

Advanced Compound Semiconductor Foundry Services



GaAs • InP • Foundry

Laser Diodes

- > Red & Infrared Laser Diodes
- > Ridge Waveguide Devices
- > DH, QW, DFB Lasers
- > Quantum Cascade Lasers (QCL)

VCSEL's

- > High-Speed Telecom/Datacom Devices
- > High-Power Array
- > Infrared Backlighting & Security
- > Time-of-Flight & Proximity Sensing Devices

LEDs

- > Vis & Infrared LED
- > Resonant Cavity (RCLED)
- > Superluminescent (SLED)
- > Micro-LED's & Heads-up Displays

Photodetectors

- > (In)GaAs P-i-N Photodetectors
- > InP P-i-N Photodetectors
- > Photocathodes
- > Avalanche Photodetectors (APD)
- > Dual Color Photodetectors
- > Optical Modulation Devices

Photovoltaics;

- > High Efficiency Solar Cells
- > Thermophotovoltaics (TPV)
- > Laser Power Converters (LPC)
- > Single Junction III-V Solar Cells (except GaN)



Mission: Fabrication of Custom Devices, Development, Prototyping, Pilot Production, and Manufacturing



Biotech



Industrial



Datacom/Enterprise



Security



Energy



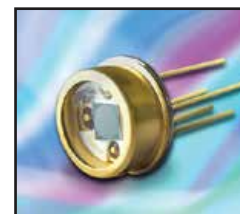
LED's



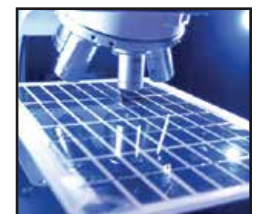
Laser Diodes



VCSEL



Photodetectors



Photovoltaics

Masimo Semiconductor maintains a customer/production wafer-processing laboratory. Capabilities include CAD design of photolithographic mask sets, development of custom device processes as well as routine fabrication process. Capabilities range from prototype development to full production.

Equipment/Processes

- > Semi and automatic wafer dicing for die separation
- > Wafer mounting to tape for dicing/cleaving machines
- > Strip/de-scum resist
- > Contact/proximity and vacuum photolithography
- > Photoresist development station
- > Solvent clean stainless hood with fire suppression for wafer cleaning
- > Inspection microscopes for measurement of critical dimensions
- > Flood UV exposure
- > Ammonia vapor system for image reversal process
- > Hot plate/Oven bake resist
- > Cassette rinse/dry
- > Silicon nitride, silicon dioxide, silicon oxynitride PECVD
- > Reactive Ion Etch: Vertical sidewall/trench etching of GaAs related compounds and dielectrics
- > Refractive Index and dielectric film thickness measurement
- > Extensive selective etch library
- > Acid compatible hood for wafer etching
- > Base compatible hood for wafer etching
- > Stylus contact contour measurement system
- > Electrical probe station for contact resistance measurements
- > Rapid thermal annealing of metal films
- > Optical coating evaporation
- > Electron beam evaporation of P- Ohmic & N-Ohmic metals
- > Thermal evaporation of Indium
- > Temporary carrier mounting for lapping and polishing
- > Heat uniform hot plate
- > Non-contact thickness measurement system for lap/polish
- > Pick & place: Die removal from carrier into trays
- > Die and device inspection

COMMITTED TO THE TOTAL SATISFACTION OF OUR CUSTOMERS

Masimo Semiconductor • A Wholly Owned Subsidiary of Masimo Corporation

25 Sagamore Park Road • Hudson, NH 03051 • Tel 603.595.8900 • Fax 603.595.0975

MasimoSemiSales@masimo.com • www.masimosemiconductor.com

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