



Optoelectronic Manufacturing Infrastructure in China

The major thrust in optoelectronics manufacturing today is cost reduction. Companies are turning to China for low-cost, scaleable manufacturing solutions. This analysis provides an overview of the optoelectronic manufacturing landscape in China, focusing on packaging and assembly of components and modules. The analysis also includes a review of activity in Thailand where companies involved with the production of magnetic disk drives are targeting Optical Manufacturing Services (OMS). Material for this work was collected in China from on-site interviews with more than two dozen manufacturers, universities and research centers, and government related organizations, and from major trade shows and conferences. Over 100 figures provide a glimpse of manufacturing sites, products, and equipment and automation in use.

Optoelectronic manufacturing infrastructure is defined as component and system manufacturers, contract manufacturing service providers, and manufacturing equipment suppliers. Component and system manufacturers include both foreign (outside China) and domestic companies that have manufacturing operations in China. Contract manufacturers include Electronic Manufacturing Service (EMS) providers, disk drive manufacturers, and a new breed of pure-play companies called OMS providers. Manufacturing equipment suppliers are both foreign and domestic companies that provide machines and services used by the optoelectronic manufacturers in China.

Demand for optoelectronic manufacturing capacity is being driven by consumer products such as CDs, DVDs, laser printers and scanners, displays for mobile phones and personal digital assistants, digital cameras, camcorders, LCD TVs, and automotive traffic signals; and by fiber optic communication products such as lasers, transceivers, modulators, detectors, WDM, isolators, couplers, splitters, circulators, photonic switches, and waveguides. A discussion on the assembly of the active and passive components used in these devices is included. Active components include edge emitting lasers (EELs), vertical cavity surface emitting lasers (VCSELs), high brightness LEDs, and photodiode detectors (PIN diodes). Assembly processes include active and passive alignment of optical elements, epoxy bonding, fiber align and attach, die bonding, and wire bonding. Test and measurement is also discussed.

1. Executive Summary
2. Overview of end-market applications for consumer and communication optoelectronic components.
3. Overview of China's demographics, business climate, and emerging centers for optoelectronic manufacturing.
4. Segmentation of the optoelectronic manufacturing marketplace in China and review of key players (captive, contract manufacturing service providers, system manufacturers, active and passive component suppliers, network operators, manufacturing equipment and automation).

5. A series of information capsules summarizing findings from on-site interviews with companies, universities and research centers, and government organizations in China, including:

- Accelink Technologies
- Associated Opto-Electronics
- Browave
- Flextronics
- Hopecom Optic Communications
- O-Net Communications
- Photonic Manufacturing Service
- SAE Magnetics
- Shenzhen Hi-Optel
- Advanced Photonics
- ASM Pacific
- COERI
- Oplink Communications
- Shanghai New Industries
- Shenzhen Photon Technology

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