The future is clear – the future is LED

Ultra Clear Dual Cure Coatings

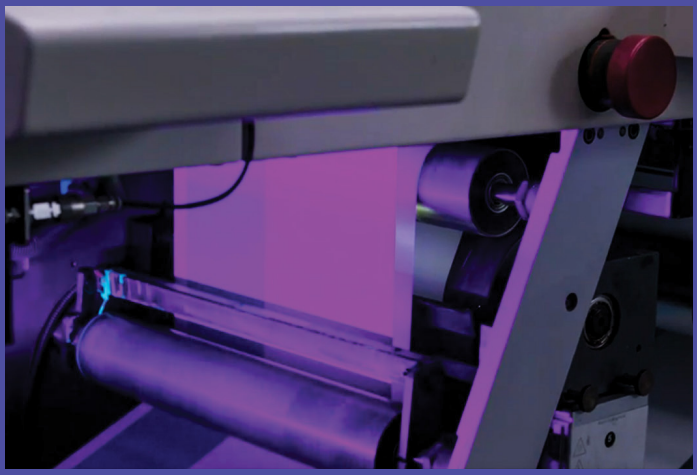
FlintGroup

UV LED

- The Clear Leader in Curing Technology

UV LED lamps are widely used to cure inks in the Narrow Web market. They provide numerous benefits, such as enhancing press performance and reducing energy consumption. However, the development of coatings that offer a competitive level of clarity compared to conventional curing alternatives has lagged behind ink technology. This deficiency has been addressed with our new Ultra Clear Dual Cure coatings for Narrow Web printers.

These coatings leverage all of the benefits UV LED curing offers, with the clarity and protection required for label and packaging demands. They are capable of curing under both UV LED lamps and conventional mercury lamps to create a solution enabling UV LED adoption without adding to your varnish complexity.



Productivity & Cost Advantages:

- **Enhanced uptime** - Minimize downtime associated with replacing mercury lamps and shutters/reflectors, while eliminating the need for press operators to wait for lamp warm-ups and cool-downs.

- **Reliable cure/higher productivity** - UV LED lamps consistently deliver uniform output across all lamps, ensuring a reliable cure even at high print speeds.

- **Long Lifetime & Low Maintenance** – UV LED lamps can have a useable lifespan up to 10 times of a conventional mercury lamp, resulting in lower maintenance cost and downtime.

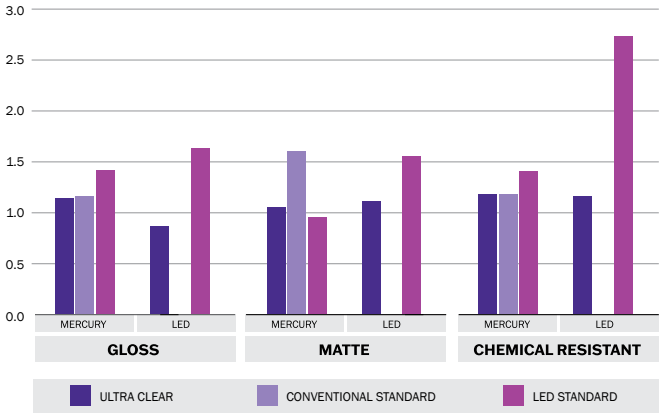
Sustainability Advantages:

- **Energy Savings** - UV LED lamps consume up to 80% less energy than conventional mercury lamps.

- **Absence of mercury** doped bulbs eliminates the requirement to handle and dispose hazardous waste associated to conventional mercury lamps. UV LED lamps do not emit UV-C light which generates hazardous ozone needing to be ventilated.

- UV LED lamps operate at lower temperatures **reducing the associated noise and energy consumption** to cool the lamps during operation.

Yellowing Comparison (higher = more yellow)



Ultra Clear Dual Cure coatings demonstrate lower yellowing level across all finishes and previous generations of UV LED varnishes

Ultra Clear Dual Cure coatings offer superior yellowing resistance, making them an optimal choice for label and packaging applications

Product Portfolio	
LED Gloss Coating **UEV00200**	This gloss overprint varnish is formulated for use on flexographic printing equipment over a variety of paper, film, and foil substrates. It can be printed with wax free water based inks as well as UV cure inks. It is designed to provide a gloss appearance and a good level of protection to scuffing and abrasion, and chemical resistance and will cure under both LED and Hg UV curing systems.
LED Matte Coating **UEV00201**	This matte overprint varnish is formulated for use on flexographic printing equipment over a variety of paper, film, and foil substrates. It can be printed with wax free water based inks as well as UV cure inks. It is designed to provide a matte appearance and a good level of protection to scuffing and abrasion, and chemical resistance and will cure under both LED and Hg UV curing systems.
LED Chemical Resistance Coating **UEV00202**	This chemical resistance overprint varnish is formulated for use on flexographic printing equipment over a variety of paper, film, and foil substrates. It can be printed with wax free water based inks as well as UV cure inks. It is designed to provide a good level chemical resistance and will cure under both LED and Hg UV curing systems.
LED Tactile Coating **UEV00203**	This tactile overprint varnish is formulated for use on flexographic printing equipment over a variety of paper, film, and foil substrates. It can be printed with wax free water based inks as well as UV cure inks. It is designed to provide a textured feel upon printing, making it suitable for speciality applications and will cure under both LED and Hg UV curing systems.
LED Slip Coating **UEV00204**	This tactile overprint varnish is formulated for use on rotary screen printing equipment over a variety of paper, film, and foil substrates. It can be printed with wax free water based inks as well as UV cure inks. It is designed to provide a textured feel upon printing, making it suitable for speciality applications and will cure under both LED and Hg UV curing systems.