512-30WL-D2	Intelligent clean room luminaire, 30W, DC 24-28V input, wireless transceiver
12	LE-LPL-0512-20WL-D2	Intelligent clean room luminaire, 20W, DC 24-28V input, wireless transceiver
13	LE-LPL-0512-40-D4	General purpose clean room luminaire, 40W, DC 32-40V input
14	LE-LPL-0512-30-D4	General purpose clean room luminaire, 30W, DC 32-40V input
15	LE-LPL-0512-20-D4	General purpose clean room luminaire, 20W, DC 32-40V input
16	LE-LPL-0512-40C-D4	Intelligent clean room luminaire, 40W, DC 32-40V input, 485 BUS interface
17	LE-LPL-0512-30C-D4	Intelligent clean room luminaire, 30W, DC 32-40V input, 485 BUS interface
18	LE-LPL-0512-20C-D4	Intelligent clean room luminaire, 20W, DC 32-40V input, 485 BUS interface
19	LE-LPL-0512-40IR-D4	Intelligent clean room luminaire, 40W, DC 32-40V input, Infrared transceiver
20	LE-LPL-0512-30IR-D4	Intelligent clean room luminaire, 30W, DC 32-40V input, Infrared transceiver
21	LE-LPL-0512-20IR-D4	Intelligent clean room luminaire, 20W, DC 32-40V input, Infrared transceiver

22	LE-LPL-0512-40WL-D4	Intelligent clean room luminaire, 40W, DC 32-40V input, wireless transceiver
23	LE-LPL-0512-30WL-D4	Intelligent clean room luminaire, 30W, DC 32-40V input, wireless transceiver
24	LE-LPL-0512-20WL-D4	Intelligent clean room luminaire, 20W, DC 32-40V input, wireless transceiver
25	LE-LPL-0512-40-A	General purpose clean room luminaire, 40W, AC 110-220V input
26	LE-LPL-0512-30-A	General purpose clean room luminaire, 30W, AC 110-220V input
27	LE-LPL-0512-20-A	General purpose clean room luminaire, 20W, AC 110-220V input
28	LE-LPL-0512-40C-A	Intelligent clean room luminaire, 40W, AC 110-220V input, 485 BUS interface
29	LE-LPL-0512-30C-A	Intelligent clean room luminaire, 30W, AC 110-220V input, 485 BUS interface
30	LE-LPL-0512-20C-A	Intelligent clean room luminaire, 20W, AC 110-220V input, 485 BUS interface
31	LE-LPL-0512-40IR-A	Intelligent clean room luminaire, 40W, AC 110-220V input, Infrared transceiver
32	LE-LPL-0512-30IR-A	Intelligent clean room luminaire, 30W, AC 110-220V input, Infrared transceiver
33	LE-LPL-0512-20IR-A	Intelligent clean room luminaire, 20W, AC 110-220V input, Infrared transceiver
34	LE-LPL-0512-40WL-A	Intelligent clean room luminaire, 40W, AC 110-220V input, wireless transceiver
35	LE-LPL-0512-30WL-A	Intelligent clean room luminaire, 30W, AC 110-220V input, wireless transceiver
36	LE-LPL-0512-20WL-A	Intelligent clean room luminaire, 20W, AC 110-220V input, wireless transceiver
37	LE-LPL-TSC	Touch Screen controller, embeded in wall, with 485 BUS interface
38	LE-LPL-IRC	Infrared controller
39	LE-LPL-WLC	Wireless controller
40	LE-LPL-IRTSC	Touch Screen controller, embeded in wall, with Infrared transceiver
41	LE-LPL-WLTSC	Touch Screen controller, embeded in wall, with wireless transceiver

*Black-word Series are ready for open market

*Red-word series have been developed per customers' requirement, please contact Engineering Solution Department for data



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LPL-0512
