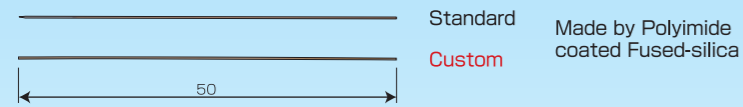


PicoTip® Emitters (50mm Length)

Form



Uncoated SilicaTips™ Product No. Number of components	Outer Diameter/ Inside Diameter (μm)	Inside Diameter of top (μm)
FS360-100-30-N-	100	30
FS360-75-30-N-	75	30
FS360-75-15-N-	75	15
FS360-75-8-N-	75	8
FS360-50-30-N-	50	30
FS360-50-15-N-	50	15
FS360-50-8-N-	50	8
FS360-50-5-N-	50	5
FS360-20-10-N- *	20	10
FS360-20-5-N- *	20	5

Please order stating the number of components in addition to the product number.
* Recommend to use over 50 μm ID chips for Pico Pipet
● Optional Pt coated Fused-silica capillary tube is available, please contact us.

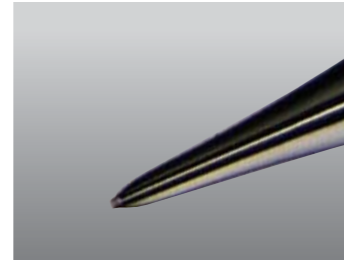
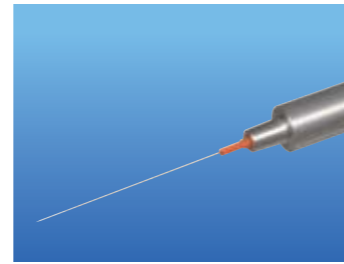


Photo: Top of PicoTip® Emitters

Glass Chip (40mm Length)

Form



Product No. Number of components	Length of top ±3mm	Outer Diameter of connecting part	Inside Diameter of top ±10 μm
1-GS75-	30mm	1.25mm	75 μm
1-GS100-	30mm		100 μm
1-GS125-	30mm		125 μm
1-GS150-	30mm		150 μm
1-GS175-	30mm		175 μm
1-GS200-	30mm		200 μm
1-GS250-	30mm		250 μm
1-GS300-	30mm		300 μm
1-GS250-S-	15mm		250 μm
1-GS300-S-	15mm		300 μm

Please order stating the number of components in addition to the product number.
● Please inquire for custom made tips and capillary.
● Silicon connector kit is available.

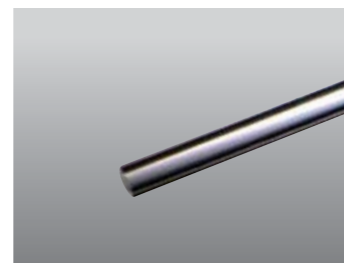
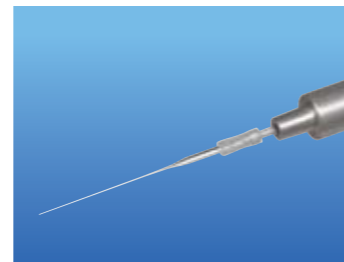


Photo: Top of glass chip

Micro quantitative chip with scale markings

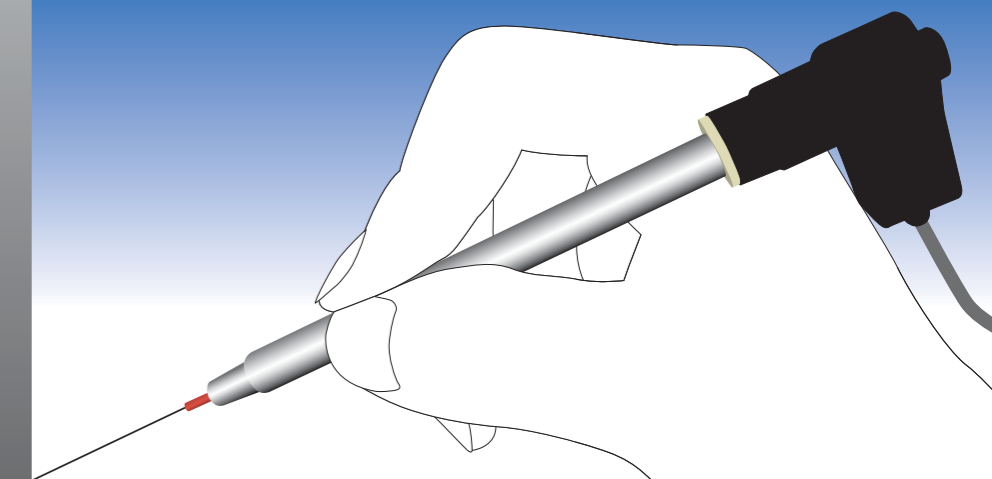
Inside Diameter (μm)	Scale markings (mm)	Capacity of one scale	Capacity of chip (nL)
50	1.02	Minimum 2nL	2.50
75	1.13	Minimum 5nL	5.125
100	1.27	Minimum 10nL	10.250
150	1.13	Minimum 20nL	20.500

● These products are currently under development. Please contact us.



Single – Cell – Isolation Bacteria to Ovum

Single – Crystal – Transfer Pico – Liter – Dispenser Nano – Liter – Pipette



Actual producer
Altair Corporation
Technical Development, Life Science Department
23-3, Shin-yokohama, 3-chome, Kohoku-ku,
Yokohama 222-0033, Japan
TEL: +81-45-473-6211 / FAX: +81-45-473-2884
e-mail : t.watanabe@altair.co.jp

Cat. 81210V4

Innovative Cells and Beads handling device
Aspirate and dispense one Cell or one Bead
by inboard computer controller.
Excellent operability



Example
for connecting other equipments



The progress for Next Generation

PicoPipet Pipette & Controller



PicoPipet Type B
(Outer Diameter of Grip: 10mm)



PicoPipet Type C
(Outer Diameter of Grip: 7mm)

Type B1 and Type C1 connect capillary chip directly with tapered joint.

Type B3 and Type C3 connect chip on the glass-made top with silicon connector.

All of PicoPipet modules can be connected many kinds of capillary tube with silicon connector

- Built-in ultra-miniature pump in PicoPipet pipette module
- Handle each bead or cell in the capillary chips, aspiration, **holding for transfer**, and dispensing
- One can handle PicoPipet by hand for the sample size over 50 μ m diameter without manipulator module.
- Small samples (under 10 μ m diameter) should be handled with optional manipulator or fixture.
- Pipette module can be connected various manipulator module or fixture (third party).

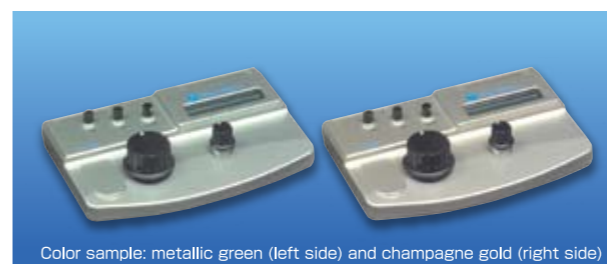
Pipette Specification

Products	Type B1	Type B3	Type C1	Type C3
Product No.	1-PBV10-TP	1-PBV10-SG	1-PBV07-TP	1-PBV07-SG
Outer Diameter of Grip	ϕ 10mm		ϕ 7mm	
Weight	about 25g		about 15g	
Length	123mm \pm 2mm			
Material of Flow Channel	Polyolefin·Glass·PEEK	Polyolefin·Glass	Polyolefin·Glass·PEEK	Polyolefin·Glass
Material of Top	PEEK	Glass	PEEK	Glass
Maximal flow	12 μ l/min ※			
Maximal pressure	150kPa ※			
Solution volume for handled	over 100 μ l			
Length of connecting cable	about 40cm			
Pump lifetime	Pump lifetime 50~100hr (lifetime is depend on aspiration time)			

● "Material of Top" means connecting part of capillary chips
 ※ Default flow rate when unconnected any capillary chips

Example

- Handled each Cells and beads as Floating Suspension Cells, Yeast, Bacteria, Mold spore, Pollens, Crystal, Metal Beads and Protozoa
- Micro quantitative dispensing in 1nl to 500nl range
- Micro purification available with chromatography media packed in the chips



Controller HR
For Floating Suspension Cells, Yeast and Bacteria



Controller ST
For larger cells and beads (over 30 μ m diameter)

PicoPipet Controller specification

Products	Controller HR	Controller ST
Product No.	1-CONTHR-03	1-CONTST-02
Velocity Control (unit)	-30~30	-30~30
Velocity Control (unit)	0.001	0.01
Velocity Indicated Scale; Normal	0.02	0.05
Velocity Indicated Scale; Coarse	0.25	0.25
Dimension	187mm Width x 124mm Depth x 46mm High	
Weight	about 300g	
Display	LCD 16 figure 2-tier	
Beep sound	volume control	
Option	Foot switch A (Product No.1-FTA)	
Power Supply	AC100~240V 50/60Hz	
Dissipation power	under 5W	
Usage environment	Temperature:5~40 $^{\circ}$ C Humidity:10~80% non condensing	
Pipette connecting cable	about 40cm (option about 80cm)	

Option

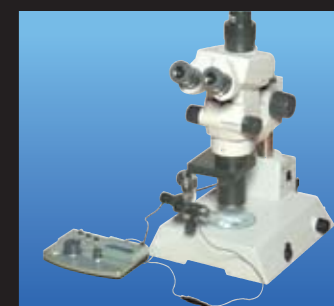


Foot switch A (Product No.1-FTA)
Enable to connect with Controller

CAUTION : Don't sting the top of pipette and/or chips to your skin.
Handle careful for broken glass tips and capillary.

Standard components

- Controller (including power cable and 40cm connecting cable)
- Pipette
- Chip
- Silicon connector (for glass chip, for Type B3 and C3)



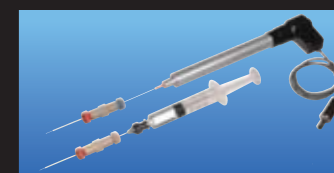
Connecting with Stereoscopic microscope(Olympus SZX7)



Connecting with Video system



Manual usage



Microinjection with ElecSyringe (OD ϕ 100 μ m stainless needle) Research use only