

FVS-04

Flash vaporization doping system

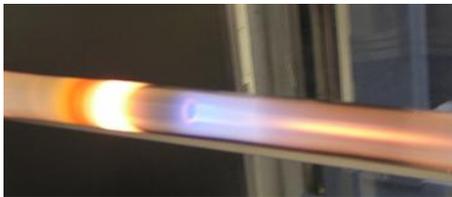


Description

FVS-04 Flash vaporization doping system is an add-on device for preform fabrication equipment, for CVD and OVD processes. System generates special silica or glass dopant precursor vapors by evaporation from solutions. This permits vapor phase (in-situ) deposition of silica in fabrication of rare earth- or metal ion-doped preforms for active and special optical fibers.

Applications

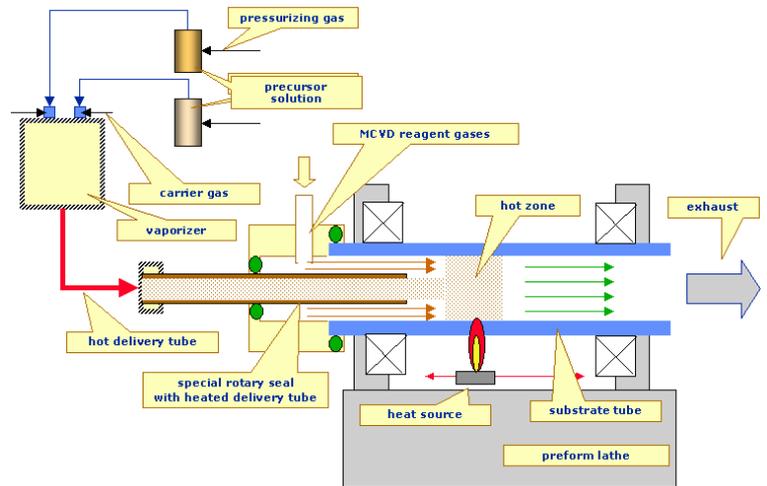
The key part of the FVS-04 vaporization system is VapBox® evaporator. Operated at a temperature



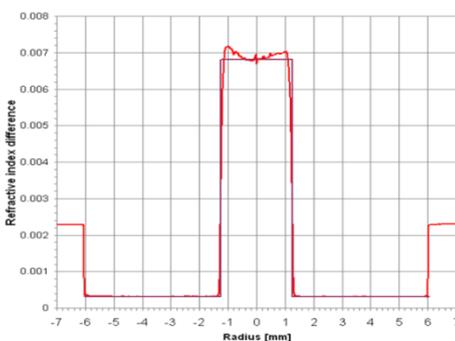
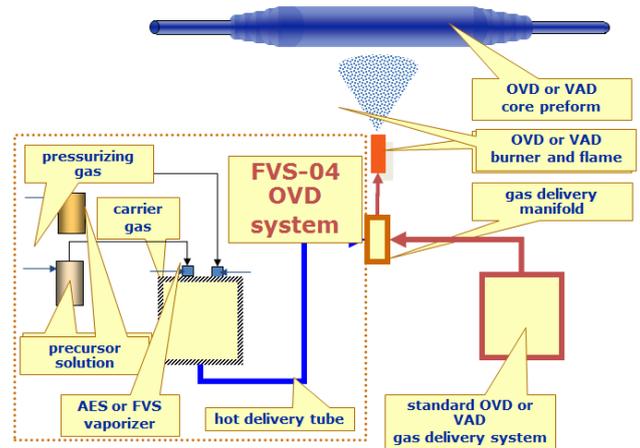
above precursor melting point, it generates vapor from a solution of an organic solvent and rare earth or metal precursor. Vaporizer is operated in pulsed mode, first producing finely distributed aerosol and then causing it to evaporate. Additional hardware is provided to guide vapors to process (special injection tube and heated conduits) and inject vapors directly into glass-forming reaction inside substrate tube (for CVD) or torch (OVD or VAD).

Precursors & Solvents

A wide range of organometallic (chelates and other β -diketonates) or inorganic chemicals can be used as precursors, in combination with organic solvents (water and alcohols only under certain conditions). TEOS and D4 are often used as silicon precursors, while use of SiCl_4 is limited to specific chemical environment. FVS-04 can be modified to aerosol and nanoparticle doping process by adding Atokit® device (see Optacore's AES-04 catalog).



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Process Support

Optacore provides basic process support and information on precursor and solvent selection as part of delivery, detailed and application specific (or product specific) process support and training is provided to customers upon request.

Accessories & Custom Design

FVS-04 can be retro-fitted to a number of preform lathes or deposition systems, and can be custom developed for non-standard applications. Ask for details.

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Note: Optacore reserves the right to change construction and/or specification of this product without notice.