

Component list

Sensor case and tubing

Item	Description	Qty
Flow cell holder	3D printable part	1
Hinge	3D printable part	2
Sensor box	3D printable part	1
Sensor lid	3D printable part	1
Pasteur pipette	107 mm; o.d. 0.7 mm; Dremel cut and polished (John Poulten)	1
Novosil silicone tubing	1.6 m; with i.d./o.d.: 3/6 mm (Fisher scientific)	2
PharMed BPT tubing	100 mm; with i.d./o.d.: 3.2/6.3 mm (Saint-Gobain)	1
Male luer lock connectors	with lock ring for 3.2 mm i.d. tubing, nylon (MasterFlex)	2
Female luer lock connectors	with lock ring for 3.2 mm i.d. tubing, nylon, (MasterFlex)	2
Pan head screw	M4x 40 mm (locking hinges in place)	4
Pan head screw	M4x 16 mm (in hinge to calibrate the angle btn. modules)	2
Hexagon thin nut	M4 (& washers)	20
Cheese head screw	M4x 80 mm (fastening screws for modules in hinges)	2

LED module

Item	Description	Qty
LED module part1	3D printable part	1
LED module part2	3D printable part	1
LED module part3	3D printable part	1
LED module part4	3D printable part	1
Excitation light filter	o.d.: 1 inch; FB470-10 (Thorlabs)	1
Pan head screw	M4x 16 mm	4
Countersunk flat head screw	M4x 16 mm	2
Blue LED	5 mm; 12 V with resistor #LED 5SUK12V (Elgood Oy)	1
metal holder for LED w lens	focal length 15 mm #SML1083, Signal Construct) 1	
lens	#SML1083 (Signal Construct), lens only	1
tinned copper wire/jumpers	~ 250 mm; 30AWG; core diam. 0.25mm; o.d. 0.6mm	4
Proto-board PCB	Piece of 20x 15 mm	1
Female header strip	2 sockets cut for soldering on PCB; Rpi pin connection	1
Transistor	NPN bipolar #S8050	1
Resistor	1 kOhm	1

Camera module

Item	Description	Qty
Camera module part1	3D printable part	1
Camera module part2	3D printable part	1
Camera module part3	3D printable part	1
Camera module part4	3D printable part	1
Pan head screw	M4x 30 mm	2
Pan head screw	M4x 12 mm (holding camera cable slot lid in place)	1
Countersunk flat head screw	M4x 16 mm	2
Camera	Raspberry Pi 8 MP (Raspberry Pi)	1
Camera cable	300 mm, 15 pin Flex Cable for Raspberry Pi camera	1
lens	#SML1083 (Signal Construct), lens only	1
Emission light filter	o.d.: 1 inch; (FB510-10, Thorlabs).	1