THE COUNCIL OF INDUSTRY MAGAZINE AND RESOURCE DIRECTORY

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COMPANY PROFILE

GTI Graphic Technology Inc.

LEADERSHIP PROFILE

Frank Falatyn

PRESIDENT, FALA TECHNOLOGIES

DOES YOUR COMPANY NEED INTERNS?

WHY MANUFACTURING MATTERS

Alfredo Garcia, Production Manager
GTI Graphic Technologies, Inc.

COMPANY PROFILE

GTI GRAPHIC TECHNOLOGIES, INC.

True Colors

Meet the world's premier designer and manufacturer of critical color viewing and inspection systems.

GTI President Robert McCurdy (right) and Lou Chappo, Executive Vice President.

Color is a crucial component of product design, manufacturing and marketing. For many companies, color is key to brand identity; think, for example, of Coke red or John Deere green. And all manufacturers require consistency of color, both in the batches of materials that come from multiple suppliers and in the products they create. Yet not only is the perception of color highly subjective, it is significantly affected by physical viewing conditions; the slightest variation in lighting and environment can lead to significant shifts in color appearance.

The best, perhaps the only way to guarantee that people communicate about color consistently across the supply chain is to set industry standards for a tightly controlled environment in which to view color. The International Organization for Standardization (ISO) has set standards for graphic and photography color viewing that are recognized in its 162 member countries. ASTM International has set standards for industrial color applications. Both standards require that viewing conditions meet strict specifications with regard to color quality, light intensity, evenness of illumination, viewing/illumination geometry, and surround conditions.

GTI Graphic Technology, Inc., located in the heart of Newburgh and celebrating its 40th year in business, is the world's premier designer and manufacturer of critical color viewing and inspection systems that meet and exceed these standards.

Fred McCurdy, a civil engineer with a degree from Tufts University, was just out of the Air Force when he placed an ad in the Wall Street Journal looking for a job. He was hired by a lighting system company based in Newburgh and, over the next two decades, became one of its top employees. In 1975, a new technology was developed to produce artificial daylight and McCurdy thought it had the potential to be more economical than the current process while still maintaining a high level of quality. When his employer proved uninterested, McCurdy decided he would try it on his own and launched GTI. His new company eventually became the leading designer and manufacturer of color viewing and inspection systems. Today, GTI is run by Fred's son Robert McCurdy, and longtime family friend Lou Chappo, Executive Vice President. "Fred founded GTI and was successful with the business because of his high-level of energy, positive thinking, and can-do attitude. He served as a mentor to us, and many others. We continue to operate the business and approach our customers, employees, and business partners by the standards he set," said Chappo.

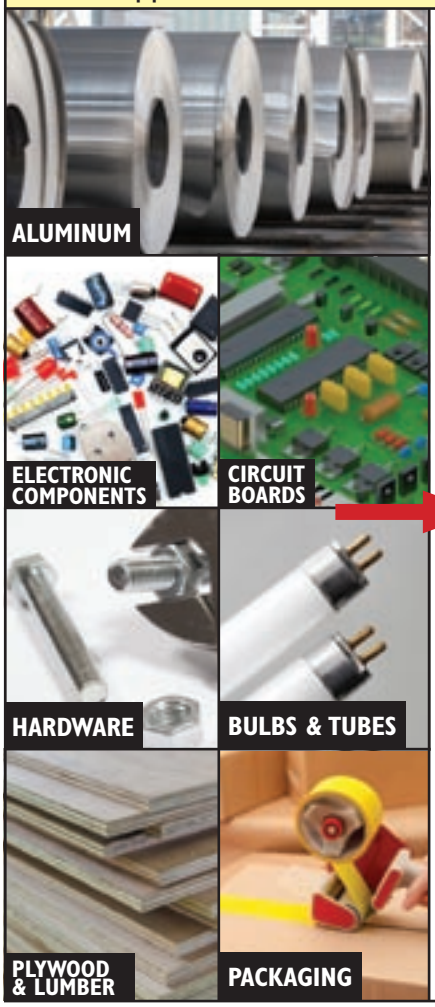
GTI's 33,000 square-foot manufacturing facility is located on DuPont Avenue in Newburgh, NY. The building, built at the turn of the last century, was constructed by The Fabrikoid Company (developer of a textile coating process), and was purchased in 1910 by DuPont for $1.2 million. Many of GTI's 33 employees have been with company for more than 20 years, and some were hired right out of high school. "We have great, dedicated people." McCurdy says. "They know their jobs, they know the business and they are committed to GTI's success."

Chappo explains that GTI has achieved a leadership position across its market segments because of its high-level of expertise and the decision to focus solely on the manufacturing and design of visual color inspection stations. At GTI, engineers are able to work with customers to customize products. "Because the fabrication is done entirely in-house (only the circuit boards are outsourced), we can make changes and tweak items on the fly. This gives us a competitive advantage," Chappo says.

"There is a downside to the high quality of our products," Chappo facetiously laments, "they just don't wear out." The only replacement parts most companies require are the lamps, which shift beyond industry tolerances in color and intensity after a certain number of viewing hours.

THE SUPPLY CHAIN

Suppliers & Vendors	Design & Manufacture	Customers



A simple illustration of what is, in reality, GTI's complex supply chain. Materials from dozen of firms in multiple industries are turned into products sold all over the world. As noted in this issue's article, "Why Manufacturing Matters," revenue from those sales helps to power our local economy.

gti truelight truecolor

[AND HUNDREDS MORE]

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According to McCurdy, 80,000-100,000 lamps are replaced each year, with the average life span in a well-used unit being approximately 18 months. The ballasts, the part of the light fixture that regulates the current to the lamps and provides sufficient voltage to start the lamps, can last anywhere from 10 to 15 years before they need replacing. GTI once had a shelf for returns but it ended up being a catchall for other items because the company just did not receive returned products.

The company has recently increased efficiency in its production process by adopting 6S, a lean process improvement tool. The name stands for Sort, Set in Order (aka Straighten or Stabilize), Shine (aka Scrub or Sweep), Standardize, Sustain, Safety. The company has also employed Kanban, an inventory control technique to control the logistical chain from a production point of view. This has allowed it to ramp up production volume and GTI is now having some of its best sales months ever. The company has achieved much of this improvement with the help of the Hudson Valley Technology Development Center (HVTDC), the Hudson Valley's Manufacturing Extension Partner. "The HVTDC has been great," says Lou Chappo. "They provided a fresh set of experienced eyes to look at our process and suggest improvements."

GTI has three types of customers: graphic artists and photographers, industrial markets, and quality engineers. Each type of customer has specific needs and GTI offers a variety of products tailored to fulfill those needs. There are desktop or tabletop viewing systems for smaller samples, overhead and wall mounted luminaires for large format viewing and, under development, a room-sized system for the automotive industry.

GTI's proximity to NYC is a plus because the city is a hub of the marketing and fashion worlds and home to many graphic design companies and photographers. Graphic artists and photographers require viewing systems that replicate the variety of light sources their work will be seen in so that they can communicate colors consistently and accurately. Brand consistency is very important and, with companies promoting their products through various types of media, the coloring on all packaging must match and coordinate with the colors seen in product labeling as well as in print ads, from magazines to billboards. In the world of fashion, communicating color is important not only in keeping the garment's coloring uniform, despite being produced in factories all over the world, but also in promoting the finished product

accurately to the public. McCurdy points out that, "More and more sales are made online or via catalogs and if a shirt looks one color in the ad and in reality is a shade or two darker, that can affect not only that sale but a company's reputation."

For industrial markets, where color consistency must be maintained across multiple facilities, GTI manufactures luminaires that can be used on opaque materials like textiles, plastics, paint, automotive parts, food, cosmetics, and more. In the automotive industry, for example, parts are made in several different locations and then brought together for assembly. If the colors of the doors or bumpers are off even a slight amount, the human eye will pick up on it.

A room or garage outfitted with wall- and ceiling-mounted luminaires that are controlled remotely is used in harmony audits to ensure that the bumper made and painted in one factory matches the doors that were manufactured in another. These audits are important for the paint companies as well as the car manufacturers. The suppliers want to be able to confidently tell companies that the colors will match when assembled. The need for uniformity of color applies to the majority of products consumers purchase. No one wants to buy the latest widget only to notice the coloring is slightly off from everyone else's widget.

Quality control and engineering is another area where the precise control of lighting and accurate daylight simulation afforded by GTI equipment is important to the design and manufacturing processes. Cameras and camera phone manufacturer, for example, require standardized lighting to determine how well their products work in different conditions.

GTI's viewing systems are shipped to companies all over the world. Robert McCurdy points out, "If a large company decides to use GTI's product to evaluate and communicate color, then the companies that work with it will also need to use GTI's viewing." Being located in the Hudson Valley has been a plus to GTIs distribution network. Over 25 percent of GTI's sales are to overseas companies and the company's proximity to New York City allows for easier shipping to Europe and Asia.

The customer base for GTI's products is growing and evolving. Paint manufacturers and their retailers are increasingly aware of the importance of creating an environment for color viewing. The color of a paint chip under the fluorescent lighting at the retail store is often very different from how the color will appear on the customer's wall under warmer lighting or daylight. Paint companies are encouraging retailers to use viewing systems designed to help customers evaluate paint samples before purchase, to reduce returns and improve customer satisfaction. Another possible area of growth is in ensuring the color quality and consistency of hand held devices used to take and view photos and video.

Technology evolves and currently there is significant development of LED (Light Emitting Diode) systems for lighting applications. While there are many potential technical and cost benefits likely to come from the implementation of LED technology in GTI viewing systems, the current state of LED design and manufacture does not meet the strict requirements of GTI and its clients. "When LEDs first came out, engineers were all about getting the brightest light from the least amount of energy – without regard for quality of light," Chappo observes. "Now they have begun to work on the more subtle quality and spectrum issues. We're watching closely to see where it leads."

The importance of color communication is something the public takes for granted, but marketers, photographers, designers and manufacturers certainly do not. With 40 years of experience working in this field and more than 125 core equipment models for color viewing, GTI has the full spectrum of color communication covered.