

Scaling new heights in photonics



ACC MEMBER:

Colorado Photonics
Industry Association

ORGANIZATION TYPE:

Membership association

WHAT IT DOES:

Promotes the Colorado
photonics industry
inside and outside the
state.

WEB SITE:

www.coloradophotonics.org

What Is Photonics?

Photonics is anything that is done to control light, combining optics, electro-optics, and optoelectronics. It is both its own industry and an enabling technology for other industries, including medicine, defense, biotechnology, nanotechnology, manufacturing, remote sensing, communications, transportation, space exploration, and many others.

How Does Photonics Impact Colorado's Economy?

- 260 photonics-related organizations in the state provided 37,000 jobs in 2003 with a payroll of \$2.2 billion.
- 4,000 of these employees work at federally funded labs: the National Renewable Energy Lab (NREL), the National Center for Atmospheric Research (NCAR), the National Oceanographic and Atmospheric Agency (NOAA), and the National Institute of Standards and Technology (NIST).
- On average, for every job requiring photonics knowledge, companies hire 7 employees in non-photonics jobs.
- 204 organizations are directly engaged in production of photonics or services, and 134 are manufacturers.
- Denver hosted the 2004 meeting of the International Society for Optical Engineering, bringing in \$6.2M to the city coffers and solidifying Colorado's importance to the industry.
- While the state economy suffered in 2003, photonics revenues were stable or increasing.

What Are Some Examples of Photonics Applications?

- Eyeglasses, binoculars, and microscopes.
- Cameras and video cameras.
- CDs and CD players; DVDs and DVD players.
- Light-emitting diode (LED) displays, such as those in clocks, dashboard displays, and traffic lights.
- Fluorescent lighting.
- Infrared devices such as television remote controls, automobile security systems, and motion detectors.
- Optical fiber telephone cables and computer networks.
- Liquid crystal displays (LCDs).
- Temperature-moderating window coatings.
- Satellite-based optical weather imaging.
- Laser surgery tools.
- Optical scanners, fax machines, and laser printers.
- Bar-code readers for inventory control.
- Credit card holograms to prevent counterfeiting.