

In addition to providing access to many of the world's top LED lighting suppliers, Arrow has relationships with knowledgeable and experienced integrators that offer complete solutions via integrated devices. Our world-class integrators deliver complete lighting solutions for even the most challenging requirements.



Photo Courtesy of Peter Paige

ACES Partners ▶▶

The Arrow Consulting Engineering Services (ACES) program puts you in touch with pre-screened, qualified, and certified third-party lighting solutions and design services companies to save time, effort, and resources. The superior core competencies of our partners allow them to provide complete outsourced designs—while allowing you to focus on your core competency.

Designspring: This well established industrial design and engineering consulting firm provides comprehensive product development services. Designspring's offerings include:

- Consumer and commercial product development from concept to manufacturing
- Software development and packaging

Illumination Devices: This engineering firm specializes in design configuration and electrical integration of solid-state lighting systems for general illumination applications. Illumination Devices offers:

- Light engine/system development for new and existing fixtures
- On-board driver circuit and microprocessor integration

LED Specialists: This engineering services firm specializes in design and integration of high-performance LED lighting solutions and offers:

- Requirement analysis and rapid prototyping
- Optical, electronic driver and mechanical design, including thermal management

Metaphase: This firm provides straightforward lighting solutions using LEDs in non-imaging applications. Metaphase offers expertise in the design of components such as secondary optics for LEDs and fully developed lighting systems including:

- Design team consultation and prototyping for design verification
- Full OEM component and system manufacturing

TXP Corporation: This PCB assembly firm provides pre-manufacturing services for the electronics industry that help OEMs bring products to market both faster and more cost-effectively. TXP Corporation offers:

- Preview PCB layout and design for manufacturability (DFM) analysis
- Get quick turn prototype PCB assembly—consigned or turn-key
- Advanced technology capabilities:
 - PoP (package-on-package)
 - 0.4 mm BGAs
 - High-density assemblies

Integration Partners ▶▶

CML Innovative Technologies

For 90 years, CML has added value to light sources. CML solves the most difficult issues in thermal management, optics, and drivers, and offers a complete range of solid-state products that range from power LEDs to LED light engines. CML offerings include:

- Advanced software simulation ensures custom products meet expectations
- Rapid prototypes and engineering support

Dialight Lumidrives

This industry leader applies LED technology to the spectrum of visual applications. Dialight specializes in status indication for the communications and industrial markets, as well as signaling for transportation and rapidly emerging illumination products. Dialight offers:

- Light engines, standard optics, and drivers
- Complete design and manufacturing for custom lighting applications

TT electronics/OPTEK Technology

OPTEK's strength is in providing application-specific optoelectronic solutions. As an integrator, OPTEK provides quality products that range from chips to fully functioning assemblies. OPTEK offers:

- Custom optoelectronic solutions
- Broad range of devices and industry expert support

Unity Microelectronics

Unity offers engineering and manufacturing capabilities for custom lighting assemblies and a wide selection of visible and IR optoelectronic products. Unity is dedicated to providing products that perform consistently over their lifecycle and offers:

- Tight binning with rigorous quality and testing procedures
- Low-cost/high-volume manufacturing

To learn more about our integration partners, please contact your local Arrow representative or call 1-888-9LIGHT1.



Total Solutions

TT electronics/OPTEK Technology offers decades of experience in custom product development and manufacturing capability. Our expertise extends from die placement through finished product assembly and testing. OPTEK has the experience and the facilities to accommodate the most stringent assembly requirements.



A subsidiary of TT electronics plc

Features ▶

Product Design

- OPTEK has vast experience in many markets with a broad variety of applications

Product Assembly

- OPTEK is a vertically-integrated company with the ability to accommodate a wide range of circuit configurations

Thermal Management

- OPTEK has OptoTherm™ substrate material

Benefits ▶

Product Design

- Customers can draw on OPTEK's knowledge to find the perfect design to fit their needs

Product Assembly

- No aspect of product design and manufacture is beyond OPTEK's capability; this means custom manufacturing solutions from chip placement to integrated assemblies can be provided

Thermal Management

- OptoTherm™ accommodates the heat dissipation required by high-brightness LEDs

Scalable

Applications ▶

- General illumination
- Task lighting
- Backlighting
- Signage
- Specialty lighting
- Cove lighting



Product Specifications ▶										
Type	Fixture Design (Y/N)	PCB Design (Y/N)	Testing (Y/N)	Manufacturing (Y/N)	Component #1 HB-LEDs (Y/N)	Component #2 Drivers (Y/N)	Component #3 Optics-Standard (Y/N)	Component #4 Optics-Custom (Y/N)	Component #5 Thermal Management (Y/N)	Markets
Total solution	Y	Y	Y	Y	Y	Y	Y	Y	Y	CL FL TR BL SI
MARKETS LEGEND					CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE					

Featured Products ▶

OPTEK offers a variety of both standard and custom VLED products and assemblies

