

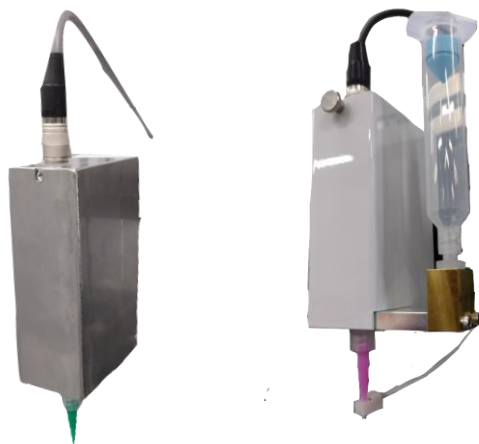
Ultra Micro droplet dispenser

femto-Spotter™

FS-200M

Overview

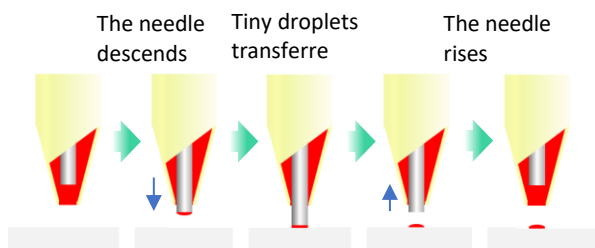
- ✓ Dispensing and transferring ultra-fine droplet volumes
- ✓ Wide range of fine dispensing volume : fL ~ nL
- ✓ Wide range of viscosities from low to high viscosity
- ✓ Transfer diameter : 5 μ m ~ 1 mm
- ✓ Compatible with liquids containing filler
- ✓ High application position accuracy
- ✓ No clogging
- ✓ Resistant to temperature changes
- ✓ No dead volume
- ✓ Compact design
- ✓ Customized support



Specifications

| Method | Needle transfer method |
|------------------------|---------------------------|
| Volume to be dispensed | fL ~ nL * |
| Transfer diameter | 5 μ m ~ 1 mm * |
| Viscosity available | 1 ~ 200,000 mPa · s |
| Dimension | 36 mm x 36 mm x 170 mm ** |
| Weight | approx. 200g |

Mechanism Overview



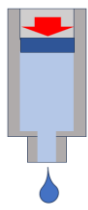
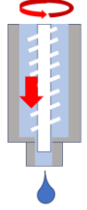
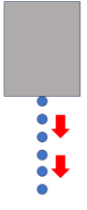

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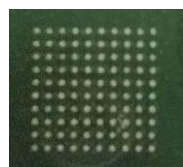
Homepage : <https://www.dinov.jp>

Comparison with Other Methods

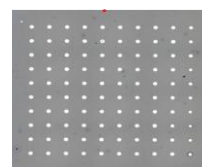
| | Tube type | Screw type | Jet type | femto-Spotter™ |
|---------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| |  |  |  |  |
| Droplet size | △ > 0.1mm | × > 0.2mm | × > 0.2mm | ◎ > 0.005mm |
| Viscosity | △ 1,000 mPa · s | △ 3,000 mPa · s | × 100 mPa · s | ◎ 100,000 mPa · s |
| Positioning Accuracy | × ±30μm | × ±30μm | × ±100μm | ◎ ±5μm |
| Dispense speed per second | – | △ 1 time ~ | ◎ ~1,000 times | ○ several times~ |

Coating Example

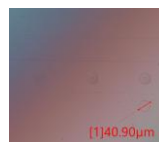
- ✓ Solder paste, flux
- ✓ Conductive metal nano ink
- ✓ Microbeads
- ✓ Ink, glue, paint
- ✓ Nanodispersed particles
- ✓ Optical Resin Materials
- ✓ High-cost biomaterials
- ✓ Adhesive
- ✓ Organic Materials
- ✓ Resist



Solder paste
(Dia.φ200μm)



Ag nano ink
(Dia.φ120μm)



Bio-material
(Dia.φ40μm)



Flux
(Dia.φ60μm)

Equipment Configuration

Micro-droplet dispensing basic type FS-200M



- ✓ Simple and basic dispensing head
- ✓ Only small volume of liquid is needed for operation
- ✓ Simple operation and big benefit

Micro-droplet long-life dispensing type FS-200M-LL



- ✓ Suitable for long-life processing
- ✓ Stable operation in long-run
- ✓ The best solution for process development
- ✓ Temperature control(option)

High precision dispensing type FS-200M-sysDA2



- ✓ Integration of high precision vision system
- ✓ Good alignment for precise spotting
- ✓ Automatic dispense-sensing feature
- ✓ Excellent dispensing result with versatile program software



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