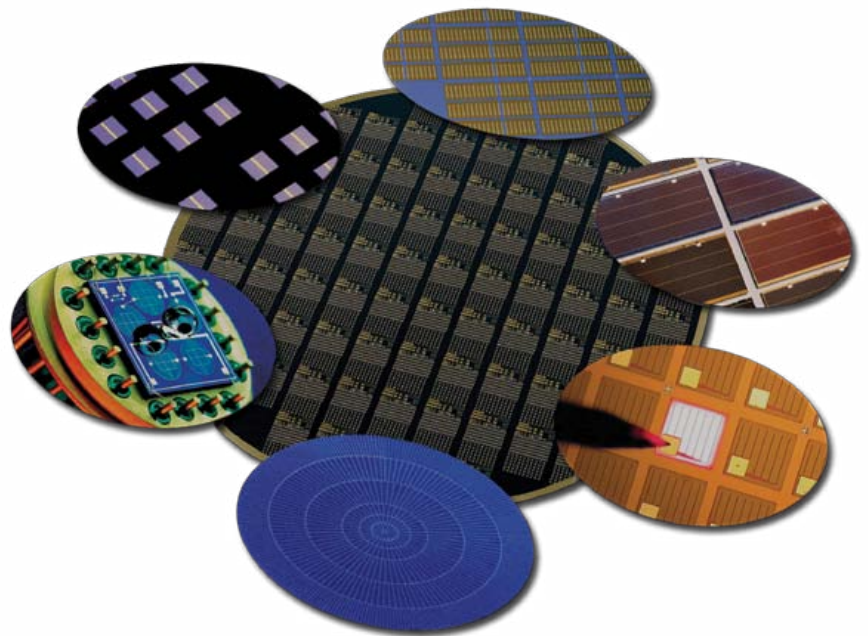


Advanced Compound Semiconductor Foundry Services

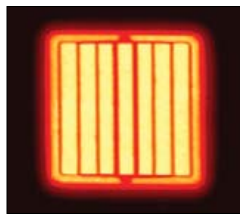


GaAs • InP • II-VI • Foundry

- > Ridge waveguide devices
- > VCSELS
- > Red Lasers
- > LEDs
- > Thermal photovoltaic devices
- > Avalanche photo diodes
- > Night vision – photocathodes
- > Optical modulation devices
- > Optical frequency conversion devices
- > Hybrid circuits
- > Laser power converters
- > GaAs P-I-N photodetectors
- > InP P-I-N photodetectors
- > High efficiency solar cells
- > Microwave devices



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



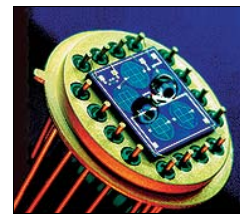
Red LEDs



GaAs Space Solar Cells



High Efficiency Space Solar Cells



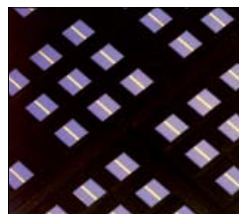
Custom Power Converter



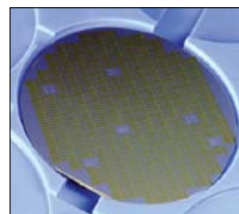
Laser Power Converter



Space Applications



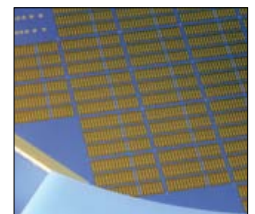
TPV Cells



VCSEL Wafer



Laser Diode



VCSEL Wafer

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
- > Wet oxide confinement growth station
- > Strip/de-scum resist
- > Contact/proximity and vacuum photolithography
- > Coat brake system positive resist, polyimide, negative resist
- > 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
- > Oven bake resist
- > Cassette rinse/dry
- > Silicon nitride, silicon dioxide, silicon oxynitride PECVD
- > Reactive Ion Etch: Vertical sidewall/trench etching of GaAs/InP related compounds CL2, BCL3, Ar, C, SF6
- > Reactive Ion Etch: Anisotropic etching silicon nitride, silicon dioxide, silicon oxynitride
- > Reactive 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/slow furnace annealing/alloying of metal films
- > Optical coating evaporation
- > Electron beam evaporation of N-Ohmic metals
- > Thermal evaporation of N-Ohmic metals – Ti, Pt, Au Ni, Ge, Zn, Ag, Al, Pd
- > Electronic beam of P-Ohmic metals – Ti, Pt, Au Ni, Ge, Zn, Ag, Al, Pd
- > 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 shear and wire pulling testing
- > Die and device inspection
- > Video caliper system

COMMITTED TO THE TOTAL SATISFACTION OF OUR CUSTOMERS

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