## Descriptions

ECO is meant for reliable measurement of ambient conditions in the Office / Home / Utility and common area with great accuracy & continuously. ECO monitors the Humidity, Temperature, Light intensity and Human Occupancy within the room.

ECO uses Capacitive humidity sensor with a bandgap Temperature sensor with measurement capability of humidity range of 0 to 100 %RH, & temperature range of - 40 °C to 125 °C with a typical accuracy of ±2 %RH and ±0.2°C.

ECO is also inbuilt with 16 bit resolution High Accuracy Ambient Light Sensor with Low transmittance (dark) lens design. The Ambient light sensor can detect from 'No-light' up to 120k Lux with distinct resolution. ECO also detects no occupancy so that utilities can be switched off to save precious energy. This uses a pyroelectric infrared sensor that deliver high sensitivity and reliable detection of occupancy.

ECO can be used in Home Automation, Office Automation, Utilities, Engineering industries, Healthcare and Entertainment Sector and Commercial applications Engineering industries and commercial applications. The device is compatible to SCADA, Industry 4.0 standards and IoT Scenario.
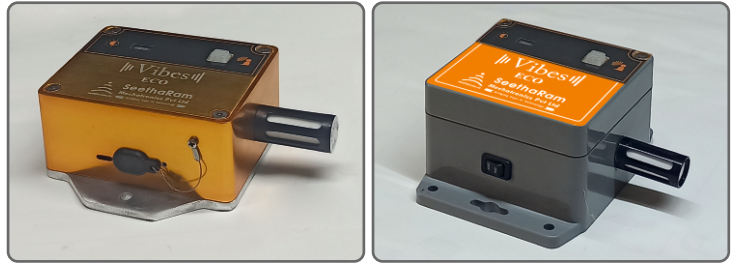
TECHNICAL SPECIFICATION

| Vibes Eco	
Power Supply	USB Powered (Type - C)
Processor	32-bit 144 MHZ ARM Cortex M4F processor
Connectivity	Wi-Fi - HTTP / MQTT / any other
Antenna	Internal antenna with 2.5 DBI max gain
Operating temperature	-40°C ~ +85°C
Ingress Protection	IP 54
Sensors Specification	
Humidity	0% ~ 100% Rh
Temperature	-40°C ~ 125°C
Accuracy	±2% Rh, ±0.2%°C
Response Time	τ63% 8 Sec
Ambient Light Range	0~120000 Lux
Ambient Light Resolution	0.0036 Lux
Motion Sensor detection range	3 Meter
Motion Sensor detection area	Horizontal - ±35°, Vertical - ±42°

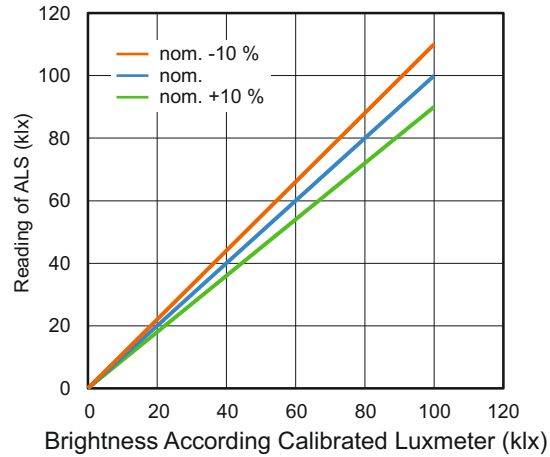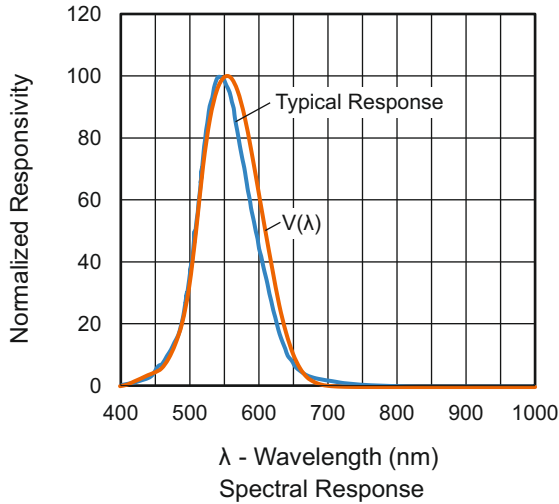## DIMENSION DETAILS
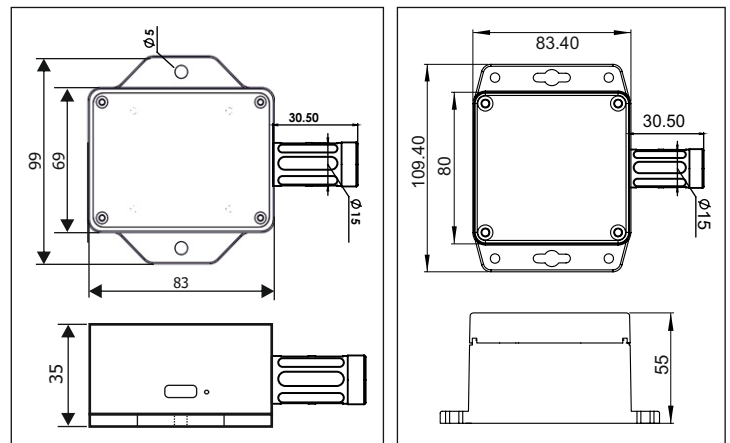
Housing	
Option1: High grade Aluminium 6xxx grade with Anodised color finish	
Option 2: ABS Plastics UL94-HB	

Humidity	Condition	Value	Unit
Accuracy tolerance	Typ.	±2.0	%RH
	Max.	Below Graph	%RH
Repeatability	-	0.1	%RH
Resolution	-	0.01	%RH
Hysteresis	-	±1	%RH
Specified range	extended	0 to 100	%RH
Response time	τ63%	8	S
Long-term drift	Typ.	<0.25	%RH/y

Temperature	Condition	Value	Unit
Accuracy tolerance	Typ.	±0.2	°C
	Max.	Below Graph	°C
Repeatability	-	0.1	°C
Resolution	-	0.01	°C
Specified range	-	−40 to +125	°C
Response time	τ63%	<5 to 30	s
Long-term drift	Typ.	<0.02	°C/y

Specifications are subject to change without Prior notice
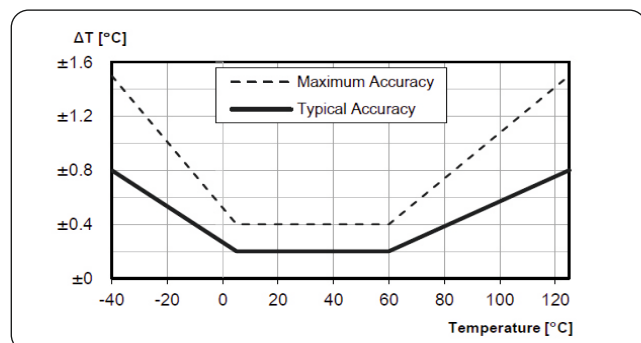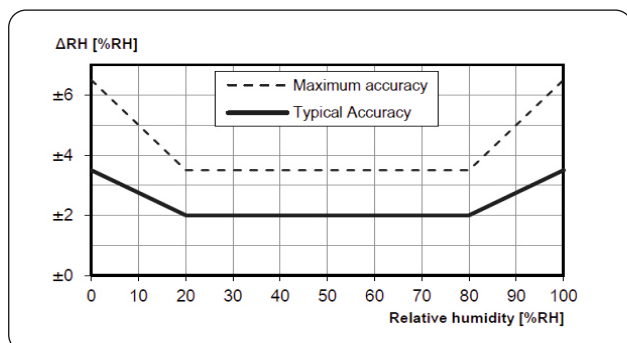
Lux Sensor Basic Characteristics

λ - Wavelength (nm)
Spectral Response

Brightness According Calibrated Luxmeter (klx)
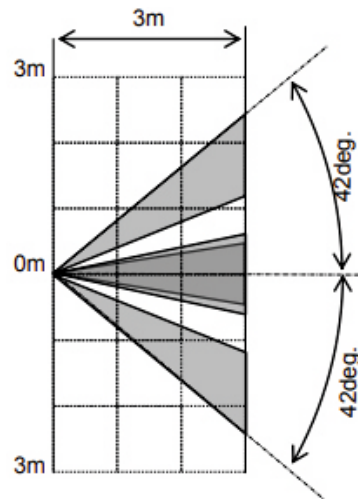
ALS measurement deviation between different light sources: ≤10 %

Motion Sensor Detection Area
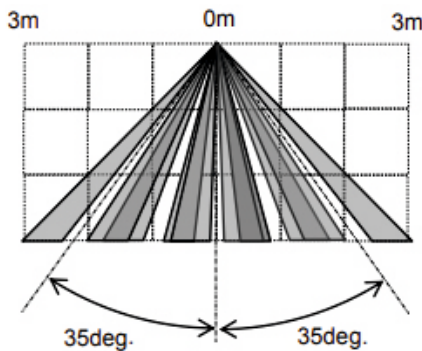
Horizontal detection area

Vertical detection area

Firmware & Wireless Communication Features:

- Transmit the value wirelessly to a HTTP endpoint. (http://)
- Firmware can be updated for HTTP/MQTT Endpoints on Azure /AWS or as required by OEM. aws ▲ Azure
- Firmware can be also modified remotely via FOTA. 📲
- Configurable through App to wireless network of your choice assigning network credentials requiring both username and password.
- Configure Endpoint Server Credentials through App
- Instantaneous values and Device performance can be monitored by App by force logging to the device.

Vibes Configurator App

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Bridging Gaps