

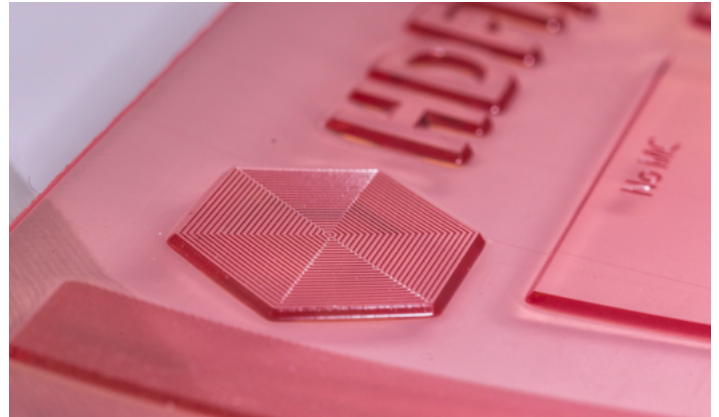
Cyber Graphics stands out in using UV-LED technology with the new DuPont™ Cyrel® Lightning plates

The new plates deliver up to 42% higher productivity, improved plate quality, and superior print quality.

What if you could optimize the balance between access time and plate performance, without compromising print quality when using a UV-LED exposure? This is usually the challenge that some converters and tradeshops, including Cyber Graphics, from Memphis Tennessee (USA), had to deal with. Exposure settings on LED units often have to be adjusted for either higher quality or shorter access time.

But now, with Cyrel® Lightning plates, the challenge has been addressed. These plates are formulated from the ground up with UV-LED exposure characteristics in mind. *“Cyrel® Lightning plates use chemistries with tailored UV profiles to achieve tunability between surface-and through-cures. This innovation enables a balanced cure that can be tailored to the unique dynamics of a scanned LED exposure sequence. At the same time, it provides sufficient through-cure using a finely tuned UV absorption profile,”* says Suniti Moudgil, Global Technology Leader at DuPont.

Being one of the pioneers in the US to adopt the UV-LED technology in their prepress operation, Cyber Graphics was invited to make an external evaluation of the new photopolymer plate. *“In flexo, we constantly talk about driving process optimization. So, having a plate that is tuned for LED exposures, driving throughput, not having the exposure be a bottleneck with LED technology, while still delivering the printing quality that we expect, was a great benefit to our business”*, states Kevin Bourquin, Vice President at Cyber Graphics.



According to him, the ESKO XPS Crystal LED exposure system provides several advantages over the conventional systems and the use of the new Cyrel® Lightning plates guaranteed to achieve:

- standardized production and high consistency;
- less user interference and operator errors;
- use in combination with automation;
- day to day repeatability;
- high quality.

Founded in the mid-90s, as a tradeshop serving the flexible packaging industry, Cyber Graphics is focused on making printers successful by adopting and developing technology for the market. Born from printers, and servicing printers, they clearly understand their customer needs. And in the last years focusing also to work with CPGs to ensure they got access to the latest technology through their printers and converters network to make their brand more consistent widely. They grew through acquisitions, currently, with five different sites (HQ in Memphis) that serve a variety of segments in the packaging market – flexible packaging, labels, shrink, folding cartons, and corrugated.

“With the launch of the LSH plate we were excited that it delivers both the same consistency that we want from a manufacturing process and in a much faster time”, explains Bourquin. *“We talk in flexo about optimizing the process. So, having a plate that we can push through the process is a benefit to Cyber Graphics. While still delivering the printing quality that our customers expect.”*



The ESKO XPS Crystal unit allowed Cyber Graphics to hold the smaller features needed to produce higher-level packaging that rivals gravure and digital printing. *“Having the best of both worlds – in plate and equipment offering – is going to benefit the industry from the quality and consistency standpoint”,* celebrates the VP.

Understanding the UV LED technology and plates in flexo

Recent developments in UV-LED technology have opened the doors for LEDs to be used in curing inks and also in the flexographic platemaking process. The ESKO XPS Crystal exposure system is proving to bring many benefits to the platemaking process, which are driving more flexographic prepress operations to invest in this exposure technology. *“All of this can be achieved when selecting the optimal photopolymer and exposure parameter combination”,* completes Kevin Bourquin, from Cyber Graphics.

UV LED exposure systems deliver energy to the photopolymer differently from the conventional exposure units. LEDs emit UV radiation at a very different level of intensity (15-20 times higher) and with a narrower emission spectrum. Another major difference is that flexo platemaking UV LED exposure systems scan over the plate during main exposure instead of a constant exposure on fluorescent lamp systems.

The photopolymer undergoes two different processes of crosslinking. This is why so much effort is put into developing an optimal “recipe” (set of exposure parameters) to let LED-exposed plates match or exceed the characteristics of the same plate exposed with a Bank system.

The new series of photopolymers plates Cyrel® Lightning uses chemistries with tailored UV profiles to achieve a balance between surface and through cures. The innovation enables a fast surface cure that effectively mitigates oxygen inhibition between passes of LED exposure when the plate is in the dark. At the same time, it provides enough through-cure through a finely tuned UV absorption profile. This leads to an exposure time reduction of up to 42%, improved quality especially in isolated highlight dots, and superior print quality amongst LED-exposed plates.

Cyrel® LSH is a hard durometer plate with a smooth surface, ideally suited for advanced surface screenings and optimized for a broad range of substrates and clean press runs in flexible packaging, tag & label, and paper printing applications.



Benefits to the printers and tradeshops

Consistent formation of the small dots, mid-tones, and the surface texture help to deliver consistency which means: customers come to color faster because of how the plate delivers the ink the same way every time the plate is put in the press. The LED exposure unit also helps to hold the smaller highlight features, like better fade to zero and smaller and more controllable overall highlight gain, which expands the tone range.

As tradeshops focus on pushing through multiple printers and jobs, when they use the LED exposure with plates that are not tuned specifically for this technology, they can see a bottleneck in the exposing step. *“The industry needs to focus on the LED technology, as this is becoming the main exposing technology, because of what it does in terms of consistency”,* recommends Kevin Bourquin, from Cyber Graphics.

Cyber Graphics is known for its advanced prepress and print media services that improve the time to market for printers, converters, CPGs, and design agencies. This is possible by continuously improving and investing in the prepress and focusing on building customers’ business.

“That’s the key to work so closely to brand owners”, explains the Vice President at Cyber Graphics. *“They trust us their production art files because they know we are packaging prepress experts. Due to this expertise, we can deliver high-quality and faster results, across different packaging mediums and span the entire prepress process-from concept to press. When packaging graphics are designed with print production in mind, we can speed time-to-market and reduce costs.”*



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FORM NUMBER XXXXX (CDP)