

Capstone Design

Combined BOM and Manufacturing Plan: Low-Cost Pyranometer

PV Matey Bill of Materials				Manufacturing Plan		
Part No. or	Description	Quantity	Make or	Source (or	Fabrication	Is the
Full Assy 1						
Subassembly 1	Sunlight Capture	1				
Subassembly 2	Microcontroller	1				
Subassembly 3	Output to Data Logger	1				
Subassembly 4	Case	1				
Subassembly 1	Sunlight Capture	1				
Part 1	SFH 3310 Phototransistor	1	Buy	Mouser	N/A	No
Part 2	Teflon Sheet*	1	Buy	ePlastics	N/A	No
Part 3	Acrylic Disk	1	Buy	US plastics	N/A	No
Part 4	680 Ω Resistor	1	Buy	Mouser	N/A	No
Subassembly 2	Microcontroller	1				
Part 5	Adafruit QT py	1	Buy	Adafruit	N/A	No
Part 6	1N914 Diode	1	Buy	Mouser	N/A	No
Part 7	5V, 1A Power Supply	1	Buy	Amazon	N/A	No
Subassembly 3	Output to Data Logger	1				
Part 8	36 Ω Resistor	4	Buy	Mouser	N/A	No
Part 9	Op Amp LM358P	1	Buy	Mouser	N/A	No
Part 10	22 AWG 3-Conductor Copper Wire	100	Buy	Mouser	N/A	No
Subassembly 4	Case	1				
Part 11	Circuitry Housing*	1	Make	Personal Equipment	3D Print from PETG	Yes
Part 12	Housing Lid*	1	Make	Personal Equipment	3D Print from PETG	Yes
Part 13	Acrylic Disk Cap*	1	Make	Personal Equipment	3D Print from PETG	Yes
Part 14	USB Cord Seal: Upper Piece*	1	Make	Personal Equipment	3D Print from PETG	Yes
Part 15	USB Cord Seal: Lower Piece*	1	Make	Personal Equipment	3D Print from PETG	Yes

Estimate *

Is the	Who will lead (Name)?	Target	Cost	
			Unit Cost (\$)	Extended
No	Lukas V.	1-Mar	\$0.86	\$0.86
No	Lukas V.	1-Mar	\$3.08	\$3.08
No	Lukas V.	1-Mar	\$1.72	\$1.72
No	Lukas V.	1-Mar	\$0.10	\$0.10
No				
No	Adriana O. and Brady J.	1-Mar	\$6.00	\$6.00
No	Lukas V	1-Mar	\$0.10	\$0.10
No	Lukas V	1-Mar	\$7.89	\$7.89
No				
No	Lukas V.	1-Mar	\$0.10	\$0.40
No	Lukas V.	1-Mar	\$0.41	\$0.41
No	Lukas V.	1-Mar	\$0.29	\$29.00
Yes	Nick B.	1-Mar	\$0.20	\$0.20
Yes	Nick B.	1-Mar	\$0.20	\$0.20
Yes	Nick B.	1-Mar	\$0.20	\$0.20
Yes	Nick B.	1-Mar	\$0.10	\$0.10
Yes	Nick B.	1-Mar	\$0.10	\$0.10
Total BOM Cost			\$	50.36