



EBW
Electronics

Electronic Design and Manufacturing Services





Turnkey Design, Engineering and Electronic Manufacturing Services

Our total-team focus on design, engineering, manufacturing, project and supply chain management is delivered under an umbrella of world-class quality. EBWE offers a complete source for OEM, Tier 1 and Tier 2 electronic manufacturing services. Our electronic manufacturing services start with a design process that integrates with manufacturing to keep production costs as low as possible using lean principles. Our plant is geared for high volume assembly, yet nimble enough to accommodate smaller builds required through new product launch.

Because the EBWE design and engineering teams have input on our manufacturing process, EBWE printed circuit board assemblies are manufactured in a high-quality, efficient and economical manner. In addition, our high-speed SMT lines and three shift production teams provide the flexibility and responsiveness needed to meet your changing needs.

Selected Manufacturing Capabilities

- 10 SMT lines; high capacity, extensive capability
- Through-hole and mixed technology manufacturing
- Double-sided assemblies
- Flexible printed circuit board assemblies
- Components up to 55mm square, 25mm tall and down to 01005
- BGA placement
- Automated X-Ray inspection
- Automated optical inspection
- Solder paste inspection
- Automated selective soldering
- Automated conformal coating
- Any volume, mix and complexity
- Microcontroller programming
- Circuit boards to 24" long



LED Expertise

EBW Electronics has been at the forefront of the transition to LED from indicators to lighting sources over the past 20 years. We are your single source to develop and execute new and existing LED designs with superior light quality and system performance.

Our expertise specific to LED lighting includes:

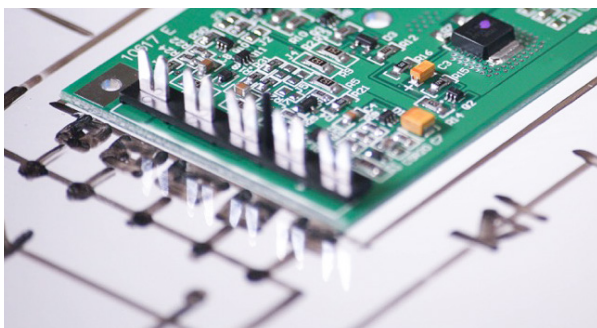
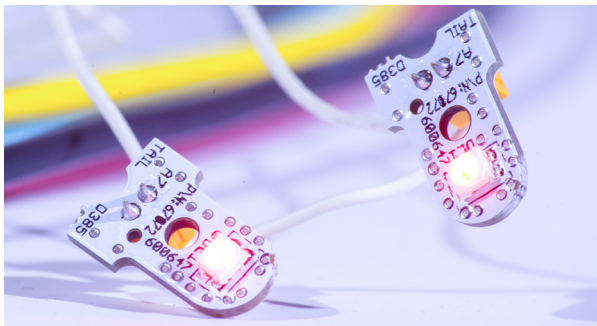
- Brightness
- Direction
- Efficiency
- Color and Color Rendering Index
- Life Expectancy
- Thermal management
- Performance

We provide you expertise in driver design as well as LED engines. Our competence includes all varieties of drivers from low voltage automotive component designs to high voltage Title 24 products. Our design experience ranges from simple linear to complex off-line switcher.

By partnering with EBWE, you can be assured:

- Adequate capacity in design, manufacturing and supply chain management
- Validation to specifications for quality of light
- Assistance with component selection for color rendering index
- Supplier selection for component quality, performance, and availability
- Bin management and LED unit tracking
- Design in-house or build-to-print
- Thermal management in new and existing assembly design
- 100 Percent functional testing

EBW Electronics is one of the largest purchasers of LEDs in the U.S., working closely with multiple suppliers and manufacturers to assure as needed supply of high quality LED components.



Design for Manufacturing

Using lean manufacturing principles and the goal of creating cost-effective, quality electronics assemblies, the EBW Electronics team delivers products on time and at very competitive pricing.

Electronics design is an area of our expertise. EBW Electronics design for manufacturing service gives special consideration to the manufacturability of your product to ensure that it is produced in the most cost effective way. This approach also aims to reduce the product development time and ensure that the products are of high quality and reliability.

By exploiting various cost saving opportunities such as reducing the number of parts, using multi-functional parts, using standard parts, reducing separate fasteners, and minimizing assembly processes our team assures an efficiently built product. Our cross functional team cooperates to assure consistency, quality, and cost effectiveness.



A Commitment to Quality

Quality Certifications

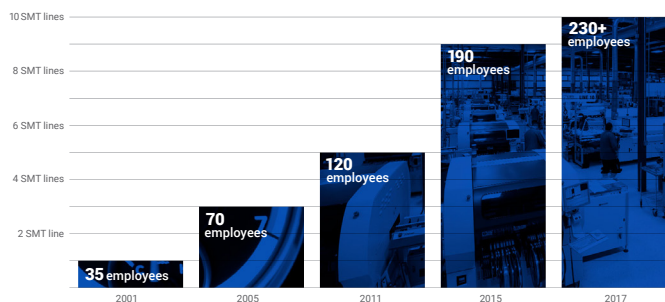
- ISO 9001 Certified Quality System
- IPC610 Trained Staff
- TS 16949 Certified Quality System



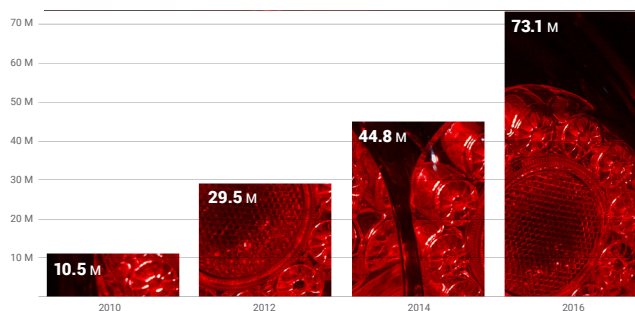
Quality is of the utmost importance at EBW Electronics. Our printed circuit assemblies and electronic components appear in a variety of applications and industries, but the focus on quality is consistent in everything we do. This focus begins the first time we talk to you and is expected of our team through the production process and beyond. The entire EBW Electronics team is committed to quality and attention to detail before all else.

Selected Quality Capabilities

- Automated optical inspection
- X-ray imaging system
- In-circuit and functional tests
- APQP processes
- Design for manufacturing focus
- Thorough in-house training programs



Facility and Team Expansion



Use for LEDs in Electronic Assemblies

Supply Chain Management

We manage our global supply chain risk through constant evaluation of the market and communication with our suppliers. Our suppliers receive forecasts weekly, loaded with several weeks of data that empowers them to plan and confirm we will have the material for your products when you need them.

When you work with EBWE, you will get a dedicated Master Scheduler, responsible for review of your orders, daily scheduling of material and plant operations to build your product. When you contact them for status or an expedite, they will understand your needs, know the status of the supply chain, and know best how to schedule EBWE resources. Your EBWE Master Scheduler is perfectly suited to give you a prompt answer.



VOLVO



Our presence in the automotive electronics and lighting market is comprehensive and can be found both inside and outside a wide variety of vehicles. We service PPAP, PFMEA, IMDS and APQP requirements every day.

Where Great People
Make Great Products



13110 Ransom Street
Holland, Michigan 49424
616.786.0575
ebwe.com