

# PH-05a

## High Temperature Printhead with Inert Gas Injection

### Product Description

The PH-05a drop-on-demand printhead is designed for dispensing oxygen and/or water sensitive materials at temperatures up to 240°C. Integrated heated inert gas injection is used to creating a local inert environment at the orifice of the dispensing device and around the drop in flight.

The PH-05a uses the same interchangeable high temperature dispensing device, the MJ-SF, as does the PH-04a Polymer Jet™ printhead. Drop volumes ranging from 5 pL to as high as 0.5 nL have been dispensed. Using MicroFab's patented drive waveforms, the range of the drop volume obtainable without changing the dispensing device can be a factor 3 or better.



### Standard Features

- Operation to 240°C.
- 30 mL capacity stainless steel reservoir.
- Separate heaters for reservoir and dispensing device for uniform / precise temperature control.
- Integrated heated inert gas injection for creating a local inert environment.
- Compatible with Jetlab® 4xl, Jetlab® 4xl-A, and Jetlab® II.

### Available Options

- MJ-SF devices available in orifice diameters 10-80µm.

## Ordering Information

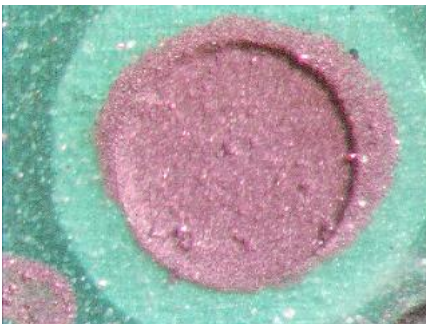
- PH-05a** High Temperature Printhead with Integrated Inert Gas Injection.
- MJ-SF-04-xxx** High-temperature device with VCO fluid fitting, xxx denotes orifice diameter in microns.
- C-01** Spare cartridge.

## Support Equipment

The PH-05a 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**
- 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.

Nano-copper ink printed onto PWB.



## Addition Information

Available at [microfab.com](http://microfab.com)

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

Polymer light-emitting diodes (PLED) printed into 100x300µm features.

