Requirement of Wearable Light Sensor

Measurement interval time: 30s or 1 min

Operating time for 1 battery charge cycle: 7 days or longer. Show blue LED light during operation (every 5 min) and change the light color to red LED light when battery is low.

Internal Memory (PSRAM 4 MB): 18-24 hours before connecting to mobile app and sending data to Sense cloud once a day.

Connection: WIFI to SERVER, show Blue LED light when connecting to SERVER and transfer the data

Battery Charging: USB charging, show Green LED light when full charging. Charging time 2-3 Hrs

WEB App: Sync the real time clock with SERVER, paring the light sensor via WIFI, transferring the data and send to Sense cloud one a day

Sense Cloud: Storing all measuring data for 3 months at least, display their graph (dash board), and can export all data in CSV format.

VEML 6030 Light Sensor: 0 – 60,398 lux, Resolution 0.9216 lux, Gain 1/4, IT 50 ms or Gain 1/8, IT 25 ms

RESOLUTION AND MAXIMUM DETECTION RANGE									
	GAIN 2	GAIN 1	GAIN 1/4	GAIN 1/8		GAIN 2	GAIN 1	GAIN 1/4	GAIN 1/8
IT (ms)	TYPICAL RESOLUTION					MAXIMUM POSSIBLE ILLUMINATION			
800	0.0036	0.0072	0.0288	0.0576		236	472	1887	3775
400	0.0072	0.0144	0.0576	0.1152		472	944	3775	7550
200	0.0144	0.0288	0.1152	0.2304		944	1887	7550	15 099
100	0.0288	0.0576	0.2304	0.4608		1887	3775	15 099	30 199
50	0.0576	0.1152	0.4608	0.9216		3775	7550	30 199	60 398
25	0.1152	0.2304	0.9216	1.8432		7550	15 099	60 398	120 796

Note

- For illuminations > 1000 lx a correction formula needs to be applied. Please refer to the section "APPLICATION-DEPENDENT LUX CALCULATION" for further details on how this is done

VEML 6040 RGBW, Light and Color Sensor:

G Channel: 0 - 16,498 lux, Resolution 0.25168 lux, IT 40 ms

Show only R, G, and B

VEML 6075 UV-A & B Sensor:

MPU 6050 3-axis Accelerometer: x, y, z