15 MINUTE TRAINING MODULE 001

LED PANELS

Déluce LIGHTING

What is an LED Panel?

An LED Panel is a simple efficient luminaire used to illuminate open interior spaces, such as offices, reception areas, waiting rooms, class rooms and a host of other applications.

They can be side lit or back lit and provide a uniform soft spread of light.
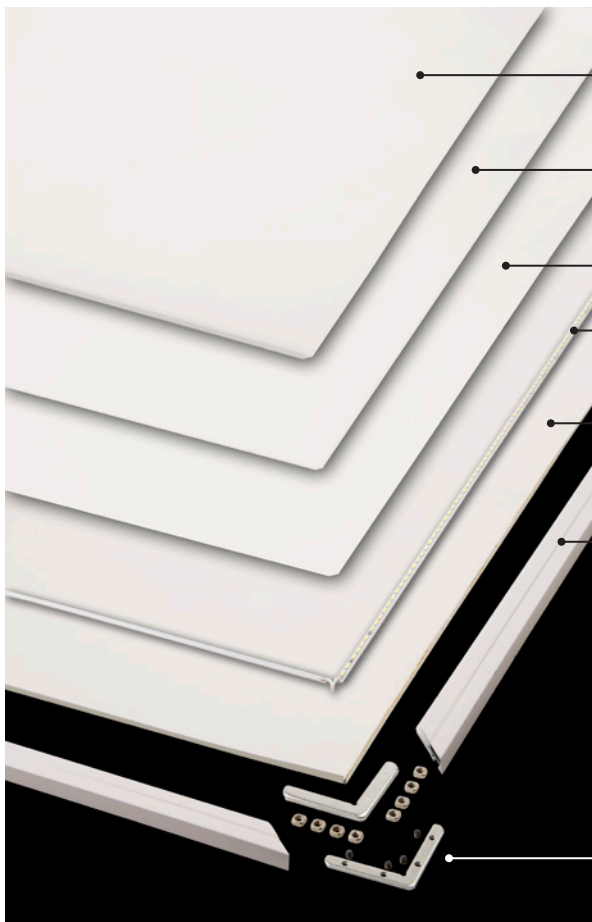
How is a side lit LED Panel constructed?

The Panel is made from 6 or 7 main elements:

1. Diffuser
2. Transmitter or Light Guide Panel (LGP)
3. Reflective Film
4. The LED Chips
5. Base Plate
6. Frame
7. Integral Hanging Fixtures (on top of the range Panels only)

A Driver is also required to power the panel.

The quality of the materials used in the manufacture of the panel will greatly affect and determine its performance and life expectancy.

1. High quality diffuser with excellent transmittance, can be supplied in PC, PMMA, PS or PP

2. High quality Light Transmitter or LGP (Light Guide Panel), can be supplied in PC, PMMA, PS or PP

3. Reflective Film

4. Edge mounted LED lighting strips

5. Lightweight Aluminium back plate, which improves heat dissipation, can also be manufactured in sheet steel

6. Extruded Aluminium Frame

Panel Driver

7. Integral Hanging Fixtures

PC	=	polycarbonate
PMMA	=	Acrylic
PP	=	Polypropylene
PS	=	Polystyrene

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How is an LED Panel mounted?

Panels are generally designed to sit within a standard 15mm or 25mm ceiling grid system.

However, surface mounting frames, recessing brackets and suspension systems are available to suit a wider range of installation solutions.

How are LED panels controlled?

Panels are controlled with a standard ON OFF switch.

Or by simply changing the driver, the panel can be controlled by a Triac dimmer, 0-10V or a Dali dimming system.

Please note: Dimmable drivers are required if the installation requires a dimming feature.

Can an LED Panel operate as an emergency fitting?

Yes, it's very easy to operate LED panels as emergency versions, with the introduction of an emergency pack.

With an emergency pack fitted the panel will operate and continue to illuminate for 3 hours in the event of a sudden power failure.

A small indicator light is provided with the pack, which must be mounted along side the panel. When illuminated, the light indicates that the emergency pack battery system is charging and operating correctly.

Emergency Pack

What are the advantages of LED Panels over conventional fluorescent modulars?

Efficiency is the main advantage of an LED panel. They can save as much as 50 to 60% of the power consumed by its equivalent fluorescent option.

Reduced maintenance costs due to the increased life span of the LED Chips over fluorescent tubes, typically 30,000 hours from the panel against 15,000 hours approximately from fluorescent tubes.

They also give a clean even spread of light, reducing shadows and give any space illuminated, a much brighter appearance.

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Are LED Panels supplied in specific sizes?

LED Panels are usually supplied to fit standard ceiling grids of 600mm x 600mm, 1200mm x 600mm and 1200mm x 300mm. However, many manufacturers can adapt panels and make bespoke sizes if required.

Are LED Panels supplied in specific colour temperatures?

LED Panels can be supplied to give a range of light appearances or colour temperatures. The most common colour temperatures are: Warm White (3000K), Cool White (4000K) and Daylight (6000K).

The latest developments in LED technology means the manufacturer can produce colour changing options in one LED Panel. So, users could change the colour in an area to match the mood, décor or season.

Examples of colour temperatures

The colour changing panels can also be dimmed to further enhance the lighting effects.

How long will LED Panels last?

LED Panels have a long expected life of between 30,000 hours and 50,000 hours, this is determined by the quality of the LED Chips and drivers

Energy savings?

		Total Watts Per Fitting	Kilowatts Consumed	Cost Per kWh	Cost Per Hour	Total Hours Used	Total Cost Per Fitting	Number of Fittings	Cost Per Day	Per Year (365 Days)
Existing Fittings	600x600 4x18W Modulars	88	0.088	£0.12	£0.0106	12	£0.13	100	£12.67	£4,625.28
Proposed Fittings	PAN66CWNONDIM	40	0.04	£0.12	£0.0048	12	£0.06	100	£5.76	£2,102.40

Proposed Savings Per Year	**£2,522.88**
Total Fitting Cost	**£3,000.00**
Payback in Years	**1.19**

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What's in the Déluce Lighting LED Panels Range?

Skylite LED 600x600mm Ceiling Panels

240V NON-DIMMABLE

36W - running at 40±2W (inc driver)

Product Code	Colour Temp	Lumens	Size (mm)
PAN66DLNONDIM	Daylight White (6000±200K)	3700	600 x 600
PAN66CWNONDIM	Cool White (4200±200K)	3600	600 x 600
PAN66WWNONDIM	Warm White (3000±200K)	3400	600 x 600

Skylite LED 1200x300mm Ceiling Panels

240V NON-DIMMABLE

36W - running at 40±2W (inc driver)

Product Code	Colour Temp	Lumens	Size (mm)
PAN66DL123ND	Daylight White (6000±200K)	3700	1200 x 300
PAN66CW123ND	Cool White (4200±200K)	3600	1200 x 300
PAN66WW123ND	Warm White (3000±200K)	3400	1200 x 300

Skylite LED 1200x600mm Ceiling Panels

240V NON-DIMMABLE

68W - running at 70±2W (inc driver)

Product Code	Colour Temp	Lumens	Size (mm)
PAN66DL126ND	Daylight White (6000±200K)	6475	1200 x 600
PAN66CW126ND	Cool White (4200±200K)	6300	1200 x 600
PAN66WW126ND	Warm White (3000±200K)	5958	1200 x 600

LED UGR 600x600mm Ceiling Panel

PREMIUM 240V NON-DIMMABLE

36W - running at 40±2W (inc driver)

Product Code	Colour Temp	Lumens	Size (mm)
PANUGRCWND	Cool White (4000±200K)	3000	600 x 600

Skylite LED Colour Blending 600x600mm Ceiling Panel

240V DIMMABLE

32W±10% - running at 36W±10% (inc driver)

Control up to 99 panels from 1 remote control (supplied separately)

Product Code	Colour Temp / Description	Size (mm)
PAN66CC	3000±200K - 6000±500K	600 x 600
PAN66CCRC	Colour Blending Remote Control	-

PAN66CCRC

Skylite LED Ceiling Panel Accessories

SURFACE MOUNTING BOXES

Product Code	Description
PANSFB	600 x 600mm Surface mounting frame
PANSFB123	1200 x 300mm Surface mounting frame
PANSFB126	1200 x 600mm Surface mounting frame

PANSFB

OPTIONAL ACCESSORIES

Product Code	Description
PAN66010VD	0-10V LIFUD Dimmable Driver
PAN66010VD126	0-10V LIFUD Dimmable Driver - 1200x600 panel only
PAN66DALI	Dali Hytronic Dimmable Driver
PAN66DALI126	Dali Hytronic Dimmable Driver - 1200x600 panel only
PAN66TDD	Triac Dimmable Driver
PAN66NDD	Non Dimmable Driver
PAN66NDD126	Non Dimmable Driver - 1200x600 panel only
PANBRKT	Surface mounting bracket for PAN66 panels
PANCABLE	Ceiling suspension cable kit for PAN66 panels - 1m long
PANCLIPS	Plaster Board mounting clips for PAN66 panels x 4

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Where can LED Panels be used?

There are many applications where LED Panels can be used:

- Offices
- Classrooms
- Hospitals
- Retail
- Reception, Lobby, Circulation areas
- Gymnasiums
  ...plus many more

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Referrals:

Nutricia - Advanced Medical Nutrition

Castle View Enterprise Academy - Sunderland

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Referrals:

Dumfries and Galloway Royal Infirmary

Main Hospital areas

Auxiliary Hospital Areas

Outpatients Areas

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