

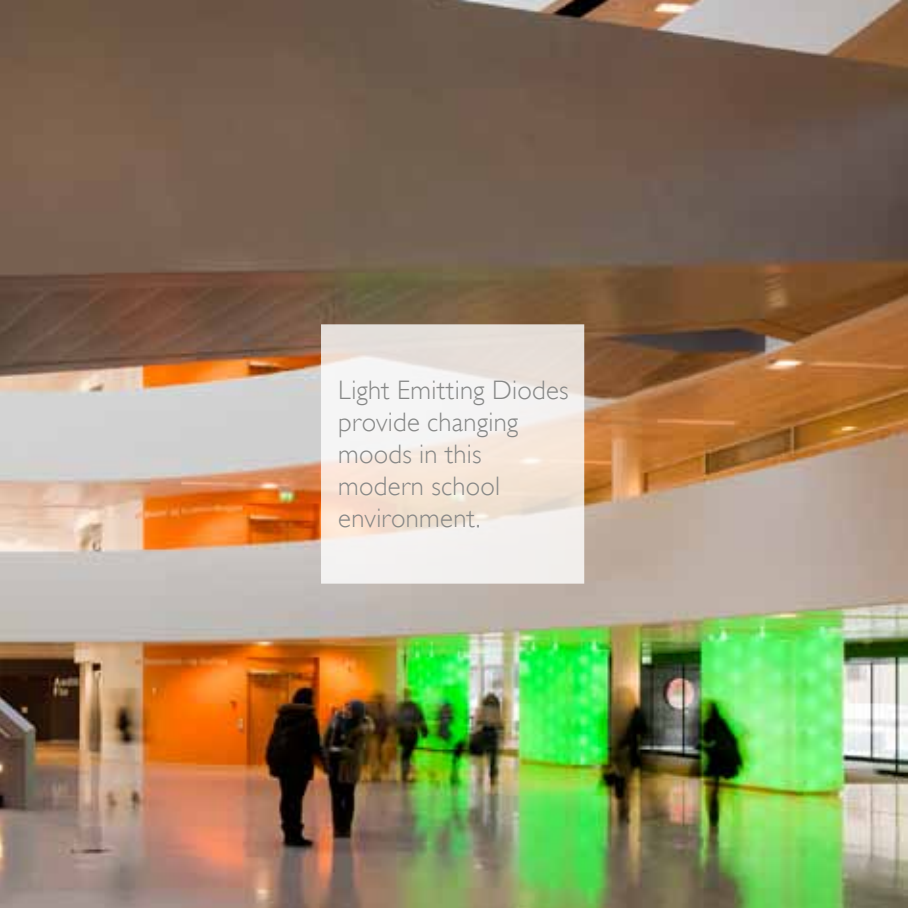
LED

Lightsource of the future !

A short introduction to LED technology




Studieverksted



Light Emitting Diodes
provide changing
moods in this
modern school
environment.

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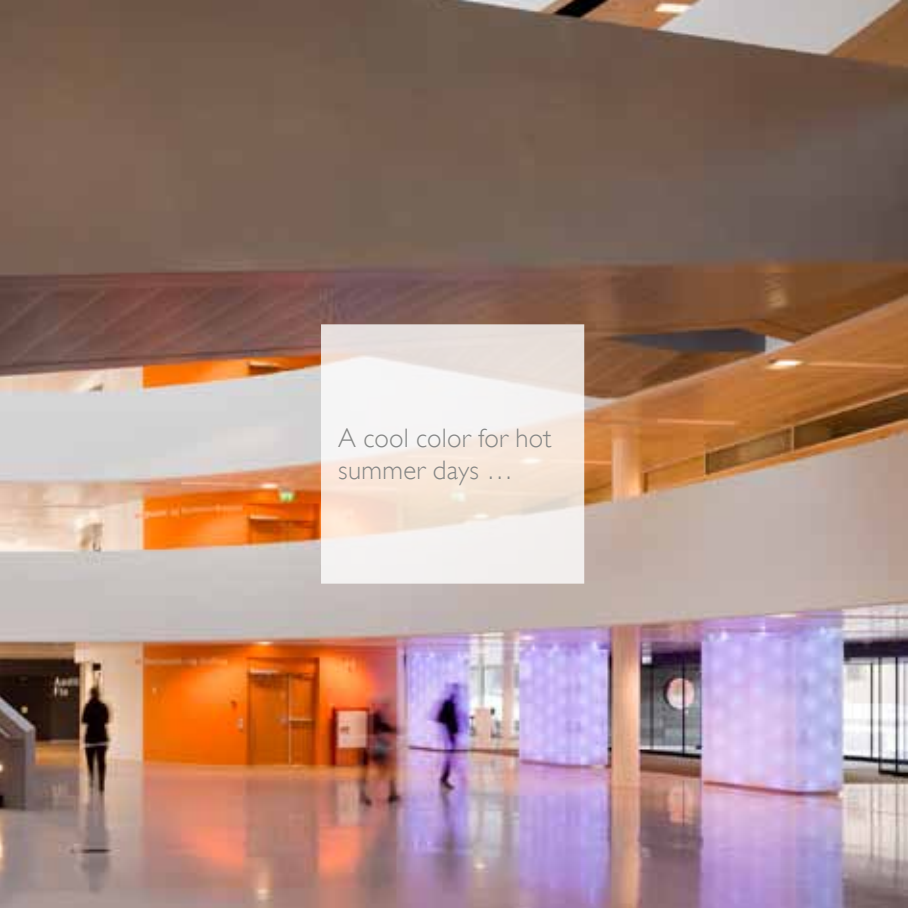




A warm yellow
for those cold,
wintry days ...



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A cool color for hot
summer days ...

LED: What it is

A Light Emitting Diode (LED) is a semiconductor that emits light when an electric current passes through it. LEDs are available in a wide range of colors, including bright white. LEDs can be used on their own, or assembled into modules for added power. LEDs are available in different qualities, for different purposes.

LED technology is in rapid development.
It seems that new varieties and applications
are announced on a daily basis!



High quality LED modules



Why LED?

Light Emitting Diodes have many advantages over traditional light sources. High quality LEDs have a very long lifetime, and are very robust – LEDs are much less sensitive to vibrations and low temperatures than traditional light sources. They are also energy-efficient, when properly applied. The small size opens opportunities for many useful applications.

LED technology is a sensible alternative to traditional light sources in many applications.

Substantial savings

This is a comparison between an 8W LED module with a life expectancy of 45,000 hours and traditional lightsources when used in task lights. The comparison is striking. These figures show that it is possible to reduce the energy consumption by as much as 86% by switching from traditional incandescent lamps to the new Light Emitting Diodes.

LIGHTSOURCE COMPARISON

				
Lightsource	8W LED module	13W compact fluorescent tube	40W halogen lamp	60W incandescent bulb
Lifetime	45,000 hours	8,000 hours	2,000 hours	1,000 hours
Number of lamp changes needed during the life time of the LED module	-	5-6 changes	22 changes	44 changes
Total energy consumption (45,000 hours)	360 kwh	585 kwh	1800 kwh	2700 kwh

A close-up photograph of a person's hands working on a complex electronic circuit board. The person is wearing a metal watch on their left wrist. The circuit board is populated with various components, including integrated circuits, resistors, and capacitors. A digital display on the board shows the number '1251'. The background is a light-colored surface with a repeating pattern of overlapping circles in shades of yellow and orange. The overall scene suggests a technical or engineering environment.

Our engineers
are among the
world's leading
experts on LED
technology.

We use their expertise to design and manufacture innovative products with low energy consumption and long life. Equally important is our experience and know-how about the design of optics and thermal control, so that the products will perform to standard over a long period of time.

Light quality

Energy-efficiency

Low maintenance cost

How we work with LED

Quality

We always use the best quality LEDs for our purposes, from the best manufacturers.

Color

Particular attention is given to the color temperatures and color rendering qualities of the LED light-sources we use.

Heat management

High power LEDs require more precise current and heat management than traditional light-sources. Our know-how of thermal control has significant influence on the life-span of our products.

Glare control

Products with LED often have problems meeting glare requirements. Our engineering skills ensure that our products with LED always meet or exceed relevant national and international standards.

Color

Light Emitting Diodes are available in a wide range of qualities and colors. High quality LEDs can be used to create lighting products with excellent light output and bright warm light. They can also provide pleasing color effects in homes and office buildings.







LED

Lightsource of the future!

Current
applications
for LED

- In task lights, reading lights.
- As replacement for halogen and incandescent lamps wherever possible.
- For demanding use such as on board ships, rigs, moving machinery etc.
- In cold environments such as freezer rooms, cold rooms, outdoors etc.
- In really small spaces, and in inaccessible areas.
- As decorative and creative elements in architecture.
- For accent lighting, downlights and spotlights.
- For emergency lighting.

Luxo products with
LED technology

- Ovelo
- Terea
- Ninety
- Air LED
- Spire





Ovelo LED task light



Nintey LED task light



Terea LED task light



Air LED task light



Spire LED undercabinet
task light



LED

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