THE LUMINOUS

FIBER OPTIC

MIDLIGHT SUN

The most common type of optical fibre available only diffuses luminous flux at the end of each fibre.

Today, thanks to an exclusive Europe-wide patented process, we are able to offer you PMMA fibre which distributes light uniformly over its entire length (and no longer only at its end). This produces around 80% efficiency in "input flux/diffused flux" (as there is almost no light flux lost between its source and point of illumination).

There are two reasons which lead us to make increased use of LED drivers to power side glow optical fibre :

their functionality ;
their technical properties.

Whatever their particular characteristics, the main advantages of LED drivers remain the same, namely :

High efficiency ;
Total homogeneity ;
No maintenance (no bulbs to change, unlike conventional drivers) ;
Silent operation (no fan units, unlike conventional drivers) ;
Incomparable lifespan.

Bright ideas to make you stand out from the crowd in modern, unusual ways.

scattering optical fiber
2mm tensioned using
springs.
Display Estée Lauder

Fiber optic chandelier François Azambourg
Galeries Lafayette Toulouse

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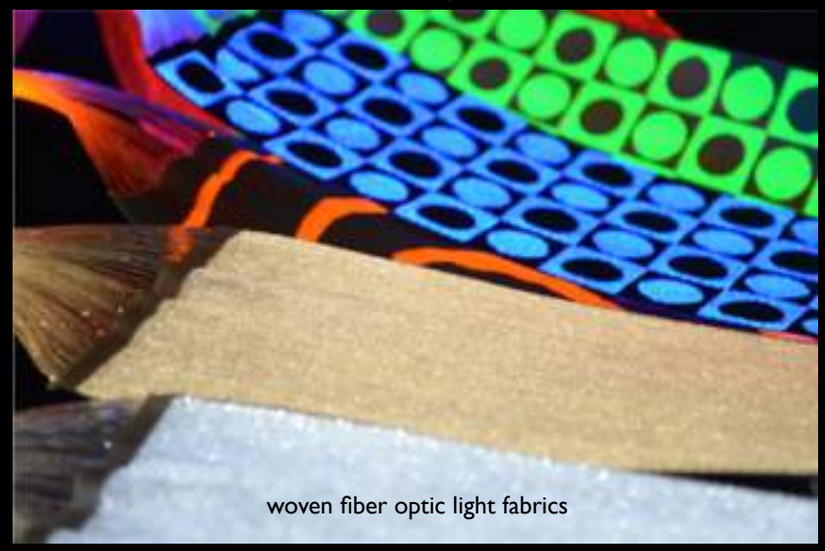
Display window made from a mass of transparent polycarbonate tubes, each containing one side glow optical fibre of 2 mm. Each fibre is powered by an RGB LED of 3 x 1W. The LEDs are controlled by a pre-programmed DMX module. Jaquet Droz display window (BaselWorld 2009).

MIDLIGHTSUN® is pleased to present the fibre optic Luminous Dress made for the advertisement by Thierry Mugler Perfumes - Clarins Fragrance Group.
This luminous dress was designed using 0.25 mm fibre optic fabric.

Luminous display window decoration
with side glow strips of 6 mm

bright wigs for a famous Parisian
cabaret bouquet of fiber 0.25mm
battery cells.



woven fiber optic light fabrics

Some technical points :

Luminosity depends on the fibre's length and is proportional to its cross-section, with fibre diameter ranging from 0.25 to 3 mm. Note that a fibre of 2 mm is 4 times brighter than a fibre of 1 mm.

In order to increase the flux emitted, fibres (which are 3 to 5 times brighter than cracked optical fibre*) are grouped into cables of 7, 19 or 37 fibres.

The number of LEDs included in a driver can vary from 1 to 12 and the maximum cross-section contained by the connector (common end) is 10 mm (that is, for example, 3 bundles of 19 optical fibres of 1 mm).

A choice of drivers either emitting a single colour (monochrome driver) or several colours (RGB driver) can be supplied.

DMX (or DALI) controlled devices and infrared or HF (High Frequency) remote controls are used to adjust the luminous intensity and vary the colour texture of RGB drivers.

Side glow cables are powered on one side only and can light a length of up to 15 metres homogeneously.

To double this length, both ends of the cable have to be powered. In this way, it's possible to have 30 - meters runs without any dimming of light in the middle of the side glow cable.

Generally, halogen or halide light engines are used to power this type of fibre optics, but, in some cases, high power LEDs are actually the ideal solution.

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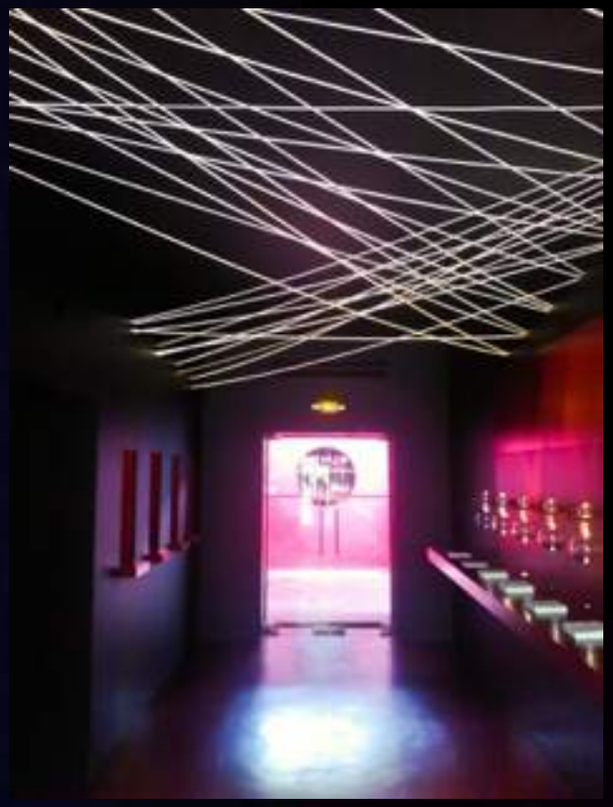
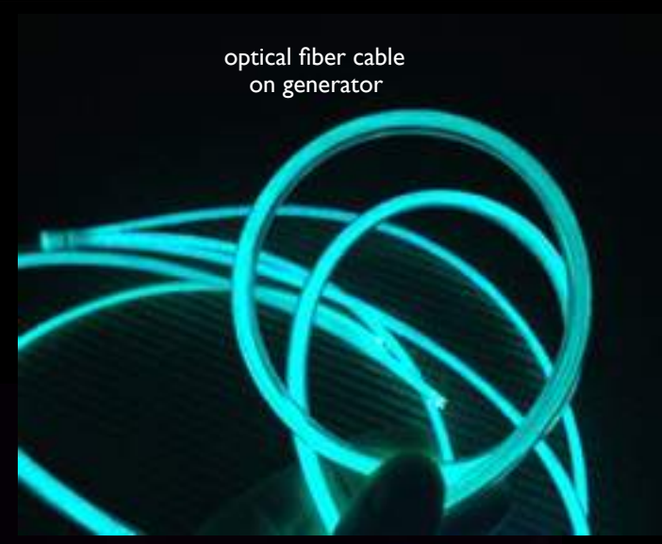
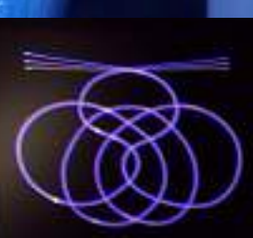


Moma Event for Shiseido

bunch of optical fibers
on battery cells.

optical fiber cable
on generator





Side glow optical fibre is resolutely innovative and caters to contemporary artists who want to create light curves or even fit them into fibrous materials, such as fabric and paper.

Safety :

Fibre optics, which are valued both for their aesthetic originality and technical properties, do not carry electricity and require no maintenance. This is why they are so easy to fit into humid, hard-to-access places, indoors and out.

The light obtained is a cold light devoid of UV and infrared radiation.
Because this type of light does not give off any heat, it can safely light the most delicate of items.

It's totally safe to touch and use in humid places, such as bathrooms, swimming pools, spas, and so on, where conventional lighting would be considered hazardous.

Because optical fibre does not carry electricity, it is ***the*** solution to prevent any risk of electric shock, fire and electrical interference.

Practicality

Affordability

Whether fibre optics are visible, concealed or integrated into other materials, they are your "Partner in Decoration" which will prove to be a must-have in illuminating areas with delicacy and sophistication.

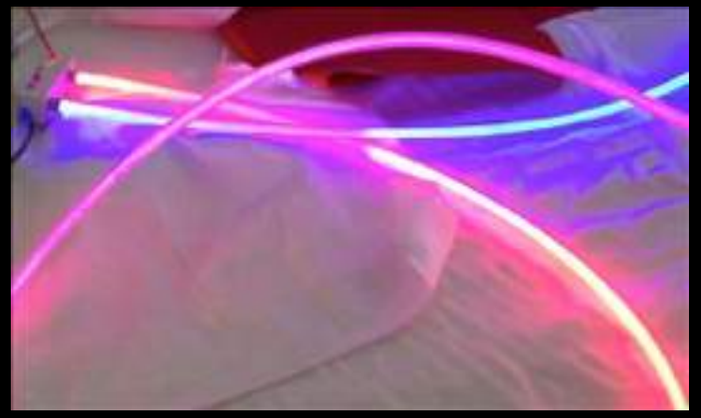
They can be fitted into every type of creation, be it of an artistic or architectural nature.

They are ***the*** ideal solution for brands which wish to showcase their products in shop windows or simply enhance their business name, and are an excellent substitute for coloured neon lights used for lettering and interior or exterior decoration.

Using fibre optics makes it possible to increase the number of light points from a single light source.

Optical fibres are relatively thin and do not require maintenance or replacement. This means they can be installed in places which are very narrow or where conventional bulbs cannot be fitted.

Over a period of around two years, the savings which can be made by using fibre optics make them cheaper than conventional lamps because fibre optics require no maintenance or replacement. The bulb which is the light source only needs changing after... 1,500 hours (for a halogen source) to 50,000 hours of use (for an LED source).



We make increasing use of LED drivers to power side glow optical fibre. The reason for this is twofold : their functionality and their technical properties.

As it happens, whatever their particular characteristics, the main advantages of LED drivers remain the same, namely : high efficiency; total homogeneity; no maintenance, because there are no bulbs to change (unlike conventional drivers); silent operation, because there are no fan units (unlike conventional drivers); incomparable lifespan.

The number of LEDs included in a driver can vary from 1 to 12 and the maximum cross-section contained by the connector (common end) is 10 mm, that is, for example, 3 bundles of 19 optical fibres of 1 mm.

Depending on our customers' wishes, we can provide you with drivers which emit a single colour (monochrome driver) or several colours (RGB driver).

To adjust the luminous intensity and vary the colour texture of RGB drivers, we use DMX (or DALI) controlled devices, as well as infrared or HF (High Frequency) remote controls.

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FABRICATION FRANCE

LEDs generator

100-250V AC
50/60Hz
IP 44

LED driver fitted with OSRAM LEDs with a total power of 15W.
The aluminium casing serves as a heat sink.
Silent operation, no fan units.
LED lifespan of over 30,000 hours.
Precise colour adjustment (for RGB versions).
Maximum permissible optic diameter: 10 mm.
Surface illumination of a 7 mm side glow bundle (white monochrome version 4500°): 1900 lux
Dimensions (mm): D 250/ L 105/ H 60
Weight: 0.9 Kg

100-250V AC
50/60Hz
IP 44

Miniature 2-watt OSRAM LED driver.
The aluminium casing serves as a heat sink.
Mains-operated power supply unit.
LED lifespan of over 30,000 hours.
Maximum permissible optic diameter: 8 mm.
Surface illumination of a 7 mm side glow bundle: 400 lux
Dimensions (mm): D 80/ L 50/ H 30
Weight: 0.15 Kg.

Standard colours: red, green, blue, warm white 3000°K, neutral white 4500°K or cold white 6500°K.

Led 15 watt generator + DMX or Dali

Led 15 watt generator + IR remote control or HF

Two versions are fitted with red, green and blue LEDs with colour adjustment either via infrared remote control (G-LEDs IR RGB model) or DMX signal (G-LEDs DMX RGB model).

Other models are fitted with white LEDs, 3000°K, 4500°K or 6500°K, (G-LEDs Multi-White model or RGB).

Please contact us for any special requests (waterproof models, DALI remote control, etc.).

In conclusion…

Side glow fibre optics provide a virtually infinite array of creative applications and are popular with a great many designers, architects, artists, and others. They serve the needs of those for whom…

imagination is the only limit… to surpass

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Midlightsun® thank you for your visit
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Whether your project is of a decorative or artistic nature, we will make every effort to ensure its feasibility and finalise it as swiftly as possible.
Don't hesitate to contact us.
MIDLIGHTSUN® is at your service.

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Professional rates on request