

Tools							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
SM1 Spanner Wrench, Graduated, Length = 3.88"	SPW602	Thorlabs	1	\$26.75	\$26.75	–	–
SM2 Spanner Wrench, Length = 4.35"	SPW604	Thorlabs	1	\$44.50	\$44.50	–	–
Metric Hex Key Set	–	–	1	–	–	–	–
Inch Hex Key Set	–	–	1	–	–	–	–
Flathead Screwdriver	–	–	1	–	–	–	–
Small Moncky Wrench	–	–	1	–	–	–	–
Nipper tool	–	–	1	–	–	–	–
Vernier Caliper 200mm	–	–	1	–	–	–	–

Breadboard							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
#031 Optical Breadboard 2	#031	Machine Shop	1	–	–	1175	1175

Light Source							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Stabilized Fiber–Coupled Light Source w/ Universal Power Adapter, 360 – 2600 nm, M6 Taps	SLS201L/M	Thorlabs	1	\$1,010.00	\$1,010.00	1173	1173
Adapter with External M6 x 1.0 Threads and External M4 x 0.7 Threads	AP6M4M	Thorlabs	2	\$1.94	\$3.88	2	4
Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 30 mm	TR30/M	Thorlabs	2	\$4.74	\$9.48	25	50
Ø12.7 mm Post Holder, Spring–Loaded Hex–Locking Thumbscrew, L=30 mm	PH30/M	Thorlabs	2	\$7.03	\$14.06	38	76
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 10 mm Long	–	–	2	–	–	5	10

Collimator							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Cage Assembly Rod, 6" Long, Ø6 mm, 4 Pack	ER6–P4	Thorlabs	1	\$32.21	\$32.21	–	–
SM1–Threaded 30 mm Cage Plate, 0.35" Thick, 2 Retaining Rings, M4 Tap	CP02/M	Thorlabs	4	\$16.40	\$65.60	–	–
Ø1" Aspheric Lens, SM1 Mounted, f = 79.0 mm, NA = 0.143, Uncoated	ASL10142M	Thorlabs	2	\$337.00	\$674.00	–	–
Ø1" Mounted Precision Pinhole, 1000 ± 10 µm Pinhole Diameter	P1000S	Thorlabs	1	\$67.50	\$67.50	–	–
Ring–Actuated SM1 Iris Diaphragm	SM1D12D	Thorlabs	1	\$65.75	\$65.75	–	–
Cardboard Cover	–	Hand Made	1	–	–	12	12

Fixed Mirror							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Kinematic Mirror Mount for Ø50.8 mm Optics with Post–Centered Front Plate, M4 Taps	KM200CP/M	Thorlabs	1	\$101.00	\$101.00	149	149
Ø2" (Ø50.8 mm) UV Enhanced Aluminum Mirror	PF20–03–F01	Thorlabs	1	\$96.75	\$96.75	53	53
Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 20 mm	TR20/M	Thorlabs	1	\$4.75	\$4.75	16	16
Ø12.7 mm Post Holder, Spring–Loaded Hex–Locking Thumbscrew, L=30 mm	PH30/M	Thorlabs	1	\$7.03	\$7.03	38	38
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 10 mm Long	–	–	1	–	–	5	5

Alignment Target (Fixed Mirror)							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Lens Mount with Retaining Ring for Ø2" Optics, M4 Tap	LMR2/M	Thorlabs	1	\$25.25	\$25.25	19	–
Alignment Target (Cardboard)	–	Hand Made	1	–	–	–	–
SM2RR – SM2 Retaining Ring for Ø2" Lens Tubes and Mounts	SM2RR	Thorlabs	1	\$6.90	\$6.90	1	–
Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 30 mm	TR30/M	Thorlabs	1	4.74	\$4.74	26	–
R2/M – Slip–On Post Collar for Ø1/2" Posts, Metric	R2/M	Thorlabs	1	\$5.00	\$5.00	4	–

Flip Mirror							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Kinematic Mirror Mount for Ø50.8 mm Optics with Post–Centered Front Plate, M4 Taps	KM200CP/M	Thorlabs	1	\$101.00	\$101.00	149	149
Ø2" (Ø50.8 mm) UV Enhanced Aluminum Mirror	PF20–03–F01	Thorlabs	1	\$96.75	\$96.75	53	53
Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 20 mm	TR20/M	Thorlabs	1	\$4.75	\$4.75	–	–
#040 Optical Post 13mm	#040	Machine Shop	1	–	–	11	11
Ø12.7 mm Post Holder, Spring–Loaded Hex–Locking Thumbscrew, L=20 mm	PH20/M	Thorlabs	1	\$7.03	\$7.03	28	28
18–8 Stainless Steel Hex Drive Flat Head Screw M6 x 1 mm Thread, 16 mm Long	–	–	1	–	–	4	4
#032 Flip Mirror Plate 2	#032	Machine Shop	1	–	–	53	53
NSK Stainless Miniature Bearing ZZ with Flange, F686–H–ZZ	F686–H–ZZ	NSK	1	\$1.80	\$1.80	3	3
#033 Bearing Spacer	#033	Machine Shop	1	–	–	2	2
18–8 Stainless Steel Socket Head Screw, M6 x 1 mm Thread, 15 mm Long	–	–	1	–	–	5	5
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 8 mm Long	–	–	2	–	–	4	8
Plastic Sheet between #032 (Flip Mirror Plate2) and #031 (Optical Breadboard 2)	–	Hand Made	1	–	–	4	4

Integrating Sphere and Spectrometer							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
3–Port Integrating Sphere, 2 in., PTFE	819D–SL–2	Newport	1	\$1,556.00	\$1,556.00	473	473
18–8 Stainless Steel Socket Head Screw, 1/4"–20 Thread Size, 3/8" Long	–	–	1	–	–	5	5
LR1–spectrometer, config.B 200–1200nm, 2nm resolution with 50um slit	–	Aseq Instruments	1	\$749.00	\$749.00	453	453
Nylon Cable Tie	–	–	6	–	–	1	6
#036 Spectrometer Plate 2	#036	Machine Shop	1	–	–	113	113
#037 Spectrometer Spacer 2	#037	Machine Shop	4	–	–	12	48
#035 Slide Plate 2	#035	Machine Shop	1	–	–	173	173
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 25 mm Long	–	–	4	–	–	7	28
#042 Ball Plunger Mount	#042	Machine Shop	1	–	–	28	28
18–8 Stainless Steel Slotted Ball–Nose Spring Plunger with 440C Stainless Steel Nose, M6x1, 2–2.9 lb. Nose Force	85015A47	McMaster	1	\$6.59	\$6.59	2	2
18–8 Stainless Steel Nut, M6 x 1 mm Thread	–	–	1	–	–	2	2
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 20 mm Long	–	–	2	–	–	6	12
MGN12 300mm Linear Rail Guide with MGN12H Carriage Block	B0762MPVN3	Amazon	1	\$26.99	\$26.99	247	247
18–8 Stainless Steel Hex Drive Flat Head Screw M3 x 0.5 mm Thread, 8 mm Long	–	–	4	–	–	1	4
#039 Linear Guide Spacer	#039	Machine Shop	4	–	–	16	64
18–8 Stainless Steel Socket Head Screw M3 x 0.5 mm Thread, 30 mm Long	–	–	4	–	–	2	8
#061 Integrating Sphere Hood	#061	Machine Shop	1	–	–	83	83
#062 Flip Mirror Alignment	#062	Machine Shop	1	–	–	13	13
18–8 Stainless Steel Flat–Tip Set Screws 4–40 Thread, 1/8" Long	–	–	2	–	–	0	0
18–8 Stainless Steel Hex Drive Flat Head Screw M6 x 1 mm Thread, 30 mm Long	–	–	1	–	–	8	8
18–8 Stainless Steel Wing Nut M6 x 1 mm Thread	–	–	1	–	–	6	6
18–8 Stainless Steel Washer for M6 Screw Size, 6.4 mm ID, 12 mm OD	–	–	1	–	–	1	1

Contact Part							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Slim Right–Angle Bracket with Counterbored Slot & M6 Tapped Holes	AB90C/M	Thorlabs	2	\$26.25	\$52.50	35	70
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 14 mm Long	–	–	4	–	–	5	20
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 35 mm Long	–	–	4	–	–	9	36
#051 Contact Plate Spacer 2	#051	Machine Shop	2	–	–	15	30
#053 Contact Plate 3	#053	Machine Shop	1	–	–	139	139
#052 Contact Pad 2	#052	Machine Shop	1	–	–	85	85
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 25 mm Long	–	–	3	–	–	7	21
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 35 mm Long	–	–	1	–	–	9	9
#063 Fixed Mirror Alignment	#063	Machine Shop	1	–	–	20	20
18–8 Stainless Steel Wing Nut M6 x 1 mm Thread	–	–	1	–	–	6	6
18–8 Stainless Steel Washer for M6 Screw Size, 6.4 mm ID, 12 mm OD	–	–	1	–	–	1	1

Leg Part							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Slim Right–Angle Bracket with Counterbored Slot & M6 Tapped Holes	AB90C/M	Thorlabs	1	\$26.25	\$26.25	35	35
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 14 mm Long	–	–	2	–	–	5	10
Dovetail Rail Carrier, 1.00" x 1.00" (25.4 mm x 25.4 mm)	RC1	Thorlabs	2	\$14.60	\$29.20	24	48
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 10 mm Long	–	–	2	–	–	4	8
Dovetail Optical Rail, 75 mm, Metric	RLA075/M	Thorlabs	1	\$28.50	\$28.50	27	27
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 14 mm Long	–	–	2	–	–	5	10
#038 Leg Plate 2	#038	Machine Shop	1	–	–	242	242
#014 Leg Support	#014	Machine Shop	2	–	–	29	58
18–8 Stainless Steel Socket Head Screw M6 x 1 mm Thread, 20 mm Long	–	–	4	–	–	6	24
M6 Star Knob	–	–	2	–	–	7	14
M6 Bolt 65mm	–	–	2	–	–	13	26
18–8 Stainless Steel Nylon–Insert Locknut, M6 x 1 mm Thread	–	–	4	–	–	2	8
18–8 Stainless Steel Washer for 1/4" Screw Size, 0.281" ID, 0.625" OD	–	–	2	–	–	1	2
#015 Leg Pad	#015	Machine Shop	2	–	–	31	62

Case							
Item Description	Part #	Manufacture	Quantity	Price	Sub Total	Weight	Sub Total
Pelican Air 1555 Case With Foam (Black)	#1555	Pelican	1	\$198.75	–	–	–