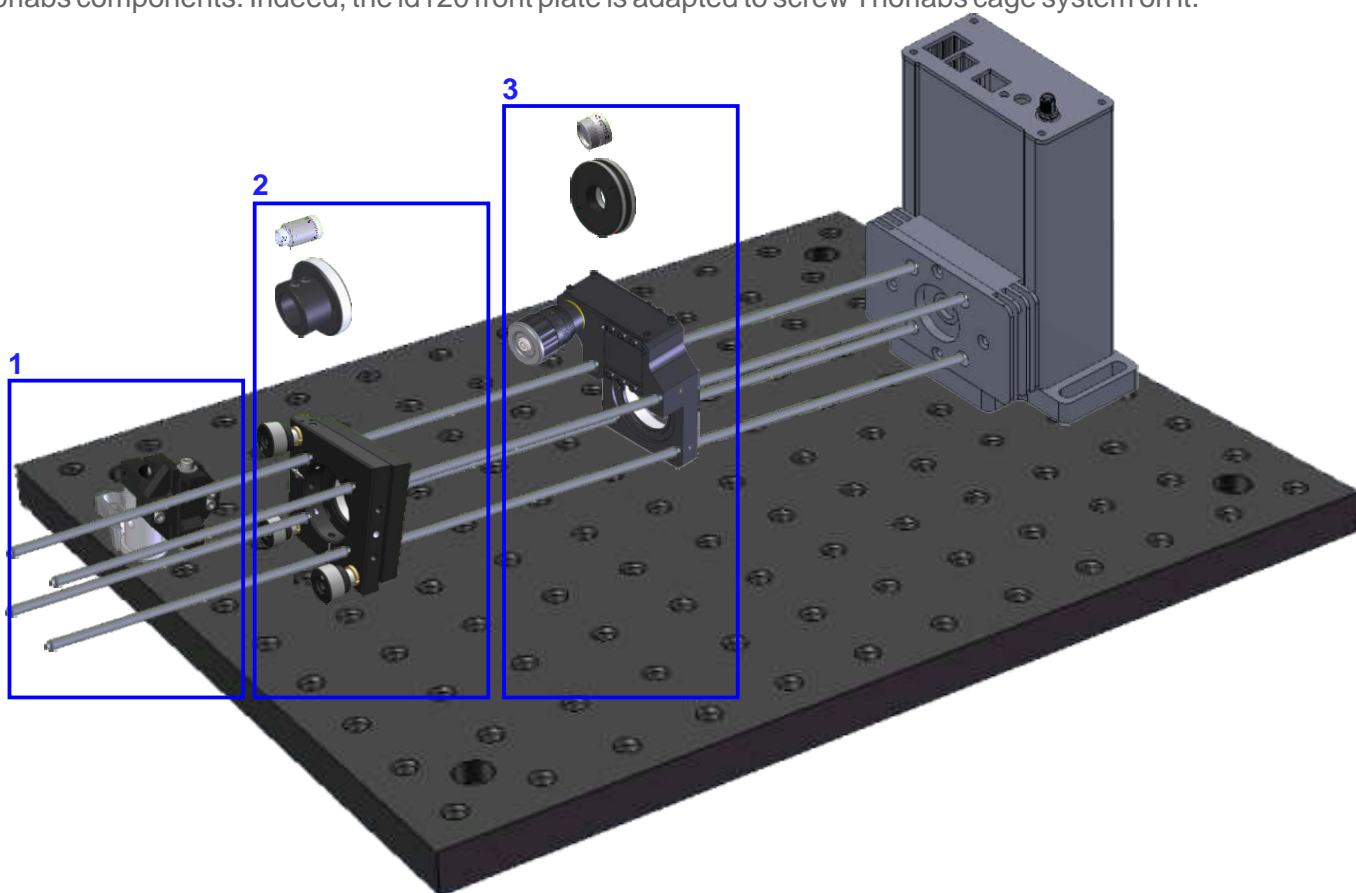


REDEFINING PRECISION

ID120 Fiber coupling

The ID120 visible photon counter is delivered as a free-space device. However, thanks to the large avalanche photodiode with an 500um diameter, it is very easy for you to create your own fiber coupling system using Thorlabs components. Indeed, the id120 front plate is adapted to screw Thorlabs cage system on it.



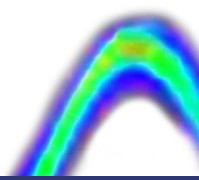
Fiber coupling can be achieved with the following components:

1- Mechanical support:

- C1026/M 30 mm Cage Clamp for Ø25 mm Posts, Metric
- CF125 Small Clamping Fork, 1.25" Counterbored Slot, Universa
- RS2P/M Ø25 mm Pedestal Pillar Post, M6 Taps, Length=50 mm
- ER8-P 4 Cage Assembly Rod, 8" Long, Ø6 mm, 4 Pack
- MB2530/M Aluminum Breadboard, 250 mm x 300 mm x 12.7 mm, M6 Taps

2- Collimation

- KC1-T/M Kinematic, SM1-Threaded, 30 mm-Cage-Compatible Mount for Ø1" Optic, Metric
- AD11F SM1-Threaded Adapter for Ø11 mm Collimators
- F220FC-B 633 nm, $f = 10.99$ mm, $NA=0.25$ FC/PC Fiber Collimation Pkg.



3 - Focusing

- SM1Z Z-Translator for Cage System
- S1TM09 SM1 to M9 x 0.5 Lens Cell Adapter
- A220TM-B $f = 11.0$ mm, $NA = 0.26$, Mounted Rochester Aspheric Lens, AR: 650-1050 nm

4- Tools

- SPW909 Spanner Wrench for SM1-Threaded Adapters, Length = 1"
- SPW30 1 Spanner Wrench for an M9 x 0.5 Optics Housing, Length = 1"

5 - Comments and recommendations

- We strongly recommend to optimize the set-up for your specific wavelength and fiber type.
- Try to keep the assembling as compact as possible. This means that the distance between the ID120 and the FC collimator should be smaller than 10cm if possible.
- In case you need to have the focalisation part very close to the detector, you can use the E09RMS - Extended RMS to M9 x 0.5 Adapter. An SM1A3 adapter would then replace the S1TM09 from page 1.
- You can use lenses with a shorter focus in conjunction with the E09RMS - Extended RMS to M9 x 0.5 Adapter. With this set-up, the lens can be very close to the detector window. The S1TM09 from page 1 has to be replaced by the SM1A3 adapter.
- As the ID120 has very high efficiency and large active area, it is essential to shield it from external light. For example, you may use C-Mount tubes

KEY FEATURES

- 60% Quantum Efficiency at 650nm
- 80% Quantum Efficiency at 800nm
- Tunable quantum efficiency
- Tunable temperature of the diode
- Adjustable deadtime
- Universal dual output
- Labview interface
- C-mount, SM1, cage compatible
- Integrated electronic counter (optional)

