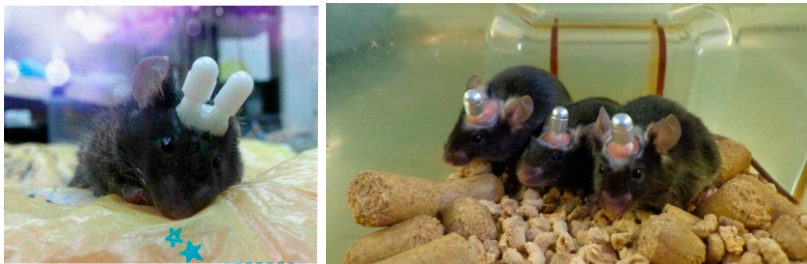


Microinjection

Single Cannula

Cannula implantation is the international general method for acute and chronic intracranial drug administration in animal experiments. RWD offers customized services for users, the users can customize according to specific experimental requirements.



Single Cannula

Components:

Guide cannula



Guide cannula consists of a threaded cylindrical plastic pedestal and a stainless steel tube. It has to be preimplanted into brain and fixed with dental cement. Both dummy cannula and internal cannula can be inserted into guide cannula individually.

Dummy cannula



Stainless steel wire and threaded plastic cap make a dummy cannula. It can be inserted into guide cannula and fixed by screw to seal the guide cannula and prevent outflow of tissue fluid after injection. The length of the stainless steel wire can be customized

Metal Cannula



The metal materials avoid biting after the cannula implantation.

Internal cannula



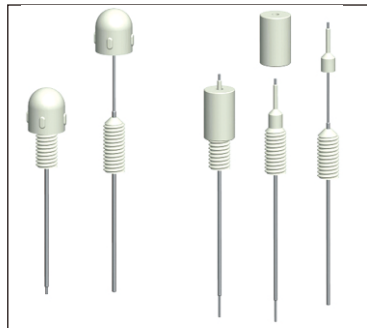
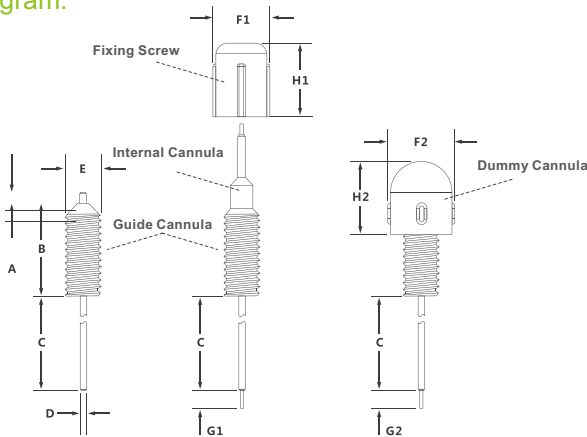
Internal cannula can be fixed into guide cannula through fixing screw and its tail end is connected with PE tube for injections. The length can be customized.

Fixing screw



Fixing screw fixes internal cannula to guide cannula.

Cording Diagram:



Single-Cannula connection

Diagrams:

- A - The length of the stainless steel tubing below the plastic pedestal.
- B - The height of the cylindrical plastic base.
- C - The length of the stainless steel tubing below the plastic pedestal, can be customized.
- D - External diameter of stainless steel guide cannulas.
- E - External diameter of cylindrical plastic base.
- F1 - External diameter of Lock nut.
- H1 - Height of Lock nut.
- F2 - External diameter of Dummy Cannulas.
- H2 - Height of Dummy Cannulas.
- G1- The internal cannulas projection length beyond the guide cannulas tip, can be customized.
- G2- The dummy cannulas projection length beyond the guide cannulas tip, can be customized.

Guide cannula	Dummy cannula	Internal cannula	Fixing screw	A	B	C	D	E	F1	H1	F2	H2
62001	62101	62201	62501	1	9	20	0.64	3.5	5.5	7.5	5	7
62002	62102	62202	62502	1	7	22	0.56	3.5	5.5	7	5	6.5
62003	62102	62203	62502	1	6	15	0.48	3.5	5.5	7	5	6.5
62004	62104	62204	62502	1	6	13	0.41	3.5	5.5	7	5	6.5
62005	62523	62205	62501	0	9	32	0.71	3.5	5.5	7.5	5.5	7

Ordering Instructions:

1.D-outer diameter of the Guide Cannula, five sizes 0.64, 0.56, 0.48, 0.41 and 0.71mm are available.

2.C-length (Unit: mm) of the metal tube below the plastic pedestal (B), that is, also the vertical distance from the skull to Target Nuclei.

3.G1-length (Unit: mm) of the protrudent Injector through the Guide Cannula, 0.5 or 1.0mm is recommended.

4.G2-length (Unit: mm) of the protrudent Dummy Guide, 0.5 or 1.0mm is recommended.

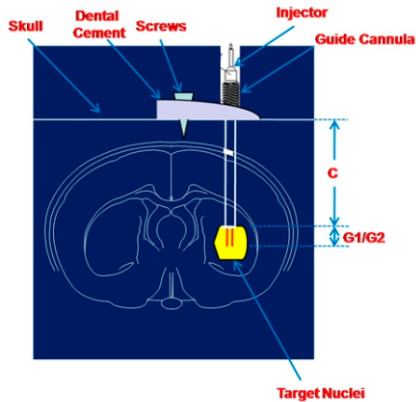


Diagram for Customization

Order information (Unit: mm):

Cannula

Matching	Guide Cannula	Dummy Cannula (plastic)	Dummy Cannula (metal)	Internal Cannula	Fixing Screw	PE Tube
1	62001	62101	62106	62201	62501	62320
	OD 0.64 x ID 0.45	OD 0.40	OD 0.40	OD 0.41 x ID 0.25	OD 5.5 x L7.5	OD 0.85 x ID 0.42
2	62002	62102	62107	62202	62502	62320
	OD 0.56 x ID 0.38	OD 0.30	OD 0.30	OD 0.36 x ID 0.20	OD 5.5 x L7.0	OD 0.85 x ID 0.42
3	62003	62102	62107	62203	62502	62320
	OD 0.48 x ID 0.34	OD 0.30	OD 0.30	OD 0.30 x ID 0.14	OD 5.5 x L7.0	OD 0.85 x ID 0.42
4	62004	62104	62108	62204	62502	62320
	OD 0.41 x ID 0.25	OD 0.20	OD 0.20	OD 0.21 x ID 0.11	OD 5.5 x L7.0	OD 0.85 x ID 0.42
5	62005	62101	62106	62205	62501	62320
	OD 0.71 x ID 0.45	OD 0.40	OD 0.40	OD 0.41 x ID 0.25	OD 5.5 x L7.5	OD 0.85 x ID 0.42

Notes:

- Plastic or mental dummy cannula is optional.
- 62320 PE tubes could be connected to syringes with needle size 0.45-0.65mm in outer diameter.
- 62523 Dummy cannula should be used together with Dummy cannula 62105.

Screws



Cat No.	Product Description
62513	Screw-M1.0xL2.0mm
62514	Screw-M1.2xL2.0mm
62515	Screw-M1.4xL2.5mm

Double Cannula

Introduction:

RWD has launched I, II, III and IV series double cannula systems for acute and chronic intracranial drug administration in animal experiments.

Series I: Recommended for rat or mouse use, 0.48mm (outer diameter) x 0.34mm (internal diameter).

Series II: Recommended for rat use, 0.64mm (outer diameter) x 0.45mm (internal diameter).

Series III: Specifically for mouse use, 0.48mm (outer diameter) x 0.34mm (internal diameter).

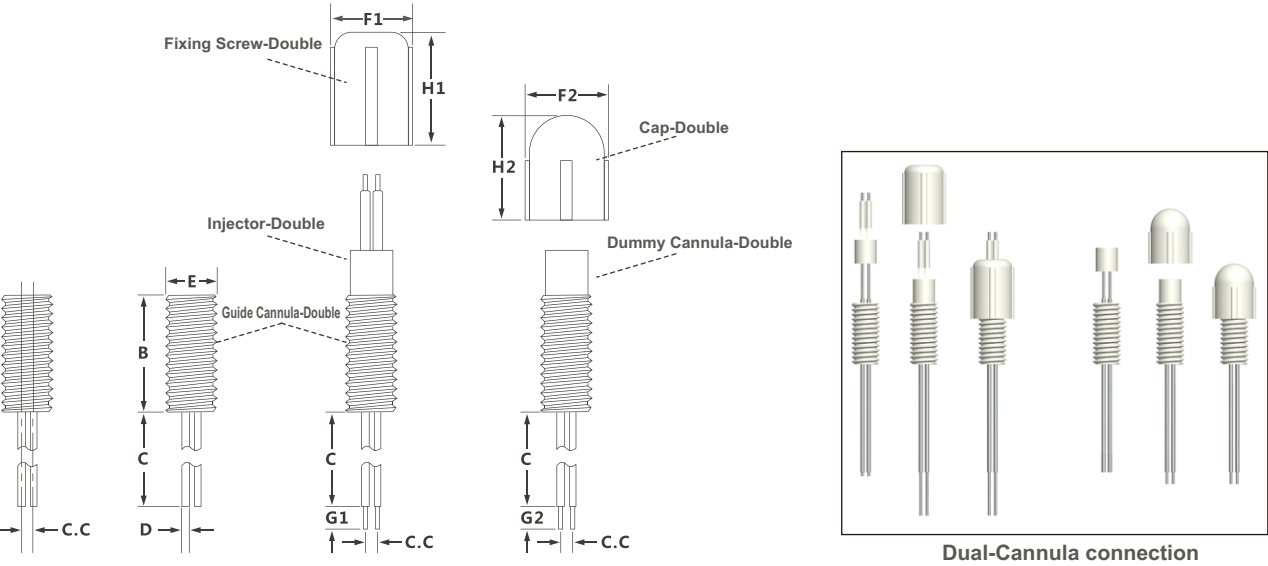
The height of cylindrical plastic pedestal of Guide cannula is different from Series I.

Series IV: 0.41mm (outer diameter) x 0.25mm (internal diameter).

Application:

Double cannula system is used for bilateral implantation, suitable for injecting one or two drugs into two different brain regions.

Cording Diagram:



Comments:

- B - Height of cylindrical plastic pedestal, which is 7.8mm for Series I, II & IV and 5.5mm for Series III.
- ★C - Length of stainless steel tube below the cylindrical plastic pedestal. The default value is 13.7mm for Series I & III, 20.0mm for Series II and 10.0mm for Series IV. The length can be customized with default value as maximum.
- ★C.C - Center distance between double guide cannulas, double dummy cannulas and double injectors. These 3 values should be the same in one system. It can be customized (range: 0.5mm-3.0mm, the minimal increment 0.1mm).
- D - Outer diameter of stainless steel tube and it has 3 sizes: 0.48mm for Series I & III, 0.64mm for Series II and 0.41mm for Series IV.
- E - Outer diameter of the cylindrical plastic pedestal and it comes with 3.5mm or 5.0mm. It is related to the outer diameter and centre distance between double guide cannulas.
- F1 - Outer diameter of fixing screw and it comes with 5.5mm (when E=3.5mm) or 7.0mm (when E=5.00mm).
- H1 - Height of the fixing screw which is 7.5mm.
- F2 - Outer diameter of guide cannula cap and it comes with 5.5mm (when E=3.5mm) or 7.0mm (when E=5.0mm).
- H2 - Height of guide cannula cap and it comes with 7.00mm (when E=3.5mm) and 7.5mm (when E=5.0mm);
- ★G1 - Length of protruding part after internal cannula is inserted into guide cannula. The default value is 5.5mm for Series I, 3.5mm for Series II, 7.5mm for Series III and 4.0 mm for Series IV. This length can be customized.
- ★G2 - Length of protruding part after dummy cannula is inserted into guide cannula. The default value is 3.0mm for Series I, 4.0mm for Series II, 5.5mm for Series III and 4.0 mm for Series IV. This length can be customized.

Ordering Instructions:

Determine the target brain region for drug administration and then determine target values of C, C.C, G1 and G2. These values can not exceed the default ones. Please refer to :

- ★ part of comments of cording diagram for more detail.
- ★C: Maximal customized length is 13.7mm for Series I & III, 20.0mm for Series II and 10.0mm for Series IV.
- ★C.C : Customized range is 0.5mm-3.0mm with minimal increment 0.1mm.
- ★G1 : Maximal customized length is 5.5mm for Series I, 3.5mm for Series II, 7.5mm for Series III and 4.0mm for Series IV.
- ★G2 : Maximal customized length is 3.0mm for Series I, 4.0mm for Series II, 5.5mm for Series III and 4.0mm for Series IV.

Order Information:

Series I:

Guide Cannula: O.D.0.48mm x I.D.0.34mm	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw
Dummy Cannula: O.D.0.30mm	C.C 0.5mm	62021	62121	62250	62523	62521
Injector: O.D.0.30mm x I.D.0.14mm	C.C 0.6mm	62022	62122	62250		
Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524)	C.C 0.8mm	62023	62123	62223		
Fixing Screw: F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522)	C.C 1.0mm	62024	62124	62224		
Plastic Pedestal of Guide Cannula: Height B = 7.8mm Diameter E = M3.5mm	C.C 1.2mm	62025	62125	62225		
	C.C 1.3mm	62026	62126	62226		
	C.C 1.4mm	62027	62127	62227		
	C.C 1.5mm	62028	62128	62228		
	C.C 1.6mm	62029	62129	62229	62524	62522
	C.C 1.8mm	62030	62130	62230		
	C.C 2.0mm	62031	62131	62231		
	C.C 2.2mm	62032	62132	62232		
	C.C 2.4mm	62033	62133	62233		
	C.C 2.6mm	62034	62134	62234		
	C.C 2.7mm	62035	62135	62235		
	C.C 3.0mm	62036	62136	62236		

Series II:

Double Cannula: O.D.0.64mm x I.D.0.45mm	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw
Dummy Cannula: O.D.0.40mm	C.C 0.8mm	62037	62137	62237	62523	62521
Injector: O.D.0.41mm x I.D.0.25mm	C.C 1.0mm	62038	62138	62238		
Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524)	C.C 1.2mm	62039	62139	62239		
Fixing Screw: F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522)	C.C 1.3mm	62040	62140	62240		
Plastic Pedestal of Guide Cannula: Height B = 7.8mm Diameter E = M3.5mm	C.C 1.4mm	62041	62141	62241		
	C.C 1.5mm	62042	62142	62242		
	C.C 1.8mm	62043	62143	62243	62524	62522
	C.C 2.0mm	62044	62144	62244		
	C.C 2.2mm	62045	62145	62245		
	C.C 2.4mm	62046	62146	62246		
	C.C 2.5mm	62047	62147	62247		
	C.C 2.8mm	62048	62148	62248		
Plastic Pedestal of Guide Cannula: Diameter E = M5.0mm	C.C 3.0mm	62049	62149	62249		

Series III:

Guide Cannula: O.D.0.48mm x I.D.0.34mm	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw
Dummy Cannula: O.D.0.30mm	C.C 0.5mm	62050	62121	62250	62523	62521
Injector: O.D.0.30mm x I.D.0.14mm	C.C 0.6mm	62051	62122	62250		
Cap: F2 5.5mm x H2 7.0mm (62523)	C.C 0.8mm	62052	62123	62223		
F2 7.0mm x H2 7.5mm (62524)	C.C 1.0mm	62053	62124	62224		
	C.C 1.2mm	62054	62125	62225		
	C.C 1.3mm	62055	62126	62226	62523	62521
Fixing Screw: F1 5.5mm x H1 7.5mm (62521)	C.C 1.4mm	62056	62127	62227		
F1 7.0mm x H1 7.5mm (62522)	C.C 1.5mm	62057	62128	62228		
Plastic Pedestal of Guide Cannula: Height B = 5.5mm	C.C 1.6mm	62058	62129	62229		
Diameter E = M3.5mm	C.C 1.8mm	62059	62130	62230		
	C.C 2.0mm	62060	62131	62231		

Series IV:

Guide Cannula: O.D.0.41mm x I.D.0.25mm	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw
Dummy Cannula: O.D.0.20mm	C.C 0.5mm	62061	62161	62251	62523	62521
Injector: O.D.0.21mm x I.D.0.11mm	C.C 0.6mm	62062	62162	62251		
Cap: F2 5.5mm x H2 7.0mm (62523)	C.C 0.8mm	62063	62163	62263		
Fixing Screw: F1 5.5mm x H1 7.5mm (62521)	C.C 1.0mm	62064	62164	62264		
Plastic Pedestal of Guide Cannula: Height B = 5.5mm	C.C 1.2mm	62065	62165	62265		
Diameter E = M3.5mm	C.C 1.3mm	62066	62166	62266		
	C.C 1.4mm	62067	62167	62267		
	C.C 1.5mm	62068	62168	62268		
	C.C 1.6mm	62069	62169	62269		
	C.C 1.8mm	62070	62170	62270		
	C.C 2.0mm	62071	62171	62271		

Notes: For Dummy Cannula, plastic or metal is optional, 68525 is for mental Dummy while 68523 is plastic Dummy.The difference between Class I and Class III is the height of the pedestal, the former is 7.8mm and the later is 5.5mm, and Class III is specially designed for mice.

PE & Silicone Tubings

PE (polyethylene) tube, with good fluidity, high thermal stability and good flexibility, is widely used in the field of life science. Currently, RWD has 9 types of PE tube and 1 type of silicone tube, including the international standard tubes PE10, PE20 and PE50, which can be used in microdialysis, animal artery intubation, venous cannula, bile duct intubation, subcutaneous implantation of buried pipe, lateral ventricle buried pipe, portal vein intubation and so on. These tubes can be used together with syringe, guide cannula, microdialys connector and luer stubs.

Order Information:

No.	Cat No.	Product Description
1	62320	PEDAX Tubing-0.85*0.42mm,pkg of 10m
2	62321	PE Tubing (HDPE)-0.85*0.42mm, pkg of 10m
3	62322	PE Tubing-0.50*0.25mm, pkg of 10m
4	62323	PE Tubing-1.00*0.50mm, pkg of 10m
5	62324	PE10 Tubing-0.61*0.28mm, pkg of 10m
6	62325	PE20 Tubing-1.09*0.38mm, pkg of 10m
7	62326	PE25 Tubing-0.91*0.46mm, pkg of 10m
8	62327	PE50 Tubing-0.97*0.58mm, pkg of 10m
9	62328	PE60 Tubing-1.20*0.80mm, pkg of 10m

Note: Except 62322,other PE tube can be High-pressure steam sterilization(121°C, 30min).



Syringe Pumps

Multi-channel Syringe Pumps

This multi-channel syringe pump is specifically designed for those applications that require constant flow rates and precise injection delivery. It can be used for single or chronic, repeated microinjections through a cannula system.

Features:

- Easy to install syringes.
- Straightforward operation: simply enter syringe diameter, injection rate and Volume to start injection.
- Storage of customized parameters.
- Display of real time injection status on LCD screen.
- Built-in standard syringe parameters, for convenient use.

Specifications:

- Accuracy: <1%
- Repeatability: ±0.1%
- Syringe range: 10µl-140ml
- Flow rate: 0.001µl/min-138.7ml/min
- Stroke distance: 0.039µm/step
- Stroke rate: 0.0094mm/min-87.211mm/min
- Dimension: 27cm×25cm×12cm
- Linear force: 18Kg
- LCD screen: 128×64px
- Five customized parameters can be stored
- RS232 interface is used to communicate with the computer
- RS485 interface is used for the communication between machines
- Interface: RS232, RS485
- Running temperature: 20-40°C



Order Information:

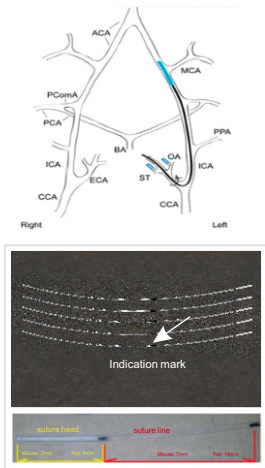
Cat No.	Product Name	Remarks
R404	4ch Syringe Infusion Pump	Single motor, simultaneous injection of four syringes(10µl-140ml)
R452	2ch Syringe Infusion/Withdrawal Pump	Single motor, simultaneous injection or withdrawal of two syringes(10ul-140ml)

Physiological And Pharmacological

MCAO Sutures

To meet the need for novel therapeutic approaches, experimental stroke research frequently employs rodent models of focal cerebral ischaemia. Proximal occlusion of MCAO via the intraluminal suture technique (so called Middle Cerebral Artery Occlusion filament or suture model) is probably the most frequently used model in experimental stroke research. A silicon coated filament is introduced into the common carotid artery and advanced along the internal carotid artery into the Circle of Willis, where it blocks the origin of the middle cerebral artery. Therefore, MCAO Sutures are the key materials for the stroke modeling on rats, mice and other animals.

RWD MCAO suture utilizes high-quality silicon rubber-coated monofilaments to induce ischemic stroke model. The within-group variation of stroke models can be maximally reduced by the super smooth surface and evenness of RWD suture. And without rupturing the vesicle, RWD suture makes its insertion into the animal brain much easier. The stability is also greatly increased for the cerebral ischemia modeling and more consistent data. RWD sutures are available in nylon monofilament material, diameters of silicone-rubber coated part range from 0.21 mm to 0.50 mm; Length of suture from 3-5cm.



Specifications:

- 1. Soft silicon rubber-coated monofilaments effectively reduced the occurrence of the insufficient occlusion by increasing the suture dimension but not rigidity. This results the blood vessel to be completely occluded and ensures the success of cerebral ischemia modeling.
- 2. Surgeon can easily sense the inserting resistance when reach its targeted position, because of the softness of RWD suture. Insert the suture until the position close to the bifurcation of external carotid artery and carotid artery show in the picture.
- 3. RWD suture has been ultraviolet sterilized thoroughly, therefore, it can be use directly upon open the package.
- 4. The suture can be customized according to specific demands.

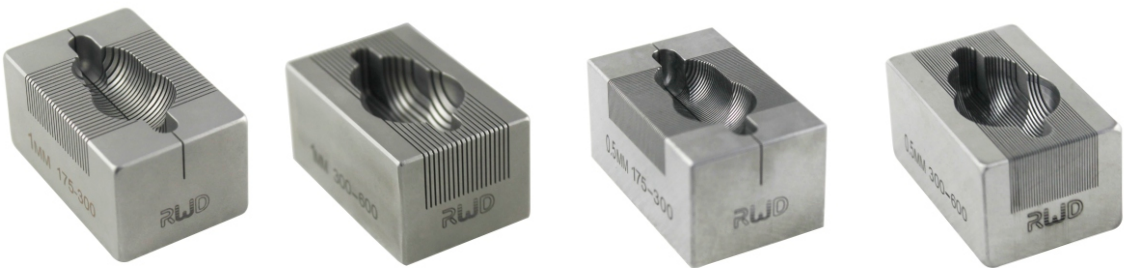
Order Information:

No.	Specification	Diameter of Head end (mm)	Diameter of suture body (mm)	Length (cm)	Animal' s weight (g)	Packing (pcs)	
1	MSMC21B102PK50	0.21±0.02	0.102	3	19-20.5	50	Mouse
2	MSMC21B102PK100					100	
3	MSMC22B104PK50	0.22±0.02	0.104	3	20.5-22	50	
4	MSMC22B104PK100					100	
5	MSMC23B104PK50	0.23±0.02	0.104	3	22.5-24	50	
6	MSMC23B104PK100					100	
7	MSMC24B104PK50	0.24±0.02	0.104	3	24-26	50	
8	MSMC24B104PK100					100	
9	MSMC25B104PK50	0.25±0.02	0.104	3	26-29	50	
10	MSMC25B104PK100					100	
11	MSMC27B104PK50	0.27±0.02	0.104	3	30-35	50	Rat
12	MSMC27B104PK100					100	
13	MSRC35B235PK50	0.35±0.03	0.235	5	190-210	50	
14	MSRC35B235PK100					100	
15	MSRC40B260PK50	0.40±0.03	0.26	5	235-255	50	
16	MSRC40B260PK100					100	
17	MSRC43B260PK50	0.43±0.03	0.26	5	270-280	50	
18	MSRC43B260PK100					100	
19	MSRC47B260PK50	0.47±0.03	0.26	5	300-310	50	
20	MSRC47B260PK100					100	
21	MSRC50B260PK50	0.50±0.03	0.26	5	350-400	50	
22	MSRC50B260PK100					100	

Note: Customized service is available.

Brain Matrix

RWD Brain matrices are adopted stainless steel material, through precision machining and highly polished, strong durability, which can be heated, chilled, autoclaved scrubbed and use in variety of harsh conditions. There have coronal sections and sagittal sections, each section can be as thin as 0.5 mm or 1 mm. Widespread use in preparing pathological tissue section and cut out TTC dyeing organization.



68709

68712

68715

68718

Order Information:

Cat No.	Product Description	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Depth (mm)	Diagram
68707	Brain Matrix, Mouse 40-75g, Coronal, 1mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68708	Brain Matrix, Mouse 40-75g, Sagittal, 1mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68709	Brain Matrix, Rat, 175-300g, Coronal, 1mm, Stainless steel	4.76	15.9	12.7	36.6	24.5	7.61	
68710	Brain Matrix, Rat, 175-300g, Sagittal, 1mm, Stainless steel	4.76	15.9	12.7	36.6	24.5	7.61	
68711	Brain Matrix, Rat, 300-600g, Coronal, 1mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68712	Brain Matrix, Rat, 300-600g, Sagittal, 1mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68713	Brain Matrix, Mouse, 40-75g, Coronal, 0.5mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68714	Brain Matrix, Mouse, 40-75g, Sagittal, 0.5mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68715	Brain Matrix, Rat, 175-300g, Coronal, 0.5mm, Stainless steel	4.76	15.9	12.7	36.6	24.5	7.61	
68716	Brain Matrix, Rat, 175-300g, Sagittal, 0.5mm, Stainless steel	4.76	15.9	12.7	36.6	24.5	7.61	
68717	Brain Matrix, Rat, 300-600g, Coronal, 0.5mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68718	Brain Matrix, Rat, 300-600g, Sagittal, 0.5mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	

Fiber Optogenetic System

Optogenetics Stimulation

The application of optogenetics has been rapidly developing since 2010, it's research field covers several classical experimental animal species, such as flies, C. elegans, mice, rats, zebrafish, primates (Monkey, cynomolgus monkey, rhesus monkey, etc.). These animals generally have the advantages of short developmental and reproductive cycle and easy integration of foreign genes, thus facilitating the introduction of Photosensitive Protein Gene and the screen of the state of expression.

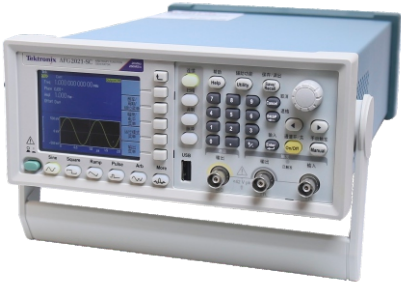


Common configuration options:

No.	Product Name	Cat No.	Quantity	Remarks
1	Arbitrary Waveform/Function Generator-20MHz	AFG2021-SC	1	
2	473nm Blu-ray Laser-50mW/power adjustable/stability<5%	R-LG473-50-A5	1	Optional
3	532nm Green Laser-50mW/power adjustable/stability<5%	R-LG532-50-A5	1	
4	593nm Yellow Laser-50mW/power adjustable/stability<5%	R-LG593-50-A5	1	
5	FC/PC Optical Fiber Patch Cables(m) - 200um,0.22NA,1m	R-FC-PC-N2-200-L1	1	
6	FC-FC Optic Fiber Commutator	R-FC-1x1	1	
7	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200um Core,0.22NA,1m	R-FC-L-N2-200-L1	1	
8	Ceramic Sleeves, Ø1.25mm, pkg of 20pcs	R-MS-1.25	1	
9	Ceramic Ferrule-Ø1.25mm/200um/0.22NA (20/pkg)	R-FOC-L200C-22NA	10	
10	Ceramic Ferrules Protective Cap, Ø1.25mm, pkg of 200pcs	R-DC-1.25	1	
11	Fiber Stripper- suitable for 100um - 600um fiber	R-OFT-600	1	
12	Laser Goggles against Green and Yellow Light	R-LS-Y	1	Optional
13	Laser Goggles against Blue and Green Light	R-LS-G	1	
14	Laser Power Meter -40mW	LP-1	1	

Waveform Generator

Adjusting and controlling the output of Laser, like frequency of output, duty ratio, etc.



Laser

- Features:
- Wavelength: Blue Light 473nm, Green Light 532nm, Yellow Light 593nm;
 - Stability: <10%, <5% and <1%;
 - Output power:0-50mW, 0-100mW and 0-200mW;
 - Connect a variety of fibers, FC-PC connectors;
 - Connect the waveform generator or stimulator to control the light output;
 - Reliable performance, long lifetime, average life expectancy is more than 10 thousand hours;
 - Exquisite appearance, compact size, portable;



Application: Accurately measure the power of continuous laser stable temperature.

Laser Power Meter

Features:

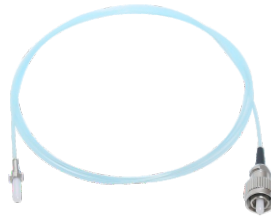
- Using a silicon photodiode probe, applicable to multiband measurement with broad spectrum range;
- Short response time, good thermal stability, small volume, convenient installation and fixation;
- Convenient to operate with digital display, applicable to the measurement on a variety of laser power;
- Automatic shut down (about 30 minutes) to save battery power.

Specifications:

Spectral range	400-1100nm
Models	LP-1
Measure range	0-40μW,0-400μW,0-4mW,0-40mW multiple ranges can be selected.
Measurement accuracy	0.01μW
Optical probe	silicon photodiode probe(φ9mm)
Measurement error	±5%

Optical Fiber and Patchcord

- Low insertion loss • Good Repeatability • High return loss • Stable temperature
- Good mutual insertion performance • Optional fiber
- Applicable wavelength: 400nm-1100nm • Numerical aperture: 0.22, 0.37
- Default length is 1m ,Optical fiber length: 0.5m-5m,step 0.5m (customized)
- Core diameter: 100um,200um,300um,400um



Order Information:

Model No.	Product Description
R-FC-PC-N2-100-L1	FC/PC Optical Fiber Patch Cables(m) - 100um, 0.22NA, 1m
R-FC-PC-N2-200-L1	FC/PC Optical Fiber Patch Cables(m) - 200um, 0.22NA, 1m
R-FC-PC-N3-200-L1	FC/PC Optical Fiber Patch Cables(m) - 200um, 0.37NA, 1m
R-FC-L-N2-100-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 100um Core,0.22NA,1m
R-FC-P-N2-100-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 100um Core,0.22NA,1m
R-FC-L-N2-200-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200um Core,0.22NA,1m
R-FC-L-N3-200-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200um Core,0.37NA,1m
R-FC-P-N2-200-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200um Core,0.22NA,1m
R-FC-P-N3-200-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200um Core,0.37NA,1m

Fiber Optic Rotary Joint

Applicable to long time stimulation and observation experiments on awake and free moving animals, avoids twining of the fiber optic

Order Information:

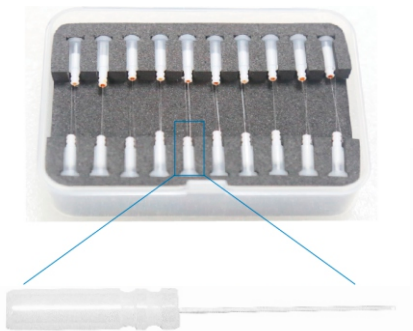
Model No.	Product Description
R-FC-1x1	FC-FC Optic Fiber Commutator



Ceramic Ferrule

Specifications:

- Material: Ceramic
- Applicable wavelength: 400-2200nm
- Core diameter: 100um, 200um, 300um, 400um
- Numerical aperture: 0.22, 0.37
- Outer diameter: 1.25mm (6.4mm long) , 2.5mm (10.5mm long)
- Core-inserting length: 10.5mm (customized)
- Optical fiber length: 2mm-20mm,step 0.5mm (customized)



Order Information:

No.	Model No.	Product Description	No.	Model No.	Product Description
1	R-FOC-L200C-37NA	Ceramic Ferrule-Ø1.25mm/200um/0.37NA (20/pkg)	8	R-FOC-L200C-22NA	Ceramic Ferrule-Ø1.25mm/200um/0.22NA (20/pkg)
2	R-FOC-L300C-37NA	Ceramic Ferrule-Ø1.25mm/300um/0.37NA (20/pkg)	9	R-FOC-L300C-22NA	Ceramic Ferrule-Ø1.25mm/300um/0.22NA (20/pkg)
3	R-FOC-L400C-37NA	Ceramic Ferrule-Ø1.25mm/400um/0.37NA (20/pkg)	10	R-FOC-L400C-22NA	Ceramic Ferrule-Ø1.25mm/400um/0.22NA (20/pkg)
4	R-FOC-F200C-37NA	Ceramic Ferrule-Ø2.5mm/200um/0.37NA (20/pkg)	11	R-FOC-F100C-22NA	Ceramic Ferrule-Ø2.5mm/100um/0.22NA (20/pkg)
5	R-FOC-F300C-37NA	Ceramic Ferrule-Ø2.5mm/300um/0.37NA (20/pkg)	12	R-FOC-F200C-22NA	Ceramic Ferrule-Ø2.5mm/200um/0.22NA (20/pkg)
6	R-FOC-F400C-37NA	Ceramic Ferrule-Ø2.5mm/400um/0.37NA (20/pkg)	13	R-FOC-F300C-22NA	Ceramic Ferrule-Ø2.5mm/300um/0.22NA (20/pkg)
7	R-FOC-L100C-22NA	Ceramic Ferrule-Ø1.25mm/100um/0.22NA (20/pkg)	14	R-FOC-F400C-22NA	Ceramic Ferrule-Ø2.5mm/400um/0.22NA (20/pkg)

Ceramic Cannula & Ceramic Ferrules Protective Cap

Ceramic Cannula: With Ø1.25 mm and Ø2.5 mm two specifications, suitable for temporary connections of two optical fibers, to build a simple, quick release connection structure, standard length is 11.5mm.

Ceramic Ferrules Protective Cap: Use to protects the Ceramic Ferrules PC/UPC end face, as well as the ST/SC/FC patch cord.



Order Information:

Model No.	Product Description
R-MS-1.25	LC Mating Sleeves, Ø1.25mm (20pcs/pkg)
R-MS-2.5	FC Mating Sleeves, Ø2.50mm (20pcs/pkg)
R-DC-2.5	FC/PC Ceramic Ferrules Protective Cap-Ø2.50mm (200pcs/pkg)
R-DC-1.25	LC/PC Ceramic Ferrules Protective Cap-Ø1.25mm (200pcs/pkg)

Fiber Tongs

Product Features:

- Suitable for 100um-800um fiber for stripping fiber coating
- Does not damage the fiber
- All cutting surfaces have precision mechanical tolerances to ensure clean,smooth operation
- According to the ergonomic design of the handle,comfortable grip
- When not working, the blade lock is closed



R-OFT-600

Laser Goggles

Features:

- Comfortable shape • Wide frame • Wide viewing angle
- High-definition • Anti-extrusion deformation material

R-LS-Y Laser Goggles against Green and Yellow Light
Transmittance T<1%, Applicable wavelength range: 528 nm-561 nm and 572nm-584nm

R-LS-G Laser Goggles against Blue and Green Light
Transmittance T<1%, Applicable wavelength range: 200nm-550nm.



To prevent or reduce the damage to human eye from laser.

Animal Surgical Instruments

RWD surgical instruments cover surgical scissors, surgical forceps, orthopedic instruments, scalpels and blades, vascular forceps, needle forceps, with more than 1,000 kinds of models.

Surgery Instrument Kit

SP0001-G
General Surgery Instrument Kit for Rodents

Cat.No.	Product Description	Qty
S11001-08	Spring Scissors (Triangular)-S/S Str/5*0.1mm/8.5cm	1
S11002-08	Spring Scissors (Triangular)-S/S Cvd/5*0.1mm/8.5cm	1
S12009-11	IRIS-Fine Scissors (Round Type)-S/S Str/11.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/11.5cm	1
S12003-09	IRIS-Fine Scissors (Round Type)-S/S Str/9.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/9.5cm	1
F11001-11	Micro Forceps-Str, 0.2mm Tips, 11cm	1
F11004-11	Micro Forceps-Cvd, 0.2mm Tips, 11.5cm	1
F12010-10	Dressing Forceps-Str, 1.9mm Tips, 10.5cm	1
F12011-10	Dressing Forceps-Cvd, 1.9mm Tips, 10.5cm	1
F21001-12	HALSTED Artery Forceps-Str, 2.0mm Tips, 12.5cm	2
F21002-12	HALSTED Artery Forceps-Cvd, 2.0mm Tips, 12.5cm	2
F22002-10	HARTMAN Mosquito Forceps-Str, 1.0mm Tips, 10cm	2
F22003-10	HARTMAN Mosquito Forceps-Cvd, 1.0mm Tips, 10cm	2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 12cm	1
S13029-14	MAYO-STILLE Dissecting & Operating Scissors-B/B Str/14cm	1
S15001-11	SPENCER Ligature Scissors (Slender Type)-11cm	1
S21010-15	BOHLER Rongeurs (Double)-Light Cvd/2mm Cup/15.5cm	1
S22004-11	Bone Cutters with Flat Blades (SGL)-11.5cm	1
S14014-12	Operating Scissors (Round Type)-S/S Str/12.5cm	1
S31011-01	11# Scalpel Blades (Box of 100pcs)	1
S32001-12	Scalpel Handles 3# Solid-12cm	1
S33009-06	Scalpel Blade Remover-6.5cm	1
F13019-12	ADSON 1x2 Teeth Tissue Forceps, 1.5mm, 12cm	1
R21027-12	STEVENS Hooks, 1 Angled Tooth (5mm long), 12.5cm	1
R22009-01	ALM 4x4 Teeth Retractors-Blunt, 7cm	1
R22005-45	3x3 Teeth Retractors-Blunt, 4.5cm	1
R51003-11	Micro Spatula w/tip W. 2mm x Thk. 0.3mm - Cvd/11cm	1
F35205-60	Sutures w/Needle-3/8/2.5x7/30cm/6-0	10
F35305-50	PGA Sutures w/Needle-1/2/4x10/90cm/5-0	10
R31006-06	SS Micro Clamps-Cvd/L*W 6*1mm/17mm	5
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/15mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-14cm	1
SP0000-P	Instrument Storage Portfolio, 31*21cm	1

SP0003-R
Microsurgery Instrument Kit for Rat, Cat, Rabbit etc.

Cat.No.	Product Description	Qty
S12009-11	IRIS-Fine Scissors (Round Type)-S/S Str/11.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/11.5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 12cm	1
F11001-11	Micro Forceps-Str, 0.2mm Tips, 11cm	1
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/15mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-14cm	1
S11001-08	Spring Scissors (Triangular)-S/S Str/5*0.1mm/8.5cm	1
S11002-08	Spring Scissors (Triangular)-S/S Cvd/5*0.1mm/8.5cm	1
F22006-12	HALSTED Mosquito Forceps-Str, 1.0mm Tips, 12.5cm	1
F22007-12	HALSTED Mosquito Forceps-Cvd, 1.0mm Tips, 12.5cm	1
F35401-50	Needle-3/8/3x10/90mm/5-0 (50/Box)	10
S32001-12	Scalpel Handles 3# Solid-12cm	1
S31011-01	11# Scalpel Blades (Box of 100pcs)	1
SP0000-P	Instrument Storage Portfolio, 31*21cm	1

SP0003-M
Microsurgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S12003-09	IRIS-Fine Scissors (Round Type)-S/S Str/9.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/9.5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 12cm	1
F11001-11	Micro Forceps-Str, 0.2mm Tips, 11cm	1
R31005-04	SS Micro Clamps-Str/L*W 4*0.75mm/13mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-14cm	1
S11001-08	Spring Scissors (Triangular)-S/S Str/5*0.1mm/8.5cm	1
S11002-08	Spring Scissors (Triangular)-S/S Cvd/5*0.1mm/8.5cm	1
F22002-10	HARTMAN Mosquito Forceps-Str, 1.0mm Tips, 10cm	1
F22003-10	HARTMAN Mosquito Forceps-Cvd, 1.0mm Tips, 10cm	1
F35401-50	Needle-3/8/3x10/90mm/5-0 (50/Box)	10
S32001-12	Scalpel Handles 3# Solid-12cm	1
S31011-01	11# Scalpel Blades (Box of 100pcs)	1
SP0000-P	Instrument Storage Portfolio, 31*21cm	1