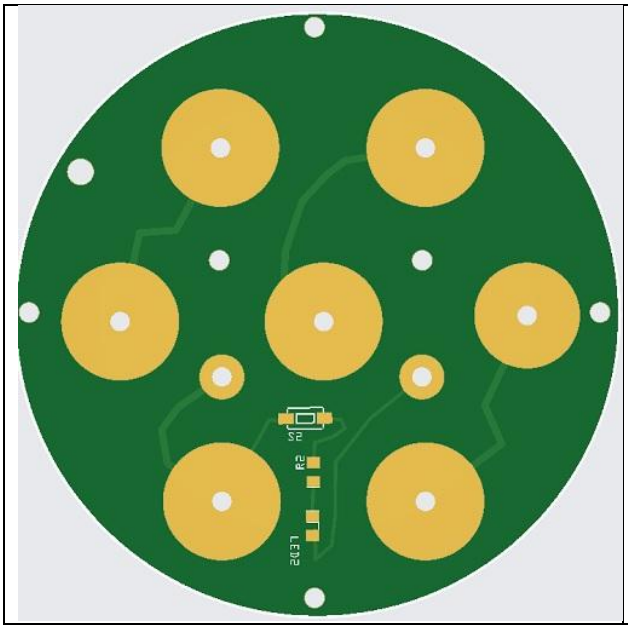
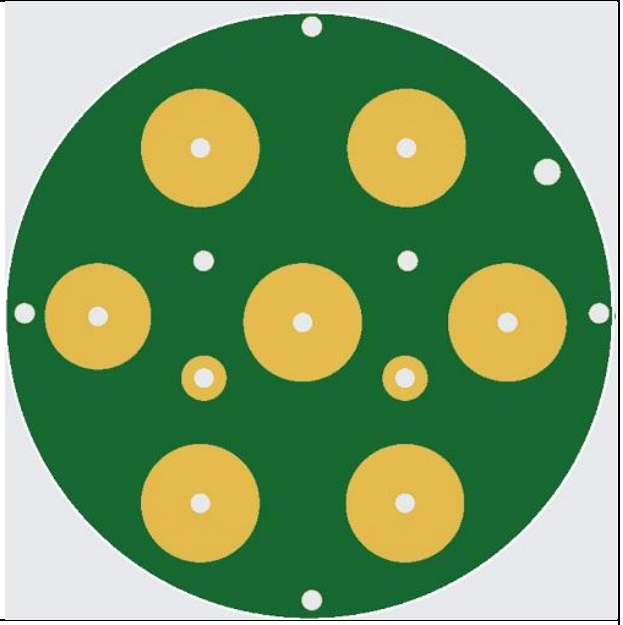
PCB: Battery Holder Top

The Battery Holder Assembly consists of a 3D printed battery holder tube sandwiched between two PCBs. It is held together by four brass hex spacers (110 mm) through the blank holes (2) and open vias (2). The spacers fastened through vias create a conductive pathway between the top and bottom PCBs.

The assembled Battery Holder Top PCB includes a push button and a red LED to check for proper assembly and battery strength. The Battery Holder Top PCB can be used in both 4-inch and 5-inch diameter c-cell battery holder assemblies.



PCB: Battery Holder Top (front view)

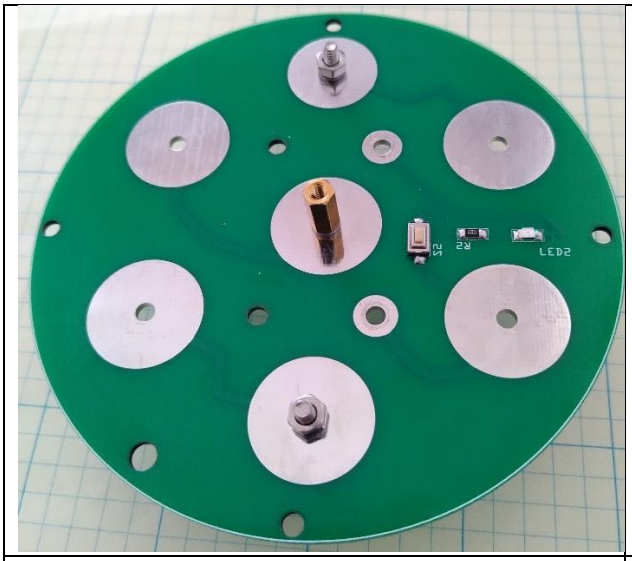
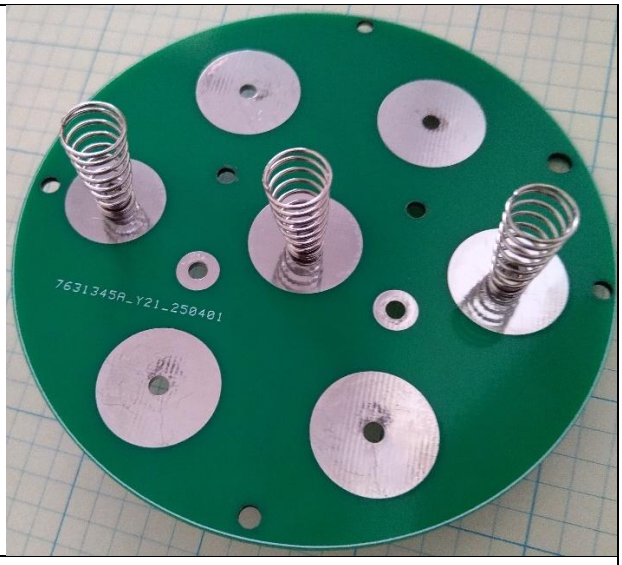


PCB: Battery Holder Top (back view)

Bill of Materials (BOM)					
#	*Description*	*Loc.*	*Cost ea*	*Qty*	*Supplier*
1	1206 smd LED, red	LED2	$0.04	1	Amazon.com
2	1206 smd resistor, 1k ohm	R2	$0.06	1	Amazon.com
3	Push-button momentary tactile switch, smd, 3x6x2.5mm	S2	$0.05	1	Amazon.com
4	Conical taper metal springs, 10x6x19 mm		$0.35	3	Amazon.com
5	M3 x 8mm stainless steel socket head screw, with locking washer and nut		$0.04	3	Amazon.com
6	Brass hex standoff spacer, M3x10mm, female to female		$0.10	1	Amazon.com

Assembly *(approximate time: 15 minutes)**:***

1. Solder the LED, switch, and resistor to board.
2. Attach three springs to middle row of large vias using screws, locking washers, and nuts.
3. The 10 mm hex brass spacer is used in place of a nut, and serves as a handle for removing the PCB during battery replacement.

	
Assembled PCB: Battery Holder Top (front)	Assembled PCB: Battery Holder Top (back)