

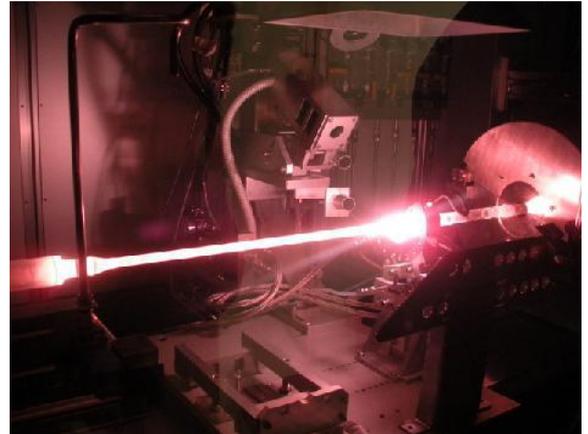
CVD-08

MCVD/FCVD Preform Fabrication System



Introduction

CVD-08 preform fabrication system is based on versatile and flexible MCVD preform technology. It is suitable for fabrication of wide range of optical fiber preforms and can be combined with a number of add-on devices for special doping (rare earth vapor phase precursor delivery) or advanced processing (FCVD) using a furnace instead of oxyhydrogen burner as heat source. CVD-08 is adapted to specific customer requirements and is available in different equipment configurations depending on application.



Applications

CVD-08 is used in fabrication of preforms for:

- Single mode fibers (standard SMF 28 fiber, modifications for cut-off and mode field size, dispersion shifter or flattened step or graded index SM fibers, ...)
- Bend insensitive or HOM optimized SM fibers,
- PM fiber preforms, Panda, Bow-Tie or Elliptical core/ clad design,
- Boron-doped stress rods for PM Panda fiber fabrication,
- Graded and step index multimode fibers, of different designs,
- Highly Ge-doped (Raman fibers) and photo-sensitive fibers,
- Laser/amplifier fibers, doped by Yb, Er, Tm, Ho, Nd, Sm, Ce,
- Nanoparticle- and metal-doped preforms for attenuators or sensor fibers.



CVD-08 preform glass working lathe is used for: preparation of substrate tubes, fire polishing of preforms before fiber drawing, preform jacketing, stretching and reforming, collapsing and consolidating PM fiber preforms and consolidation of microstructured preforms.

Dopants and precursors

CVD-08 is typically equipped with 3 or bubblers, for SiCl_4 , GeCl_4 and POCl_3 , and with a 4th bubbler, if BBr_3 or TiCl_4 is used. Gaseous precursors include SF_6 or SiF_4 and BCl_3 . Helium and chlorine gases are also provided. For fabrication of active or special fibers, Optacore's vapor phase doping devices (CDS-03, FVS-04 and AES-04) are recommended, to generate vapors of rare earth- and metal-ion precursors (Yb, Er, Al and others). CVD-08 is suitable for solution doping technique.

Control system

Control system and software is the key component of a modern MCVD system. Optacore has developed WinMCVD, a purpose-developed, Windows-compatible, GUI control software, offering advanced ramping functions, extensive data logging, process data analyzer, recipe database, remote update and servicing over internet (see brochure).

Accessories and options

Preform lathes: Arnold, Litton or others on request. **Burners:** standard is metal half-ring burner, burners with steel or quartz multi-jet as option. **MCVD Furnace:** Optacore's MCF-35 inductive furnace is offered as option. **Pyrometers:** Raytek M150 scanner is standard pyrometer, models from Lumasense and Land are options. **Other options:** doping systems, camera vision system for tube diameter and bow control, lathe hood, clean air system, hot air exhaust, cooling water system, tools for glass working...



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