
White Paper

“Design and development can be done in locations that are not necessarily tied to the production plant.”

Automation.com

“In today’s global environment whoever manufactures products better, cheaper and faster, wins.”

Jim Pinto, The China Challenge

American Design / Chinese Manufacturing

FORMETCO is a manufacturing and supply company, deeply rooted in service to the outdoor advertising industry. For forty-three years the company has listened and reacted to the needs of billboard providers all over North America.

Older companies learn a lot of lessons along the way. In so doing, they learn to think long-term, to develop products and services in lock step with their customers’ vision. Such has been the formula for success at FORMETCO in its service to the out-of-home industry.

FORMETCO was not first-to-the-table with a product for the emerging digital outdoor revolution. It took the time to study the early products and to carefully assess its customer’s reaction to the developing trend. In the process FORMETCO took note of those items critical to success for the out-of-home provider.

FORMETCO found that the same value proposition existed with the new technology as with its earlier products:

- Quick delivery
- Dependability
- Ease of installation
- Quick Service
- Low cost

But, with a rapidly changing high technology product, there were additional requirements:

- Versatile, yet simple programmability
- Low power usage
- Reliable diagnostic notification

With these basic requirements in tow, FORMETCO set about to develop a product and to select a contract manufacturer capable of producing at the highest standards and the best possible price for its customers.

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In 2009 the LED full-color display industry was more than twelve years into its cycle of development. The historical relevance of this point is that there were a number of early developmental firms with a wide range of electrical, developmental and application engineers with deep experience in light emitting diode systems working in the industry. FORMETCO selected and assembled a team of professionals with a long history of system design. Armed with its evaluation of competitive products, along with the application needs it had obtained from the out-of-home industry, the new design team set about its work.

FORMETCO knew that the outdoor advertising application demanded more robust technology than was, at the time, available in the industry. It also needed to short cut the time from parts failure to repair or replacement. In order to accomplish this, a proprietary LED board design would be required, along with a sophisticated new data distribution scheme. Other critical items such as remote system diagnostics hardware and software needed to be created. More refinement in power conservation was needed.

FORMETCO's research had proven the reality that a long-term, production plan would most likely require an Asian manufacturing partner. All indicators suggested that high technology production in a quality-controlled environment happened in the Far East.

Ultimately, FORMETCO chose to follow the lead of IBM, Apple and most other American brand technology manufacturers, which discovered that the highest quality, lowest priced and most efficient manufacturing takes place in the technology center of China.

While there are more than two hundred Light Emitting Diode (LED) display producers in China, FORMETCO was seeking a technology partner, willing to produce product, specific to the design requirements of the outdoor advertising industry. The proprietary design FORMETCO had developed, along with specific quality control requirements, would be essential to producing the robust product the company had envisioned.

Many manufacturers were evaluated, but the decision was made to select LEDman Optoelectronics, Ltd. on the basis of its western cultural orientation, financial strength, multiple international certifications and capacity for growth. The company was already accustomed to producing product at the highest quality requirements and was amenable to FORMETCO's design requirements and further quality control requirements.

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LEDman is a publicly traded corporation with a market capitalization greater than the largest US digital supplier. Currently in the process of constructing the largest LED display manufacturing facility in the world, its production will be expanded, six-fold, in the second quarter, 2012.

LEDman is further unique in that it is a producer of the individual diodes, which populate its displays. This level of efficiency is unique to LEDman and offers quality control over every aspect of the display. All other digital outdoor suppliers are reliant upon LED's produced by other manufacturing firms. Multiple bins (grades) of diodes are combined for each color. Further, the colors are not all from the same vendor. The LEDman diodes are all produced in a single-bin process for the purpose of uniformity in a digital display. (See the FORMETCO White Paper entitled, The LEDman LED and its Advantages).

FORMETCO introduced to LEDman a new cabinet design and mounting system, specific to the needs of outdoor advertising. It worked with LEDman to integrate the FORMETCO power supply system, the new data distribution methodology and new software and user interface systems, again specific to out-of-home applications.

FORMETCO AND LEDman created further efficiencies relative to shipping and crating in order to facilitate ready assembly for installation in the US markets. Quality control measures were expanded to include extensive vibration testing to ensure the integrity of all solder joints and full cabinet water testing to eliminate water incursion difficulties.

LEDman guarantees that all water and vibration testing is performed on all display cabinets as a part of the rigorous quality control regimen.

The final, essential element, provided by FORMETCO in coordination with LEDman is an extensive inventory of product kept at FORMETCO's, Ad-Tech facility in Norcross, GA. While other suppliers quote delivery in months and weeks, FORMETCO delivers in days. The financial return of the FORMETCO digital product can begin as much as two months prior to most competitors.

While FORMETCO was not the earliest provider of the digital outdoor technology, it may be the best, most financially viable option for an outdoor provider today. Amazingly reliable, affordability, low-cost and short-term delivery, ease of operation and service, all come standard with the FORMETCO digital solution.