Specification Sheet

TopSpot® OEM

TopSpot® technology for system integration

The TopSpot® technology is a non-contact printing method offering an up to now unmatched throughput in the production of low- and medium density microarrays. The core of TopSpot® is the micro-machined print head. 24 or 96 different liquids can be loaded into the reservoirs of the print head. Once loaded, several thousand prints can be made without refill. The 24 or 96 different liquids can be delivered on demand and at a pitch of 500 µm.

TopSpot® print module

The TopSpot® print heads are actuated by the so called print module. After filling with samples the print heads are inserted into the module, which is then ready for up to 2000 prints. To better fit our customer's needs this module is now also available as OEM component for third party integration. Whether you plan your own custom made microarrayer, a production machine or if just would like to upgrade your old pin-printer, the TopSpot® print module almost fits everywhere.
The TopSpot® print module contains a piezo stack as primary actuator, all mechanical parts to support the print head as well as precise adjustment stages to control actuation and printing height.

Electronics & Software

The piezo actuator inside the module is driven by a high voltage signal generated by the R5 amplifier. This amplifier is contained within the OEM package and can be controlled by simple software from any PC via a RS232 or USB port. Trigger input lines enable easy synchronization with external components like x-, y-stages or cameras.

Applications
DNA / RNA microarrays
Protein / antigen microarrays
Fabrication of bio-chips

TopSpot® print module - Specifications	
Dosage volume:	0.5 nl - 1 nl (single shot volume, volume depends on liquid properties), CV < 5 %
Array:	24 or 96 spots at a pitch of 500 µm
Dimensions:	141 x 158 x 204 mm (264 mm incl. micron screw)
Weight:	2.3 kg (2.8 kg incl. z-stage)
Dosage frequency:	up to 30 Hz (media dependent)
Tested Media:	Aqueous solutions, DMSO, PBS, SSC, glycerol …
Order No.	TS10020 A

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