QSA

Single-Shot Autocorrelator

The QSA-800-20f can be used to measure the pulse width of ultra-short ultra-intense lasers. Measure pulse width from 20 fs-1000 fs. Compact in size and simple to operate, it is suitable for real-time measurement or online detection of pulse width.

📄 Product Features

- Compact size, calibration-free, easy to operate, easy to embed and use in large systems

- Measure single-shot pulses

- Easy to adjust the input light intensity due to built-in adjustable filter, measure pulse width down to micro-Joules pulse

- Realize long-term monitoring of pulse width. Stability, average value can be viewed at any time

- Customer-specified central wavelength and pulse duration

- The software interface is easy to operate, it makes it easy to export data charts

🗔 Typical Applications

- Femtosecond laser pulse width measurement

🖽 Specifications

	QSA-800-20f
Wavelength range	700-900 nm
Measurable pulse widt[1]	20-100 fs
Pulse width resolution	0.5 fs
Input laser repetition rate	single shot - GHz
Energy density	0.2-0.7 mJ/cm²
Input beam dimension	2-10 mm
Input laser polarization	level
Detector	CMOS 10 bit
Interface	USB 3.1
Dimensions	110 mm*67 mm*63 mm

1 QSA-800-100f product pulse width measurement range is 100fs-1000fs, please contact me for details.
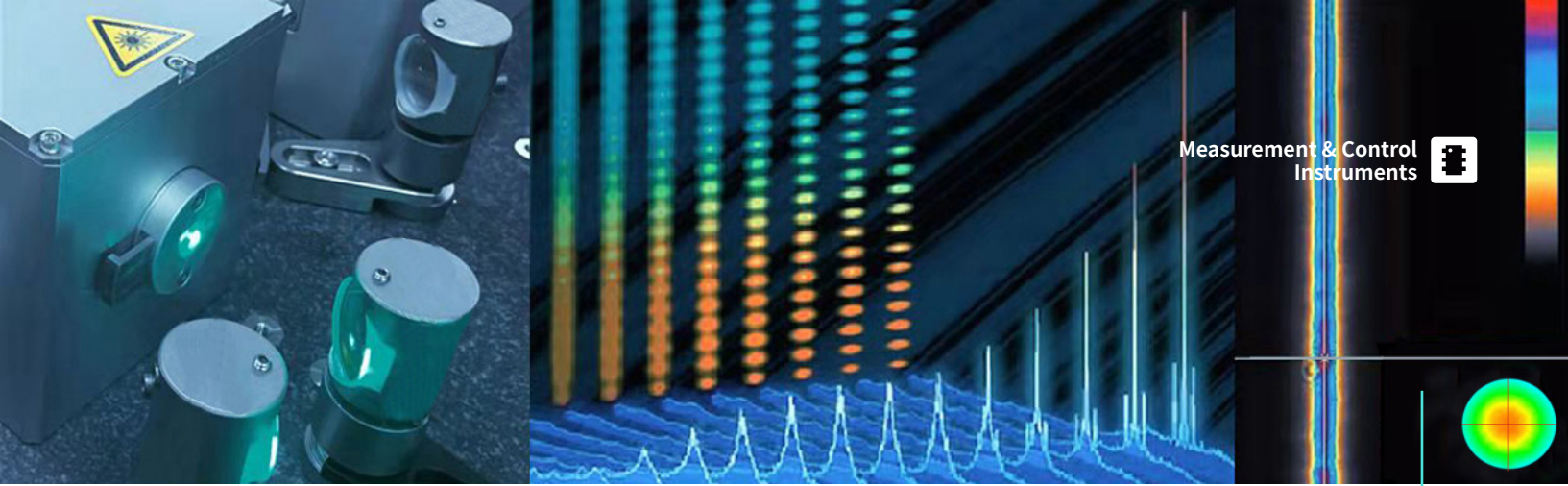
↕ External Dimensions
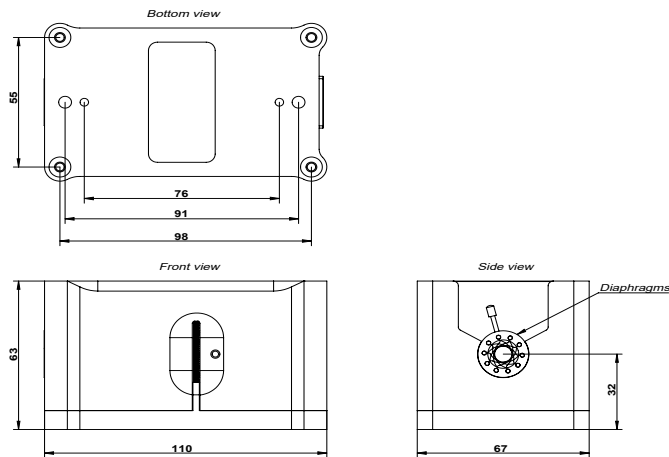
Dimensions of QSA

📊 Typical Data

QSA software interface

QDG24

Delay signal generator

The QDG24 digital delay signal generator generates 24 independent pulses from input delay data based on internal or external clock signals. It can be set to generate a delay of up to 1 s with a maximum accuracy of 10 ps and less than 30 ps of channel-to-channel jitter.

The setting of all parameters can be set remotely via the instrument panel touch screen or USB/LAN connection to a computer.

Product Features

- 24 independent delay channels, accuracy:10 ps，timing jitter:30 ps
- 6 repetition rate settings
- Supports external TRIG triggering
- Supports single or multiple pulse outputs
- Supports panel touch screen setup or remote setup
- Supports 4-way fault input latch-up control
- Support 2 alarm outputs
- Supports USB or LAN interface

Typical Applications

- Ultrafast laser systems
- Accurate pulse synchronization
- Instrumentation
- Timing control

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▦ Specifications

Clock reference	QDG24	
Internal clock	100 MHz ±0.5 ppm	TCXO
Input clock repetition rate	10~100 MHz	≥300 mV, impedance1 kΩ
Delayed output		
Total number of channels	24	
High-precision channels	12	most 24
High precision accuracy	10 ps	
Low precision channels	12	most 24
Low precision accuracy	10 ns	
Delay	0~1000 ms	
Pulse width	100 ns~150 ms	
Repetition rate	0.1 Hz~100 kHz	
High-precision channel-to-channel jitter	≤30 ps	8 h@25 ℃
Low precision channel-to-channel jitter	≤100 ps	8 h@25 ℃
Output	5.0 V@1 MΩ impedance；2.5 V@50 Ω impedance	
Rise time	1.5 ns	typical value
Power supply and interface		
Power supply	220V AC（100~270V AC），50/60 Hz	≤50 W
Touch screen	4.3 inch capacitive touch screen	resolution 800*480
USB	1个	instrument configuration
Ethernet LAN	1个	instrument configuration or system control applications
Switching input	4个	fault latch-up interlock signal
Switching output	2个	fault output indication

↕ External Dimensions
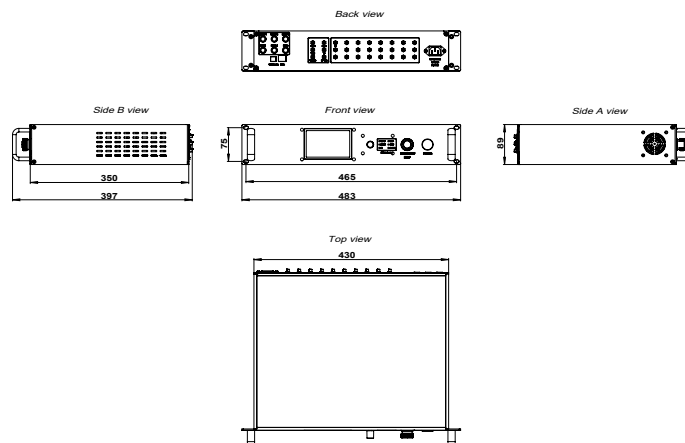
Dimensions of QDG24
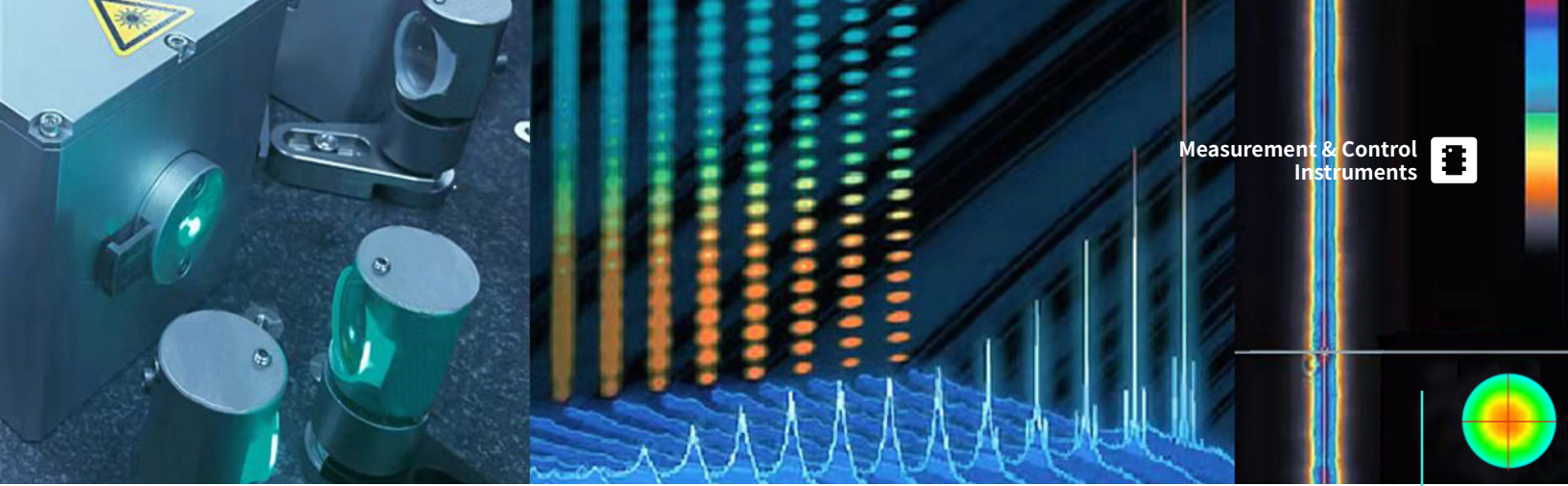
QPP

High performance electro-optic modulator

The QPP electro-optic modulator selects a single pulse from a femtosecond pulse train. It is often used to control the time of femtosecond amplifier pulses in and out of the cavity, and can also clear the prepulse before the amplification pulse to improve nanosecond time contrast. The miniaturized multi-channel electro-optic modulator with the related electronic control unit can remotely control the pulse in and out of the cavity time in the mobile phone APP, which is an ideal choice for laser integrated systems.
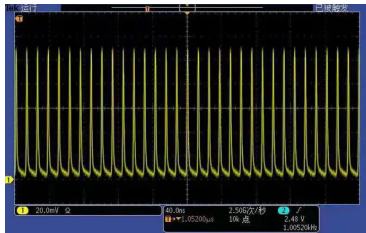
Product Features

- Suitable for 20-120 MHz femtosecond oscillators
- Used for laser pulse export, pulse radio selection, repetition rate adjustment
- Transmittance > 90%, contrast > 1500:1
- Rising/falling edge (10%-90%): 4 ns
- Multi-channel switching time via APP remote control
- Customer-specified the dimensions of system

▤ Specifications

Crystal type	DKDP
Operating wavelength	510-540 nm / 700-1000 nm / 1000-1100 nm
Channel	1/2/4, controlled individually
Transmittance	> 90%
Repetition rate	1 Hz-1 kHz
Clear aperture	6 mm or customizable
Clear aperture height	40 mm or customizable
Rising/falling edge (10%-90%)	< 4 ns
contrast	1500:1
Controller high voltage	Max 7 kV
External trigger voltage	TTL high potential 2 V (min.) TTL low potential 0.8 V (max)
Grand prism (optional)	650-1000 nm transparency, contrast ratio > 10^5:1
Dimensions	83 mm*59 mm*58 mm

▥ Typical Data

↕ External Dimensions

Front view

Side A view

Top view

Dimensions of QPP
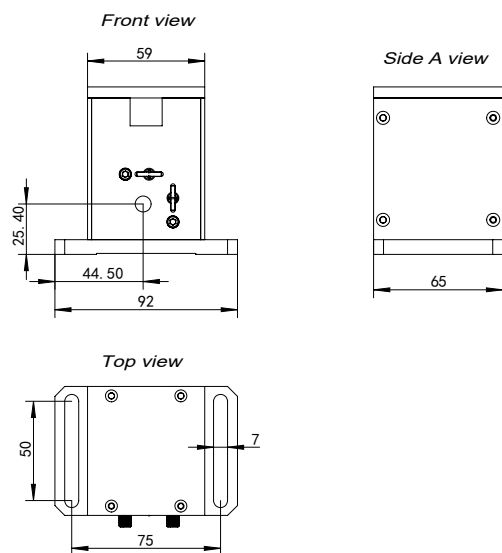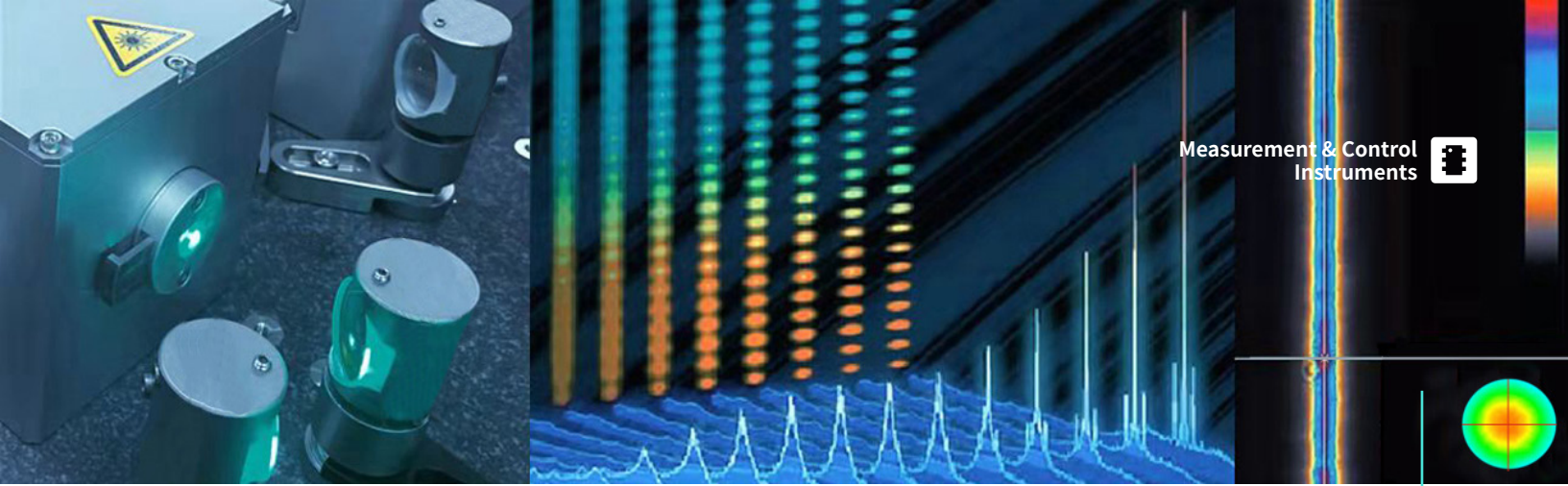
Triones

High quality flexible optical adjustment frames

Triones high-quality flexible optical adjustment frames, specially designed for users with long-term strict stability requirements and compact environment, suitable for laser system construction, high-precision optical path design and other application scenarios. The optical adjustment frames is made of special stainless steel material integrated to provide two-dimensional degree of freedom adjustment, and the whole adopts metal flexible structure design, which effectively avoids the problem of imbalance deformation caused by spring failure of the traditional adjustment frame.

📄 Product Features

- Special stainless steel material + flexible structure = Ultra-low deformation is guaranteed

- Compact, Ultra-thin design

- Double-sided installation available

- Accept customized parameters
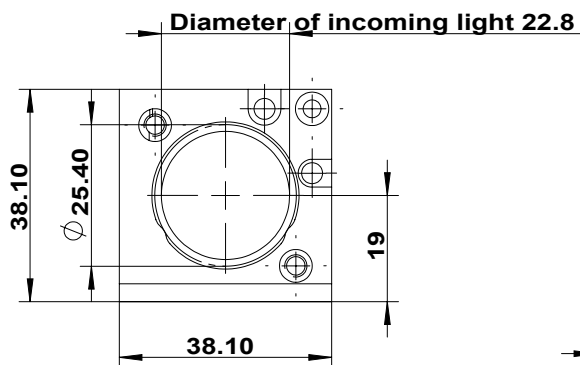
- Compatible with high vacuum environments
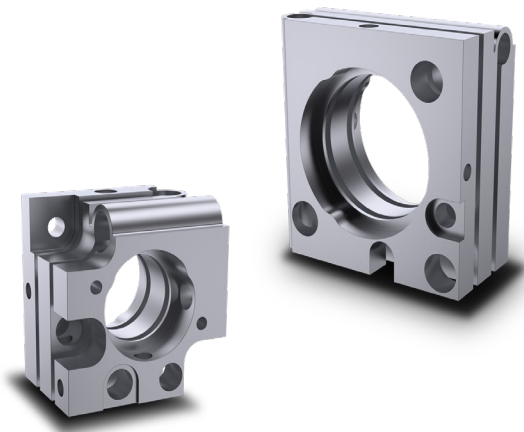
📋 Specifications

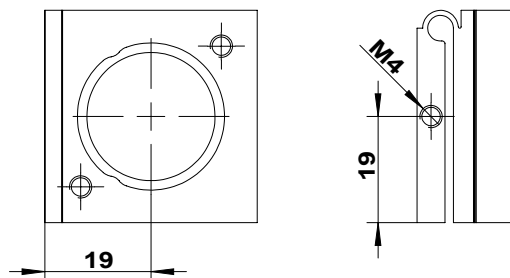| Model	Triones-1/2	Triones-1	Triones-2	Triones-3	Triones-4
Suitable lens size: inch	0.5	1	2	3	4
Size：mm	23.5*23.5	38.1*38.1	63.5*63.5	101*101	127*127
Light height：mm	11.75	19	31.75	50.5	63.5
Thickness：mm	16.1	16.1	31.75	47.5	49.2
Center transmittance aperture：mm	10.8	22.8	48.2	72.3	96.5

↕ External Dimensions
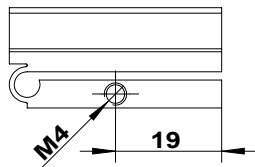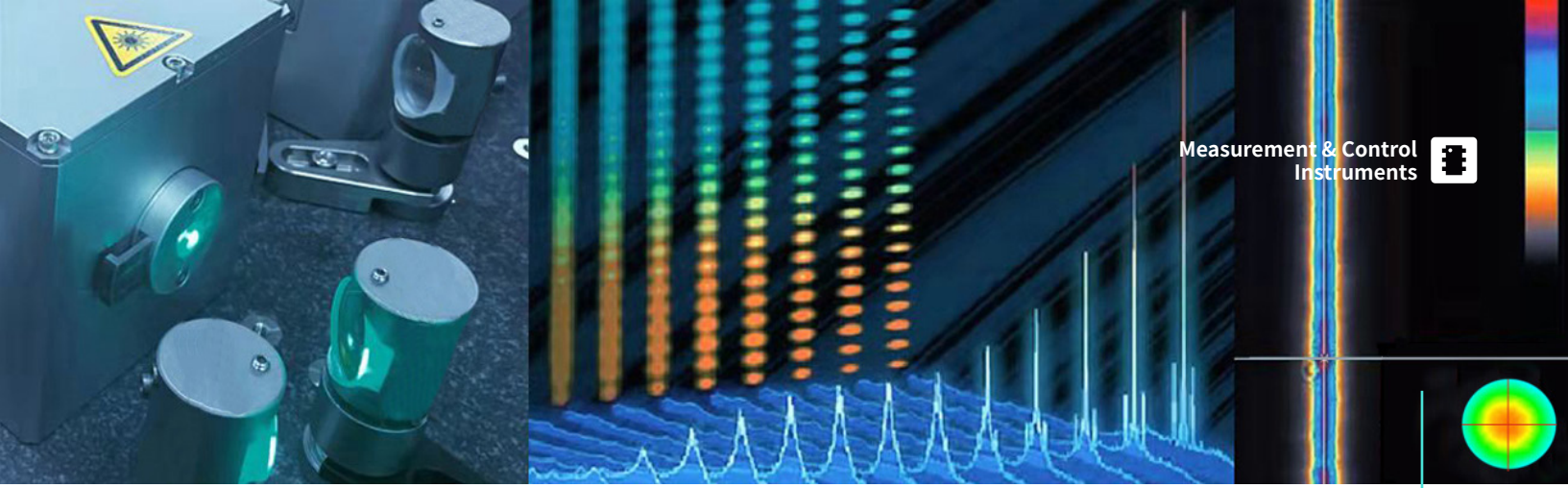
Triones-1 Frame size diagram

Forward installation/adjustment   Reverse installation/adjustment

Dimensions of Triones-1

M-SS-CL

Stainless steel water-cooled optical adjustment frames

M-SS-CL high-quality water-cooled optical adjustment frames, specially designed for users who need temperature control for frames or lenses, suitable for laser system construction, high-precision optical path design and other application. The optical adjustment frames is made of special stainless steel material , providing two-dimensional degree of freedom adjustment, M-SS-SL optical frame adopts metal flexible structure design, one U-shaped waterway is drilled inside the bulk, which effectively avoids the imbalance deformation caused by the spring failure of the traditional adjustment frame and the drift problem caused by poor heat dissipation.
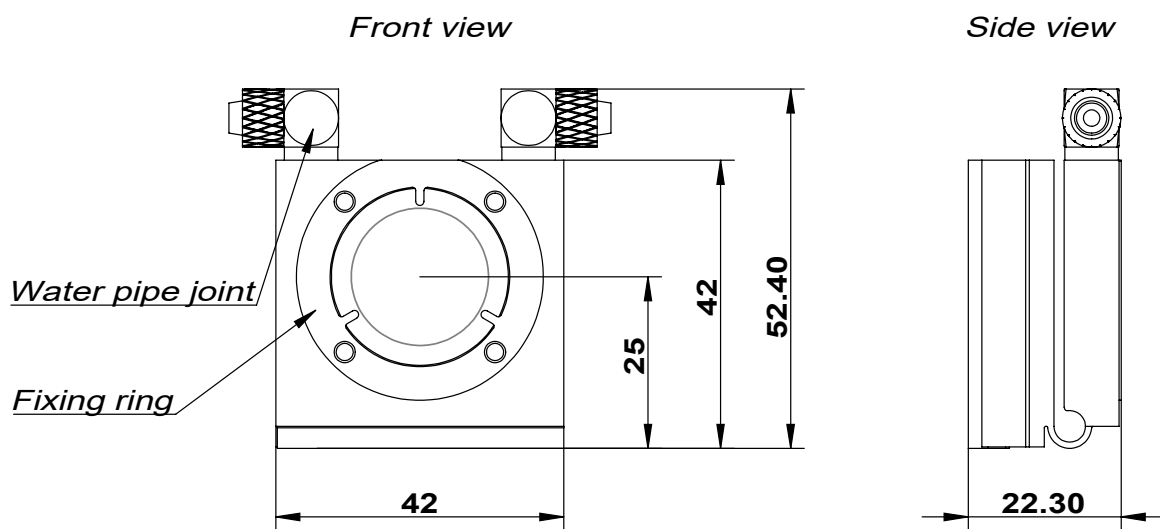
📄 Product Features

- Cool lenses and frames, precise temperature control
- Special stainless steel material and flexible structure to ensure ultra-low deformation
- Compact, ultra-thin design
- Accept customized parameters
- Compatible with high vacuum environments
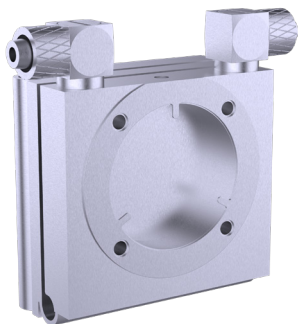
▦ Specifications

Model	M-SS-CL-1	M-SS-CL-2
Suitable lens size: inch	1	2
Size: mm	42*42	65*65
Mini light height: mm	25	38
Thickness: mm	22.3	26.5

↕ External Dimensions

Front view

Side view

Water pipe joint

Fixing ring

42

25

42

52.40

22.30

Dimensions of M-SS-CL -1