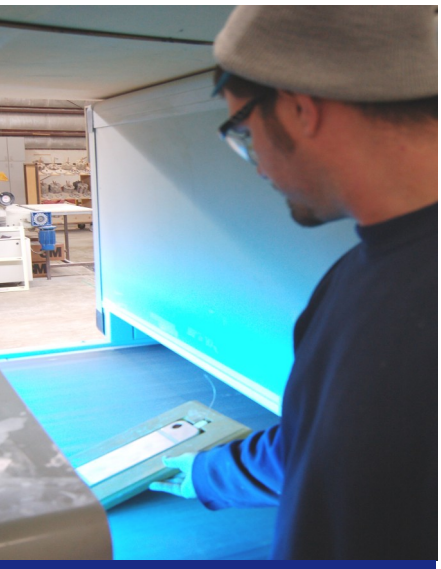
INSTRUMENT MARKETS

MasterBrand Cabinets, Inc.

Measuring Success:

an EIT Customer Case Study



An Omega Cabinetry operator sends an EIT Power MAP down the UV flat line.

Waterloo, Iowa is home to Omega Cabinetry, the premier line of MasterBrand Cabinets that has earned a global reputation for its beautiful, durable, high-quality UV finish. To help keep their lines running in tip-top condition, MasterBrand relies on several EIT instruments: the Power Puck®, PowerMAP® and MicroCure®.

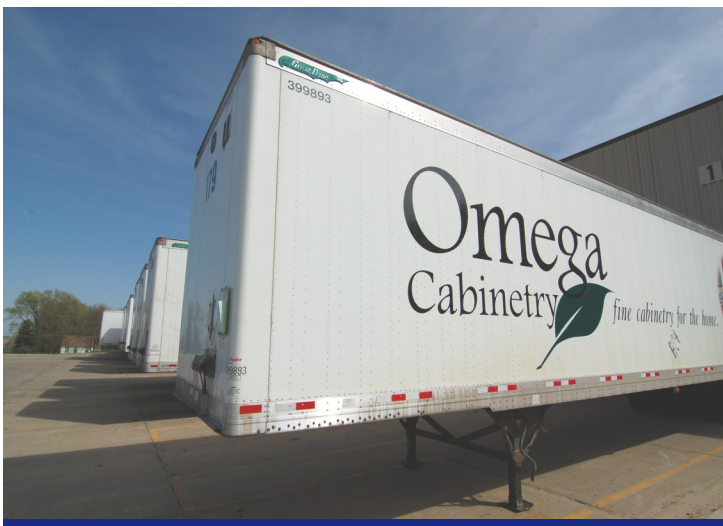
"As a chemist coming from a formulator position," says Mark Parker, Manager of Finish Improvement, "I am really focused on making sure our process runs within specifications. We are super vigilant about quality control and the importance of measurement."

Omega operates three UV finishing lines for wood parts from moldings to large flat panels. "We have a number of different EIT measurement tools, each well suited to a particular task. We use a MicroCure on our narrow edge-coater, a Power Puck on the roll coating line, and a PowerMAP on our most complex Paint-White line which has various UV stations of different wavelength and irradiance," explains Parker.

"There is no doubt in my mind that investment in a good measurement routine has saved us many-fold in scrap, rework and possible customer satisfaction issues. We identify potential cure problems before they become warranty issues."

"MasterBrand engineers company-wide have adopted the Toyota Way philosophy," explains Clay Shimeall, Vice President of Operations. "One of the key tenets of the approach is to solve problems at the source—and our UV measurement commitment fits perfectly with that philosophy."

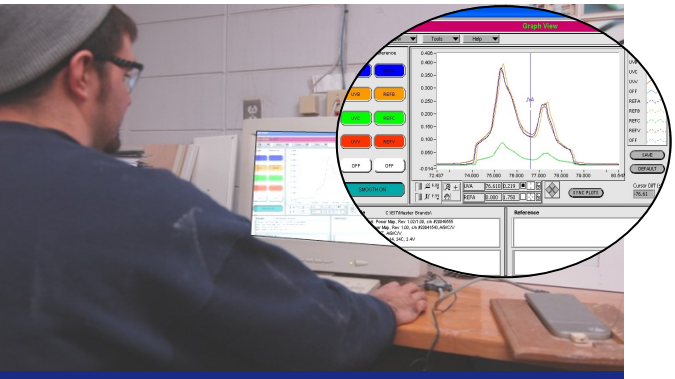
Omega has trained technicians and operators to use a number of UV measurement tools. The data collected during each production shift ensures that their processes are running within the specifications, and allows Omega to determine when it is time to service the UV lamps and replace worn reflectors.



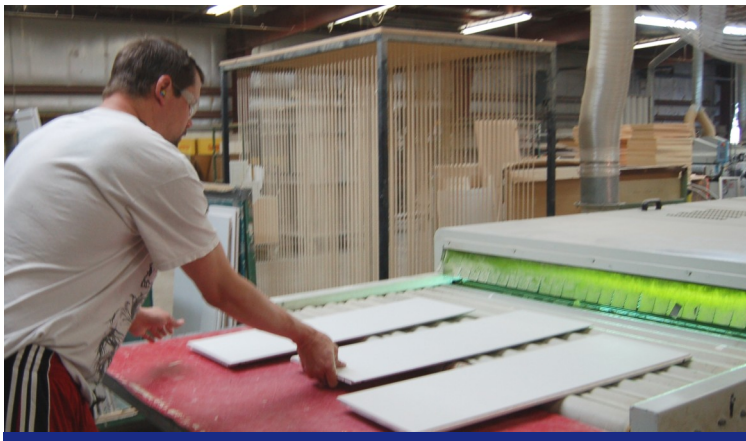
Omega Cabinetry, a high-end product of MasterBrand Cabinets, relies on UV measurement to assure the highest quality finish.

Getting a perfect mirror-like finish along with the extreme performance properties required by their discerning customers led Omega Cabinetry to work closely with their coating suppliers and CEFLA, their system provider, to develop a unique curing profile that optimizes the process.

Today, MasterBrand system engineers keep a constant eye on the process using an EIT PowerMap UV profiling system. The graphic Powerview software enables them to quickly examine not only the output level for each of the many lamps on the line, but to assure that the lamp's spectral output has not shifted. Proper spectral output of the doped lamps is essential for the right cure of the many pigmented coatings that Omega applies. "For some coatings, measuring peak irradiance and dose is enough," says Parker, "but for other materials we find that seeing what is happening in each spectral band is a key parameter for us to watch. Controlling this process is more difficult, and the Powerview software gives us a more detailed tool to monitor this process than we need for some of our other applications." The graphic interface allows technicians to compare data collected on each shift to a reference profile, measure any differences they find, and zoom in on suspected problems for a closer examination.



EIT Powerview software provides Omega engineers with a detailed analysis of complex curing profiles designed to produce the highest quality finish and performance.



Each of Omega Cabinetry's three UV finishing lines requires a different measurement approach tailored to fit the specific parts and process.

Though MasterBrand goes further than most manufacturers to monitor their UV process, they are not content with daily data logging and are always looking to further improve the quality control. "We are now examining real-time UV measurement," says Parker, "since a problem can occur at any time and there is a lot of benefit to being able to detect and correct any problem as fast as possible." EIT Compact sensors can be mounted in the light shield, or in the UV lamp housings to continuously monitor the condition of each lamp. Properly located, the sensor can provide immediate information about the condition of the lamp and reflector. Data can be sent to the system PLC or a stand-alone display to alert operators to unexpected changes in UV output and provide all the necessary data at a glance.