



The following are the operating specifications for the Heatpulse® 8108 system.

- **Wafer handling:** automatic serial processing, using standard cassettes.
- **Throughput:** Process dependent, approximately 80 wafers per hour (in a null cycle) without flat-finder.
- **Wafer sizes:** 5 inches, 6 inches, and 8 inches (standard).
- **Ramp-up rate:** Programmable, 1 - 180°C per second.
- **Steady-state duration:** 1 - 600 seconds per step.
- **Ramp-down rate:** Programmable, 1 - 180°C per second. Ramp-down rate is temperature and radiation dependent, maximum 150°C per second.
- **Recommended steady-state temperature range:** 400 - 1200°C.
- **ERP temperature accuracy:** +3°C to -7°C, when calibrated against an instrumented thermocouple wafer (ITC).
- **Temperature repeatability:** $\pm 3^\circ\text{C}$ or better at 1150°C wafer to wafer. (Repetition specifications are based on a 100-wafer set.)
- **Temperature uniformity:** $\pm 5^\circ\text{C}$ across an 8-inch wafer at 1150°C. (This is a 1-sigma deviation from 100-angstrom oxide uniformity.) For a titanium silicidation process, no more than 1.5 percent increase to uniformity during the first anneal at 650 - 700°C.