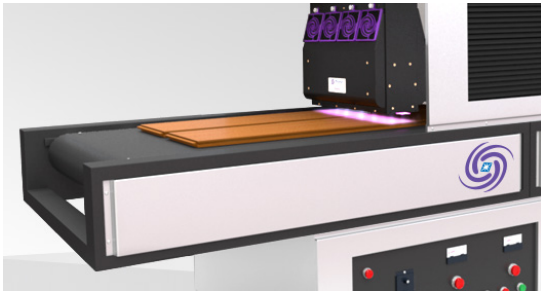


UV LED Coating Solutions

Wood Manufactured Product



UV LED technology allows users to cure a broader range of heat-sensitive substrates in wood manufacturing such as glued veneers and resinous woods that have previously been more challenging with traditional UV arc lamps.

UV LEDs produce significantly less heat which keeps board surface temperatures low, allowing less expensive raw materials to be used.

UV LED solutions are energy efficient and provide highly reliable UV curing that is delivered evenly across coated wood products. UV output from Phoseon systems is repeatable which ensures consistent energy is delivered throughout every shift and every job change year over year.

Sustainability

No mercury disposal

Safer workplace

No ozone

Operating Economics

Up to 50% energy savings

Low maintenance

Longer lifetime

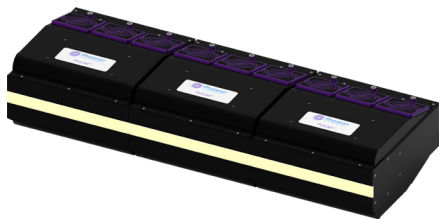
Increased Productivity

Negligible Heat Transfer

Tighter process control

Higher Yields

UV LED Curing Technology



Phoseon Technology has a variety of LED head designs ideal for wood coating lines. The heads can scale to cover any board width, and the consistent UV output over time enables end users to confidently run production lines at maximum speeds.

Phoseon's revolutionary UV LED curing raises work-piece surface temperature less than half of traditional arc and microwave curing methods which can heat the wood's surface by as much as 60 degrees Celsius.

Heat creates tremendous challenges in wood coating, particularly with woods with high resin or oil content, such as pine, fir, spruce and mahogany. Heat brings the resins and oils to the wood's surface, and that bleeding causes discoloration and difficulties with coating adhesion. UV LED curing systems transfer less heat to the board surface, which eliminates these issues and creates less product waste.

Wood Coating Applications

UV LED curing technology is ideally suited for the manufactured wood products industry and is used in applications such as edge coating, roller coating and digital printing. UV LED technology drastically reduces energy consumption and significantly reduces work-piece surface temperature.



Edge Coating

Edge Coating lines utilize UV LED to ensure consistent, high-quality results. Machines can be made more compact due to small form factor; speed can be increased due to consistent UV output; and the diffuse nature of UV LED light can be used to more effectively cure shaped surfaces which previously required multiple mercury lamps at various angles.



Roller Coating

UV LED is a perfect match for roller coating lines, both for gelling and full-cure stations. The benefits include better factory floor utilization due to shorter, more efficient lines; increased uptime with no degradation in UV output, less expensive input stock due to lack of infrared heat; and reduced operating costs by more efficient electricity use and no need for costly air-extraction systems.



Digital Printing

While technically not a wood application, creating a wood-grain look on diverse materials is made possible with UV LED and ink-jet printing. By using a combination of pinning and full-cure lamps, realistic 'look' and more importantly 'feel' is enabled by creating texture to mimic the grains of natural wood. This is especially valuable in decorative and accent applications.

LED curing is ideal for wood coatings applications as the rugged design is built to operate in tough environments. In addition, UV LED light sources are solid-state devices that can be instantly turned ON/OFF, significantly reducing time in automated processes.

Phoseon's patented SLM® technology provides intense UV output, while using a fraction of the power required with traditional UV arc lamps. The UV output from Phoseon's UV LED curing systems is consistent over time and uniform along the length of the device.