

# LED curing technology for Screen printing INDECO Serigrafia case study

Brand owners are choosing green technologies. Indeco gained valuable operational and environmental benefits when they switched to a Phoseon UV LED curing solution.

## Challenge - How to reduce operating expenses and increase output with clean energy?

InDeco Serigrafia located, near Milan in Italy, stands out in the screen printing market for luxury applications with its 30 years of experience and constant search for new, innovative solutions.



UV LED curing technology is more accessible than ever and it is bringing a host of advanced printing capabilities. A few months ago, Indeco did several retrofits switching from old UV mercury curing systems to a Phoseon high-performance UV LED solution. Let's see why.

The Phoseon UV LED curing solution is an appealing option for curing in-screen printing, offering many benefits to printers and converters. Besides the overall cost savings and operating benefits, the environmental friendliness of the solution was of paramount importance for Indeco, as this was requested by most the major consumer brands in the luxury sector.

“We bought our first LED solution from Phoseon 7 years ago and it is still running. We were already very satisfied with the results. Indeco has always been looking for innovative technologies and Phoseon’s LED high power lamps are really performing extremely well both for big productions and at high speeds operations“ says Alessandra Musitelli.



## Increased Capabilities

Today, thousands of UV LED light sources are reliably running equipment for numerous screen printing applications



and they offer capabilities that mercury curing solutions don't. A few examples from Indeco are standard printing of texts, 360 degree screen printing with no lines of junction for a seamless design, glitter printing and printing requiring thick layers. With Phoseon UV LED systems, Indeco was able to double the thickness of the inks used and still cure instantly. They were also able to increase their color covering capabilities which is very important for perfumery, cosmetics, and fine quality food and beverages applications.

When upgrading to UV LED equipment, the benefits are numerous and the return on investment is incredibly fast - less than 1 year!



Advances in UV LED curing technology and compatible, eco-friendly inks, have fostered the development of a new generation of screen printing solutions. These new UV-LED-equipped printers are being used to custom decorate everything from bottles, mascara, lip gloss and pens to golf balls, and round containers made either out of glass or plastic.

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## Environmentally Friendly Solution

With LED systems, converters can diversify their product lines and enter new markets without having to expand their floor space or expose employees to Volatile organic compounds (VOCs) harmful UV-C ozone.

By removing its 8 mercury stations, 5 fusion lamps and upgrading them with 13 Phoseon FireJet™ LED lamps (FJ200), Indeco can reduce over 67 Tons of CO2 per year. They also do not need to re integrate into the building the 23.5 Million cubic meters of air extracted every year to remove ozone and the heat produced by the mercury lamps.

In addition, with traditional UV curing lamps you can't warranty a good adhesion test right after the printing. It is only after 12-24 h that you can find out if something is wrong potentially having to throw all your past production away. This means that you have to start producing at your own risk!

Products cured with LED can be instantly validated, as you get an immediate adhesion. No wasted plastic due to uncured, burned or scrap products.

Today, Indeco is studying the development of a new varnish that can be dried with LED lamps, another step that will give them a competitive advantage with processing varnishes.

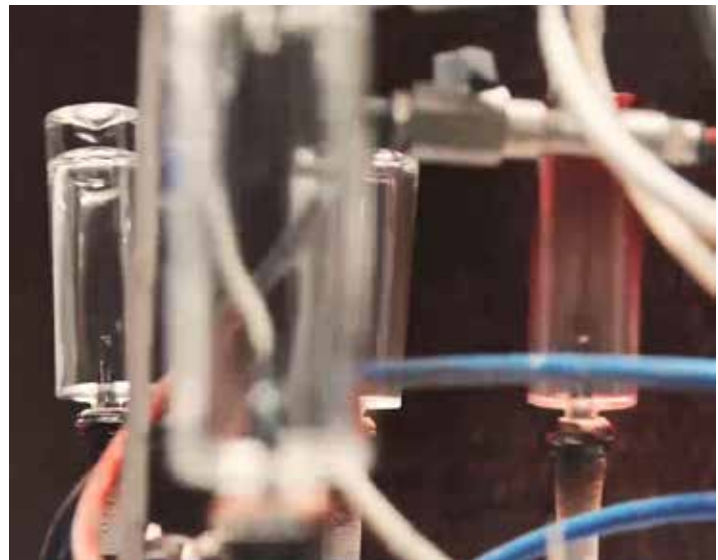


## A wider range of Materials

Users of UV LED curing systems can also process a variety of materials (including thin and heat-sensitive substrates) at maximum production speeds with low-input power. This drastically reduces energy consumption and the surface temperature of the items: no heat on the polypropylene, drying of the ink speeder and adhesion on plastic/glass/aluminum is immediate.

The UV LED curing solution offers more compact designs: Floor space is valuable in all types of businesses and Phoseon compact units can easily be integrated into screen printing machines for curing inks on plastic and glass containers. They are easy to use and operate without having to change mercury bulbs on a regular basis. Phoseon LED curing systems can last for over 40,000 hours.

The advantages that Indeco values are the higher quality and continuity of the printing. They are able to increase their production speed and be more efficient in their production process as UV LED systems require very little maintenance.



## Energy Savings



Most importantly, energy savings and the drastic reduction of emissions in the environment was a key decision point. As a matter of fact, government regulations are forcing firms to get serious about safety and sustainability.

The rising tide of government regulations is causing all types and sizes of manufacturing firms to be more proactive in adopting safer, less toxic equipment and processes. This is where UV LEDs come in. Besides being mercury-free, UV LED lamps generate no ozone and offer over 70 per cent lower CO2 emissions.

Brand owners are becoming more sensible by choosing green technologies and Indeco gained valuable operational and environmental benefits when they decided to switch to Phoseon UV LED curing solution. UV LEDs contribute to workplace safety because they don't generate dangerous UV C radiation or excessive heat or noise. Companies that have already installed more environmentally sustainable printing processes report that it has helped attract younger workers and customers that prefer eco-friendly processes.

[www.phoseon.com](http://www.phoseon.com)

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### Start Your Retrofit Today

Learn more about Phoseon UV LED retrofits, our financing options and how to contact us at [retrofit.phoseon.com](http://retrofit.phoseon.com).

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