

Polymer Jet™ Printhead for High-Temperature Operation

Product Description

The PH-04a Polymer Jet™ high-temperature, drop-on-demand printhead is designed for dispensing polymers and other materials at elevated temperature. Materials that must be heated above 50°C in order to melt and/or lower the viscosity of the fluid to less than 20cP can be dispensed using the PH-04a Polymer Jet™ printhead. Adhesives, optical polymers for light guides and lenses, and optically active materials have all been jetted successfully with the PH-04a. Drop volumes ranging from 5 pL to as high as 0.5 nL have been dispensed. The PH-04a uses the same interchangeable high temperature dispensing device, the MJ-SF, as does the PH-05a high temperature printhead with inert gas injection.



Standard Features

- Operation to 240°C.
- 30 mL capacity stainless steel reservoir.
- Separate heaters for reservoir and dispensing device, allowing different operating temperatures.
- Integrated, high-capacity, 10µm stainless steel filter.
- Compatible with Jetlab® 4xl, Jetlab® 4xl-A, and Jetlab® II.

Available Options

- MJ-SF devices available in orifice diameters 10-80µm.
- Filter material and pore size selectable.

Ordering Information

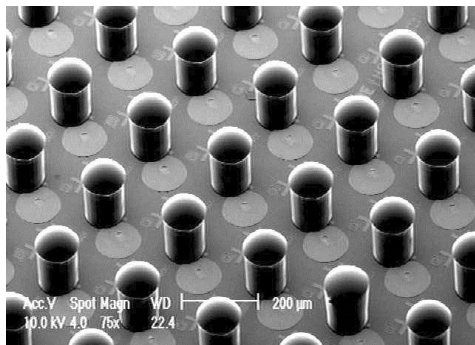
- PH-04a** Polymer Jet™ drop-on-demand printhead. Includes one cartridge (with filter).
- MJ-SF-04-xxx** High-temperature device with VCO fluid fitting, xxx denotes orifice diameter in microns.
- C-02** Spare cartridge, includes filter.

Support Equipment

The PH-04a may be combined with the following components and subsystems™ to create a functional subsystem.

- CT-M5-01** JetDrive™ V controller, including command set and stand-alone control program. Includes built in strobe delay. Level 02 firmware (complex waveforms) included.
- CT-PT-21** Pressure / Thermal Controller with one manual pneumatic channel and with two TS-01 temperature controllers.
- TS-01** Temperature Controller.
- CT-PT-A1** Electronic Pressure Controller and Pressure Mode Selector, single channel.
- CM-VS-01** Basic Optics System: CCD camera, power supply, lens, fine focus, mounting block.

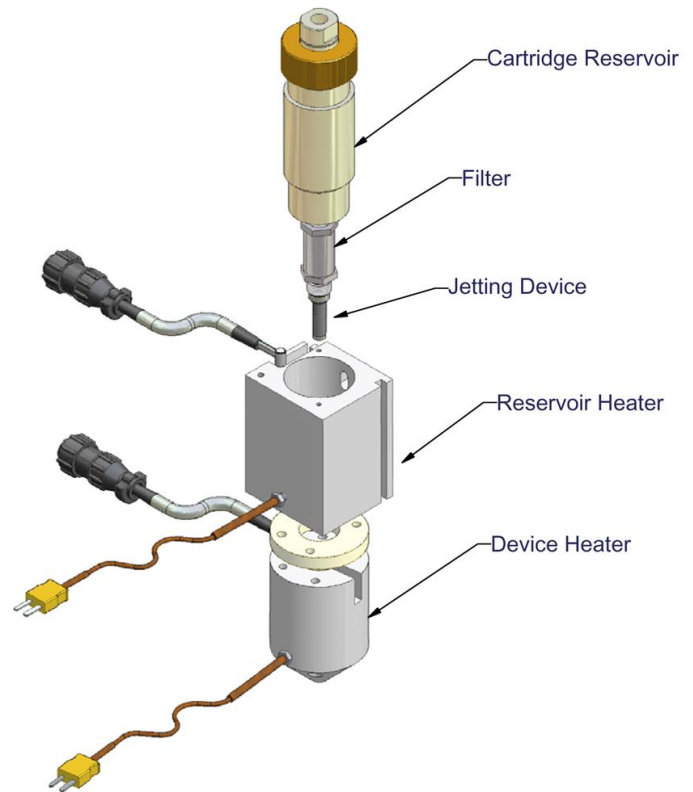
Epoxy microlenses, printed using a Polymer Jet™ printhead, on 100µm pedestals, to collimate VCSEL output.



Addition Information

Available at microfab.com

- Drawings with dimensions
- Equipment selection guide
- Integration Guide
- Cleaning Guide



1.74-index optical thermoplastic printed, using a Polymer Jet™ printhead, on glass as 1-32 splitter, 120µm wide branches.

