

Optimizing Flexo Label Production: Upgrading Traditional UV with UV LED Curing

Upgrading traditional UV curing equipment on flexographic (flexo) presses to UV LED curing technology offers significant process benefits for label and tag production and costs significantly less than a new UV LED flexo press. But it's prudent to learn what the options are and how each will optimize your label production processes before selecting a UV LED curing system provider.

Benefits of UV LED curing for flexo label production

The top 6 benefits are:

1. Increased production rates and quick turnaround due to significantly faster press speeds and increased uptime.
2. Increased process flexibility and control because UV LED curing units offer dimming controls and less heat to the substrate.
3. Easy to retrofit on existing flexo presses as a result of a small form factor and internal cooling.
4. Improved reliability and consistent print results due to more uniform and stable UV output.
5. Reduced press operating costs because of less energy use, fewer consumable parts and lower maintenance costs.
6. Safer press operator working environment because there is no mercury or ozone with UV LEDs.

Read [6 Ways UV LED Curing Improves UV Flexo Label Converting Processes](#) to learn more details about each of these benefits.

Flexo press UV LED curing retrofit options

The small form factor, light weight, and lack of major cooling and exhaust air ducting and fans make it easy to retrofit UV LED curing equipment onto existing UV flexo presses. But there are several options to consider depending on the number of press stations, specific products running on your press, average length of job runs, budget, and customer demand for turnaround time.



■ **Prove the process works with minimal budget** - One option is to retrofit just one or two press stations with UV LED curing equipment initially. Ideally, you would want to place the UV LED units in the locations with curing bottlenecks. For example, you might place UV LED curing units at the stations where you typically cure thicker opaque white or dense black inks, metallic inks. While UV LED curing units typically cost more than traditional UV, **you can install just one or two UV LED units with a smaller budget before deciding to retrofit additional press stations and increase press speeds.** This also gives you time to work out process and operating procedure details, before committing more budget. It is typically not an issue to combine both existing UV curing with UV LED curing on one flexo press.

4. Improved process reliability and consistent print results

- **Flexibility with fewer UV LED units** – Another option is to purchase one or a few UV LED units that can be repositioned to different press stations as needed depending on the product being run, say a heat sensitive film, or colors being printed. Installing UV LED curing on the press stations you typically use for heat sensitive substrates could eliminate the need for chill rolls. Some UV LED curing suppliers offer modular systems which lend themselves easily to being moved or repositioned to different press stations as needed. And some ink suppliers offer UV LED flexo inks which are compatible with traditional UV curing lamps in order to avoid time consuming ink changeovers between jobs.
- **The case for more UV LED curing** – If you typically run a lot of shorter run print jobs, then you may want to consider installing UV LED units at every station where there's pigmented inks, assuming your budget allows, so that you can increase production speeds and reduce changeover times between jobs. Also, if you need to run low migration inks and coatings for pharmaceutical or food labels, then it probably makes sense to retrofit UV LED to every press station to ensure consistent and reliable curing. Finally, if your budget allows, installing UV LED curing units at every press station will deliver the most benefits resulting in the best return on investment assuming there are available UV LED curable inks, OPVs and adhesives that meet your flexo process requirements.

Plan now for successful implementation

Given the number of flexo ink suppliers offering UV LED curable inks, as well as varnishes and adhesives, and the projected 4% annual growth rate of UV LED narrow web flexo (according to Flint Group global marketing director), it's clear UV LED curing is here to stay and taking market share from traditional medium pressure arc UV curing. Flexo label and tag printers who put off investing in UV LED curing technology risk falling behind the competition.

By considering the retrofit options available and your specific situation now, you can plan and implement a retrofit that will optimize your flexo production rates.



Start learning more now by clicking the following:

[6 Ways UV LED Curing Improves UV Flexo Label Converting Processes](#)

– Improving label converting processes is an ongoing challenge given how hard it is to keep up with the latest technologies. If you already have medium pressure arc lamp UV curing on flexo presses, this article will help you learn about the benefits of retrofitting existing presses with UV LED curing technology.

[Guide to Retrofitting a UV Flexo Press for Productivity Advantage: UV LED Equipment Features to Consider](#)

– Considering an upgrade to UV LED curing technology on your flexo press can be daunting. This guide helps you navigate the UV LED curing equipment features that will deliver higher press productivity.

[UV Curing for Flexo Comparison Chart: Traditional UV versus UV LED](#)

– When considering UV LED curing for your flexo printing and label converting processes it's helpful to compare your existing mercury arc UV to UV LED curing technology. This chart provides concise and easy comparisons, the characteristics of each, and process design considerations for typical narrow web flexographic label converting processes.