



LIFELEAF[®] Smartwatch Specifications



LIFELEAF® Product Specifications

Item	Description
Watch case	<p>Circular shape (44mm); Weight: ~38g (watch only, no strap); Thickness: 12.7mm Water resistant (IP67) Case material: aluminum [back of watch is hard plastic in white] Case Color: glossy silver</p>
Strap	<p>Material: medical silicone (biocompatible), Interchangeable Sizes: small (18cm), large (22cm), 2 straps added per box Strap color: white</p>
Touch screen	<p>1.3" display diameter, 360x360 resolution Capacitive touch screen 3D touch display AMOLED 16M colors User Interface with over 100 watches for vitals display and various home faces (see watch detailed specification for full UI functionality)</p>
Watch cover glass	Sapphire crystal cover glass (high end, less prone to scratches)
Battery	<p>Rechargeable lithium-ion battery ~390mAh Battery life (active): ~18 hours depending on the usage modes Battery life (shutdown): ~4 days</p>
Charger	<p>Li-Polymer Charge Management Controller Magnetic pogo pin connector for charging External charger color: white (1,5m long)</p>
Bluetooth	BLE 5.0 (part chip set), supports BLE4.2-5.1 at mobile App side
OS	freeRTOS (Android and IOs compatible at the app level)
CPU	PsoC63 with BLE (Amazon freeRTOS) from Cypress
Storage	64Mbytes+ flash (embedded and/or by external SPI extension)
Memory	24Mbytes SRAM (volatile, embedded and external)
Light Sensor	PPG sensor (OSRAM SFH7072)
Analog Front End	TI AFE4420 with built-in ADC (sigma-delta)

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Vibration system	Vibration system triggered by alters interrupts
Pedometer	automatically running, including steps count
Vital measurements	Watch measures and monitors non-invasively in real time, continuously the following vitals: Blood glucose, Blood pressure, Heartbeat, Oxygen saturation, Respiration rate
Notifications	Watch alarm, calendar alarm, push notification display
Other functions	Clock, notification, stop clock, timer, weather, location temperature (synchronized from App) Wakeup mode: watch goes to sleep after 60s, comes back with screen touch/tap on the watch screen or hand gesture
Mobile App	Connects to LIFELEAF mobile app using BLE. Display most recent values of all vitals in a dashboard. Displays daily, weekly, monthly trend graphs of all vitals. Monitors and alerts vital measures below and above of pre-defined threshold values. Upload calibration data for all vitals.
Web Portal	All data uploaded to LIFELEAF cloud to view using a web portal. Display most recent values of all vitals in a dashboard. Displays daily, weekly, monthly trend graphs of all vitals. Manage subscription to LIFELEAF data services
IMU (6-axis)	3-axis Accelerometer, 3-axis gyroscope for motion detection (InvenSense)
Watch crown(s)	Long press used for power off and on of the watch Gentle press used to return to home face
Bioelectric Impedance	Bioelectric impedance at the back of the watch. Primarily used to detect skin contact prior to enabling any data collection
Certifications	Prioritized for first release: USA FCC (FCC ID: 2A33U-LPLFV01), EUROPE CE, Biocompatible straps, waterproof, battery qualification Planned but not required for the first release: ISO 13485 for MEDICAL DEVICES, California standard for wearable devices (CA Prop 65), full Biocompatibility, USA HIPAA,