



The New

OBSIDIAN SOUND BOARD

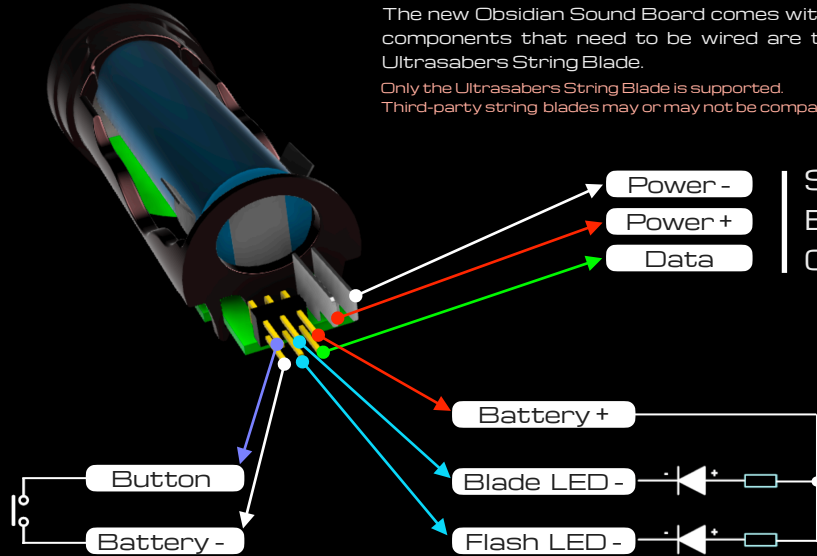
Technical Specs



MAIN FEATURES

- * Built on chassis, $\Phi 1.3"$, 4" long
- * Powered by a single 3.7V, 18650 Li-Ion rechargeable battery
- * Built-in battery holder and electrical protection
- * Built-in audio amplifier and speaker
- * Drives 2 LEDs and a 127-pixel string blade, simultaneously
- * Up to 10 fonts, up to 25 sounds per font
- * Up to 6:40 minutes audio memory
- * Auto-power-off at timeout and low battery

WIRING DIAGRAM



The new Obsidian Sound Board comes with the battery and speaker already connected to the board, so the only components that need to be wired are the push button and the lights, either a 2-channel power LED or an Ultrasabers String Blade.

Only the Ultrasabers String Blade is supported.
Third-party string blades may or may not be compatible with the Obsidian sound board.

Additional Parts

- * Ultrasabers String Blade / Dual channel LED / Single channel LED (leave `Flash_LED_` unused)
- * 1x 18650, 3.7V, unprotected Li-Ion battery
- * 1x Non-latching push button,
- * 1x Double row pin header, female, 0.1"
- * 2x Flat terminal for crimping, 0.25"
- * Wires. Observe the AWG requirements below, for string blade power and for all LED connections

Power Requirements

	LED only	String only	LED & String
AWG	22	20	22 & 20
Battery maximum continuous discharge current	4 A	7 A	12 A
Battery minimum capacity	1500 mAh	2500 mAh	3500 mAh

Do not connect the LED directly to the board, use a buck regulator or a resistor in series connection, as illustrated in the diagram above.

TECHNICAL FACTS

	Obsidian Lite	Obsidian USB3	Obsidian USB4
Power			
Operating Voltage [Vdc]	3.1 - 4.2	3.1 - 4.2	3.1 - 4.2
LED Current for each channel [A]	1.5	1.5	1.5
String Blade Maximum Current [A]	6.0	6.0	6.0
Sound			
Audio Quality	16 bits @ 23.438 kHz	16 bits @ 23.438 kHz	16 bits @ 23.438 kHz
Audio Power	2 W, mono	2 W, mono	2 W, mono
Speaker	3 W, bass	3 W, bass	3 W, bass
Memory [Mbytes]	2	4	16
Light			
Control resolution [bits/color]	8	8	8
Refresh rate - LED [ms]	20	20	20
Refresh rate - String Blade [ms]	40	40	40
Features			
Number of fonts	1, built-in	1, rewritable	Up to 10, rewritable
Number of effects per font	10	10	10
Number of sounds per font	25	25	25
USB port	NO	Micro USB	Micro USB