"When Thomas Edison invented the light blub, he surely could not have imagined that light emitting glass would one day arise as an alternative to his brainchild…..but arise they have in and in Sngapore too."

BusinessTiimes 11 August 2014

Façade’s Magical Moonlight

BusinessTimes 11 August 2014

Green Building Group, Singapore offers a lighting system like no other lighting systems.

LES, a light emitting surface produced with advanced printed lighting technology, characterizes the soothing light emitted from the moon, providing intense night vision lighting from surfaces which can be seen in full focus from kilometers away.

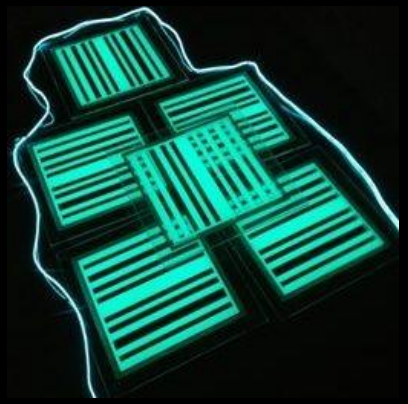
LES emits a soft distinctive glow, enabling it to blend beautifully into any building facades, creating lighting architectures that could turn every architect's dream into recent realities.

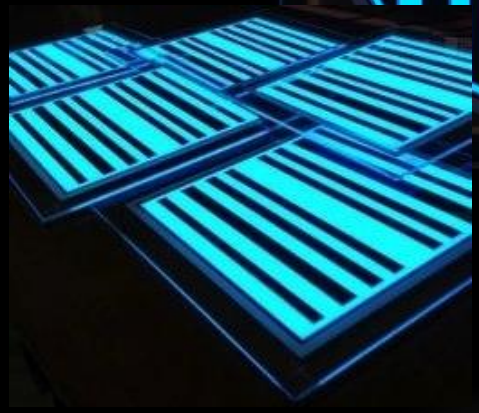
It's probably the only lighting system specially designed to celebrate the romance of the moon and the symphony of its glorious light.

About LES

Produced with advanced printed lighting technology, LES | FILM is flexible and is malleable to form any surfaces . It can even be produced in lengths exceeding 10M long

LES | FILM



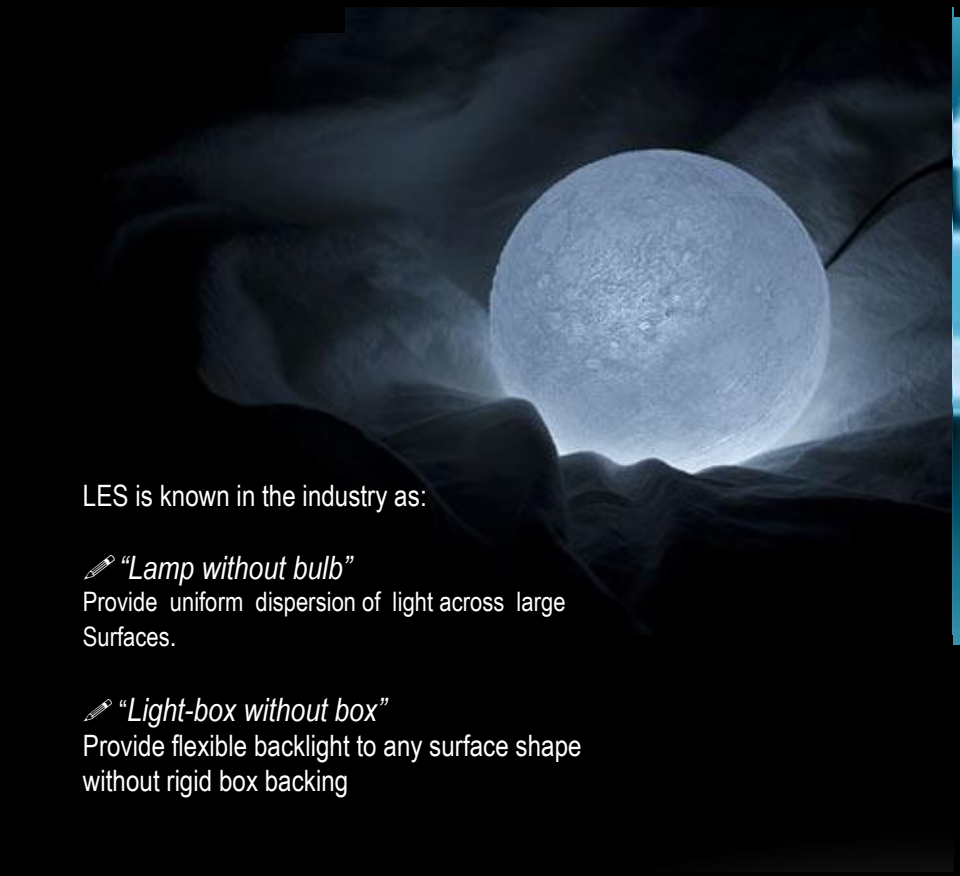


LES | GLASS is a patent pending technology that is poised to be the new standard for the glass industry. Glass is typically lighted by third party devices, such as light bulbs and LED. LES | Glass emits light directly from the glass without any influence from third party media,emanating 4K type luminescence not attainable by other lights.

LES | GLASS

Heat, glare and light pollution are the biggest turn-off for most lighting system. LES is developed especially to address this technology gap, bringing comfort and romance right into your living space.

Special Attributes



LES is known in the industry as:

- *"Lamp without bulb"*
  Provide uniform dispersion of light across large Surfaces.

- *"Light-box without box"*
  Provide flexible backlight to any surface shape without rigid box backing

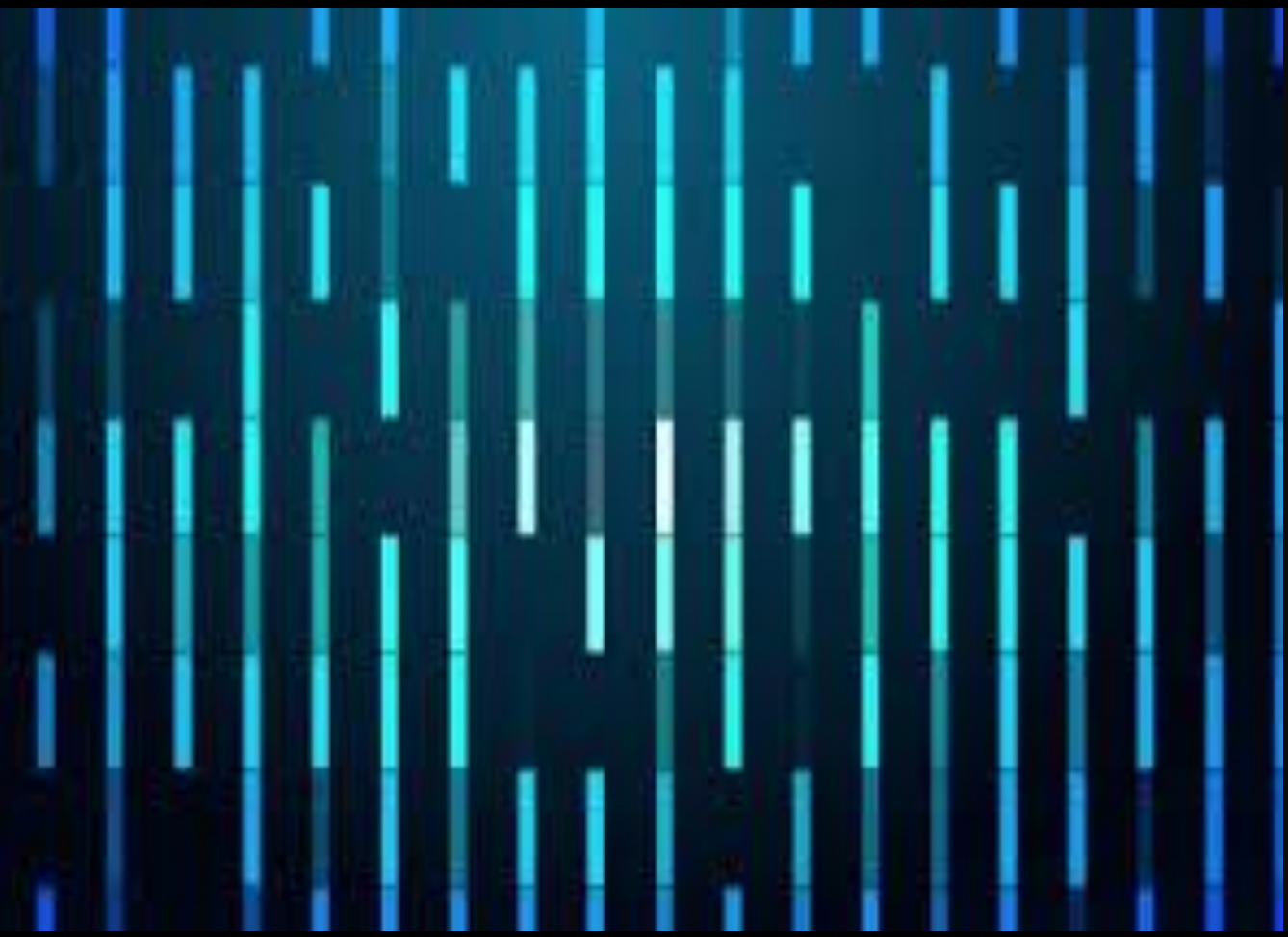
Applications

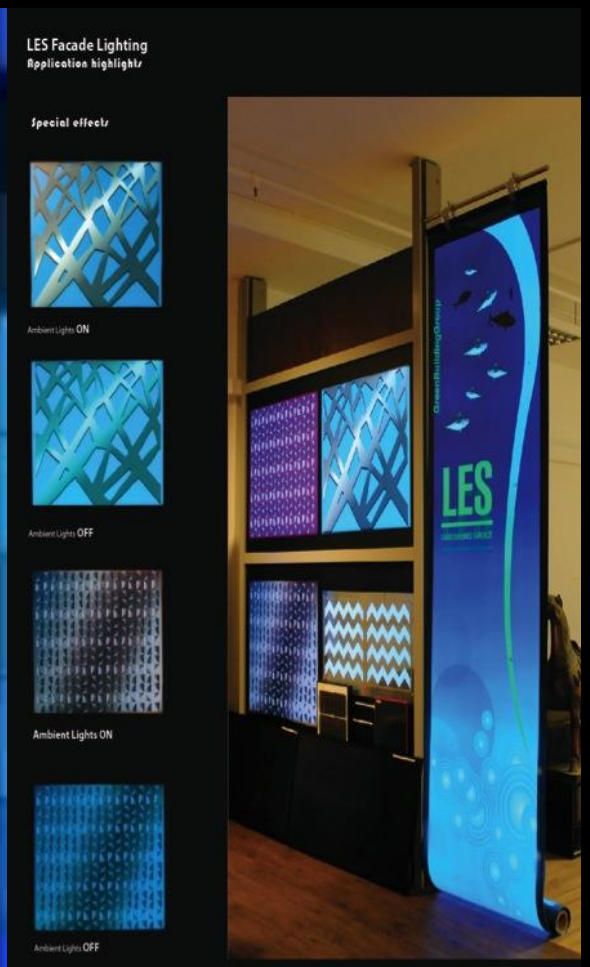
| Façade Lighting
| Display & Signage
| Event Lighting

Key Focus Strategy

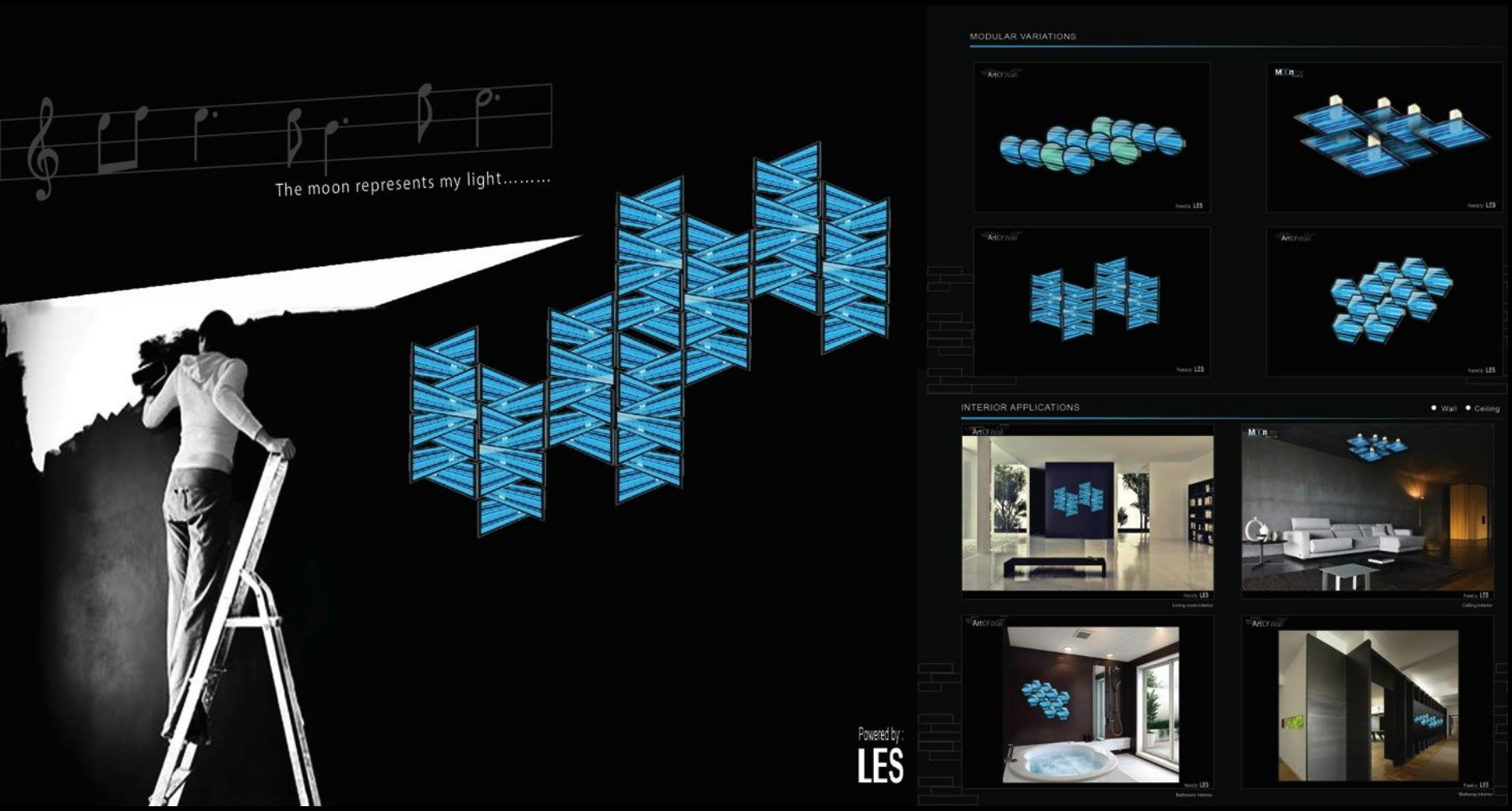
Façade Lighting

Proposed District Lighting Program





Façade, Display & Signage



Modular Lighting

Nike Event 2014

Brandpost

Lamp without Buib

INNOVATION

Facade's magical moonlight

With SIMTech, SME develops technology that allows glass to give off its own light

By **LESTER WONG**
lesterw@sph.com.sg

WHEN Thomas Edison invented the light bulb, he surely could not have imagined that light-emitting glass panels would one day arise as an alternative to his brainchild.

But arise they have, and in Singapore too, where local firm Facade Global Master has jointly developed its light-emitting surface (LES) technology with the Singapore Institute of Manufacturing Technology (SIMTech).

The technology works by printing a transparent layer of light-emitting material onto a glass or film surface.

When the material is excited by passing an electric current through it, it lights up.

The light produced by the LES technology is distinguished by its softness while remaining visible from up to four kilometres away.

It is also highly energy-saving, using only 58 watts per square metre in comparison to the 800-1,300 watts per square metre usage for light-emitting diodes (LEDs).

"Our objective was to find lighting more characteristic of the moon than the sun, and LES seemed the most suitable option," said Philip Kwang, Facade's managing director.

"We also knew from the point of view of the facade industry that there is a demand for glass to be lit up on its own."

However, resources were limited for Facade as a local small and medium-sized enterprise (SME) in 2012 when the company was first poised to enter the printed electronics industry.

That was when Mr Kwang first hit on the idea of collaborating with SIMTech, a unit of Singapore's Agency for Science, Technology and Research (A*Star).

"Conventionally, printed lighting is restricted to a very limited size," said Mr Kwang.

"By leveraging on SIMTech's film base printed lighting technology, we can now print for surfaces up to 10 times larger."

Mr Kwang believes that the technology can be used to process surface areas as large as 10 square metres.

The collaboration was ideal for the SIMTech team led by senior research engineer Lok Boon Keng as well, because Facade already owned the large format printing equipment necessary for the production of printed lighting.

Working together, the team also found a way to extend the technology's application to glass panels, Facade's area of expertise.

When printed on film, the LES technology can be rolled up into lightweight bundles that can later be used as advertising banners, for example.

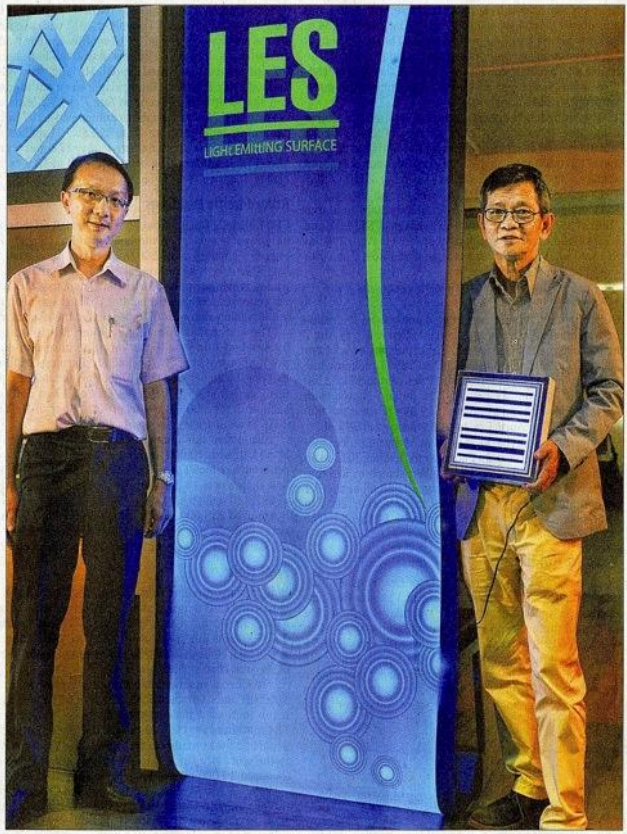
When printed on glass, the LES technology can be used to illuminate building facades.

The technology can already be seen lighting up the former Non-Commissioned Officers' Club building on Beach Road.

Mr Kwang envisages that the LES technology will be used to light up the Singapore skyline in the near future.

"The question is how to produce a light that can be captured on camera," he said.

"And with LES, buildings can stand out in the dark even from a great distance away."



Let there be light: *Mr Kwang (right, with Mr Lok) says 'we knew . . . there's a demand for glass to be lit up on its own' and 'with LES, buildings can stand out in the dark even from a great distance away'.* PHOTO: ARTHUR LEE

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Channel NewsAsia – Bright Lights, Big Cities

http://youtu.be/WsGD5Nc8zkw

NCO Club Light-up

http://youtu.be/U_t3qGIa5UU

Art –Of-War

http://youtu.be/qOa3et6TSAA

YouTube Video

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Collaborating Partners

Finalist
reddot design award

Autodesk
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