

AMBIENT LAMINAR GAS FLOW DISTRIBUTION IN LASER PROCESSING SYSTEMS

ABSTRACT

A method and apparatus for annealing semiconductor substrates is disclosed. The apparatus has an annealing energy source and a substrate support, with a shield member disposed between the annealing energy source and the substrate support. The shield member is a substantially flat member having a dimension larger than a substrate processed on the substrate support, with a window covering a central opening in the substantially flat member. The central opening has a gas inlet portal and a gas outlet portal, each in fluid communication with a gas inlet plenum and gas outlet plenum, respectively. A connection member is disposed around the central opening and holds the window over the central opening. Connection openings in the connection member are in fluid communication with the gas inlet plenum and gas outlet plenum, respectively, through a gas inlet conduit and a gas outlet conduit formed through the connection member.

Fig. 1