



LED Illumination



TELEDYNE

MICROELECTRONIC TECHNOLOGIES

A Teledyne Technologies Company



Engineering Light for Better Products



Over 20 Years of Proven Performance

Teledyne Lighting & Displays group is a leader in designing and manufacturing high efficiency, high reliability LED illuminations devices.

Optimize SWAP: Size, Weight, Power and Performance

We focus on collaboration to achieve

- ➔ Smaller size
- ➔ Lighter weight
- ➔ Lower power
- ➔ Improved performance
- ➔ Equal or improved reliability

Services

At any phase of your design, from concept or schematic to manufacturing drawings, we work with you to provide a cost effective, innovative packaging solution. Our team of experienced engineers achieve your size, weight and performance requirements through circuit layout, mechanical analysis, component selection, and solve thermal and power management issues. Reliability and producibility are designed into every circuit, achieving a state-of-the-art quality product.

Advanced Technologies

We utilize a full array of advanced technologies to achieve optimal packaging for your circuit:

- ➔ WLP - Wafer Level Packaging
- ➔ CSP - Chip Scale Packaging
- ➔ SIP - System in Package
- ➔ MCM - Multichip Module
- ➔ MCA - Microwave Assembly
- ➔ Flip Chip/Flip Chip on Flex
- ➔ BGA/CGA - Ball/Column Grid Array
- ➔ Stud Bumping
- ➔ COB - Chip on Board
- ➔ SMT - Surface Mount Technology

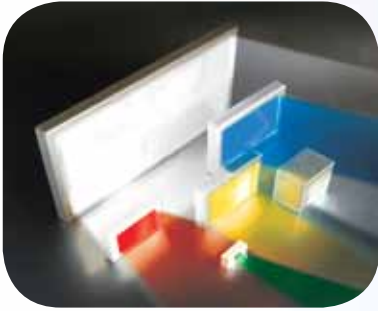
Accreditations

Teledyne Microelectronics is certified to AS9100, ISO 90001:2000 and MIL-PRF-38534, Class H and K. We are a DOD DMEA Microelectronics Trusted Source, accredited for Microelectronics Packaging, Assembly and Test Services.



Contact us to find out how we can help solve your toughest illumination requirements with our advanced technology

310.574.2078
www.teledynelighting.com



Alphalight™ LED Backlights for LCDs

- Ultrathin design available **NEW**
- Excellent brightness and uniformity
- Compact, rugged, lightweight
- Fast response < 100ns on/off address
- 15,000:1 dynamic full range dimming
- High optical efficiency
- Long life
- Available in monochrome white, green, red, blue
- Available in full color RGB and RGW
- Custom options available, including IR and NVIS
- Patented design and advanced optical architecture
- RoHS compliant version available



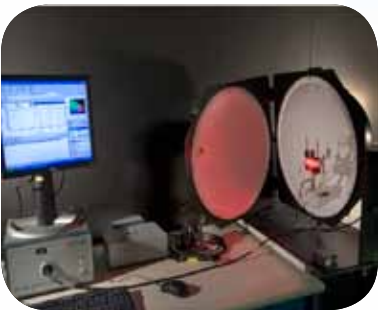
Photon Engine™ LED Collimating Illuminator

- Numerical aperture matching optics
- Collimated light output 40° - 50° FWHM
- Efficient thermal design
- Programmable intensity
- Available in monochrome colors white, red, green, blue
- Available in full color RGB, IR and UV wavelengths
- Custom options available
- Patented design
- RoHS compliant



Non-Imaging Optics for LEDs

- Side-emitting
- Collimating
- Elliptical
- Optics use total internal reflection
- Patented designs
- Licensing available



Testing and Screening

- Luminance and flux measurements
- Goniometer measurements
- Spectral characterization
- Image analysis
- Life testing
- Environmental testing

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