

POAM Electronics produces versatile USB-based RF power sensors that operate as complete standalone power meters. They connect easily to PCs, Mobile Phone, instruments, or ATE systems, **no external meter required**.

Capable of measuring average and peak power, include automatic temperature compensation, our sensors are ideal for general RF testing, defence, and portable applications. With USB, LAN, and **mobile app support**, they offer flexible, modern connectivity for lab and field use.

APPLICATIONS:

- RF/Microwave & mmWave test
- Power monitoring in 5G & Satcom
- SSPA and antenna system testing
- Lab instrumentation & ATE systems
- satcom, radio and radar testing
- Signal level calibration
- Remote power monitoring



OVERVIEW:

POAM RMS Power Sensors are high-performance true RMS detectors designed for precise and stable power measurements across a wide frequency range. Available in three models, each tailored for specific application needs:

- **PE-8G-RMS-65-USB:** 10 MHz to 8 GHz with 65 dB dynamic range
- **PE-40G-RMS-35-USB:** 100 MHz to 40 GHz with 35 dB dynamic range
- **PE-67G-RMS-35-USB:** 100 MHz to 67 GHz with 35 dB dynamic range

These sensors deliver exceptional linearity and accuracy, supported by built-in **automatic temperature compensation** for consistent performance in varying environmental conditions.

Engineered for **laboratory, industrial, and field use**, the sensors feature versatile connectivity options:

- **USB-C** for direct connection to PCs or laptops
- **LAN (RJ-45)** for remote access and integration into networked systems
- **Mobile device support** via USB-C, enabling direct monitoring on smartphones or tablets without a PC

With an ultra-compact form factor of **63 × 58 × 36 mm** (2.48 × 2.28 × 1.42 inches), POAM RMS Power Sensors are among the smallest in the world to offer both USB and LAN interfaces, making them ideal for portable and embedded applications.

Whether in RF, microwave, or millimetre-wave systems, these sensors provide reliable wideband scalar power measurements for advanced test setups and automated environments.

RF Power Sensors Specification:

(For 8, 40 and 67 GHz models)

Model No.	PE-08G-RMS-65-USB (10 MHz – 8 GHz)	PE-40G-RMS-35-USB (100 MHz – 40 GHz)	PE-67G-RMS-35-USB (100 MHz – 67 GHz)
Specification			
Frequency Range	10 MHz to 8 GHz	100 MHz to 40 GHz	100 MHz to 67 GHz
Input Power Range	-60 dBm to +5 dBm	-35 dBm to 0 dBm	-35 dBm to 0 dBm
Connector	SMA Male	2.92 mm Male	1.85 mm Male
Max CW input	+15 dBm	+12 dBm	+12 dBm
Linearity Error	±1 dB typical	±0.5 dB typical	±0.5 dB typical
Return Loss		>10 dB typical	
Interfaces		USB-C, LAN (RJ-45)	
Impedance		50 Ω	
Voltage		5 VDC (USB-C powered)	
Current		100 mA	
Temperature Compensation		Automatic	
Enclosure		Aluminum 6082-T6	
Weight		120g	
Operating Temperature		-40 °C to +85 °C	
Storage Temperature		-55 °C to +90 °C	
Dimensions		63 × 58 × 36 mm (2.48 × 2.28 × 1.42 in)	

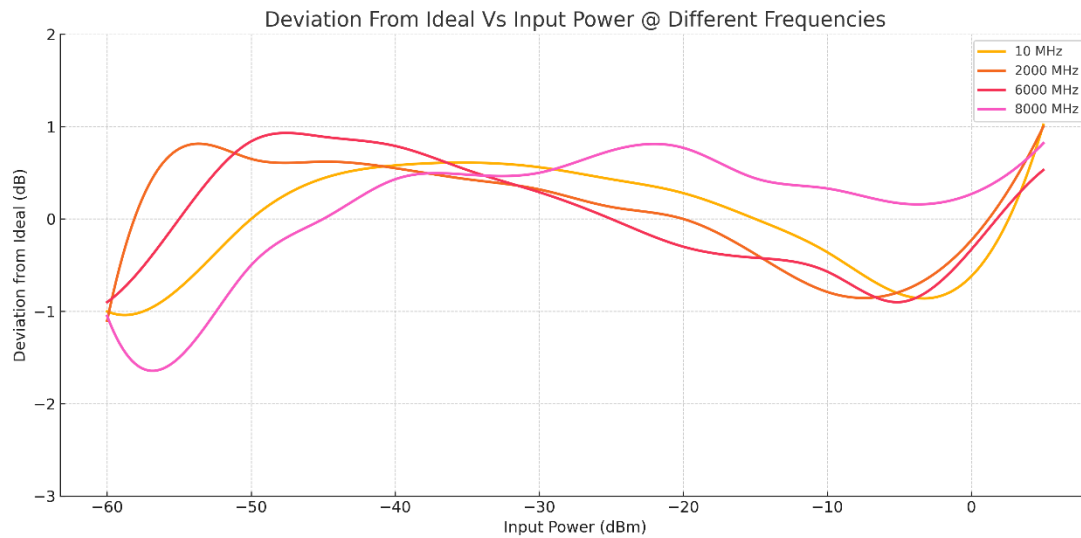


With an ultra-compact size, POAM RMS Power Sensors are among the smallest in the world with both **USB and LAN** connectivity at the same time, ideal for portable and embedded use.

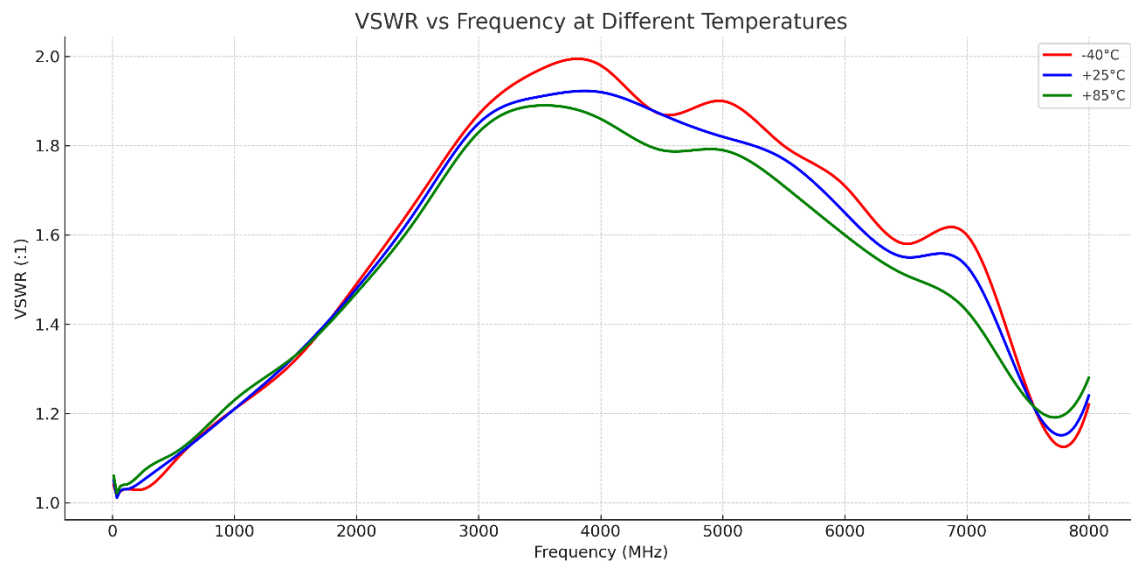
With **mobile app support**, they are also the **first professional sensors globally** to offer **direct power readings on a mobile device without a PC**, enabling truly modern connectivity for both lab and field environments.

PERFORMANCE GRAPHS (8GHz model)

1) Deviation from Ideal @ different frequencies:

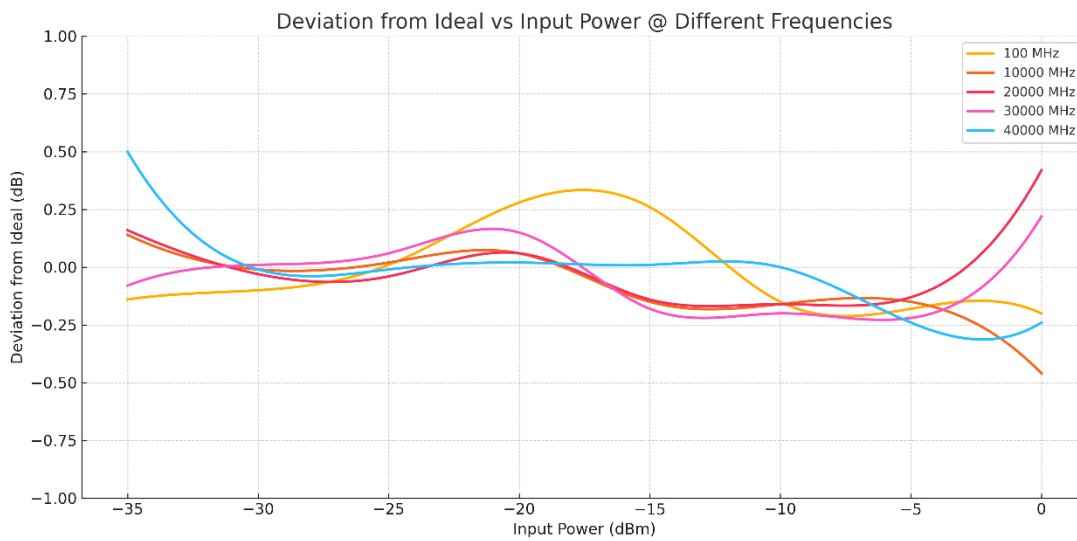


2) VSWR vs frequency @ different temperatures:

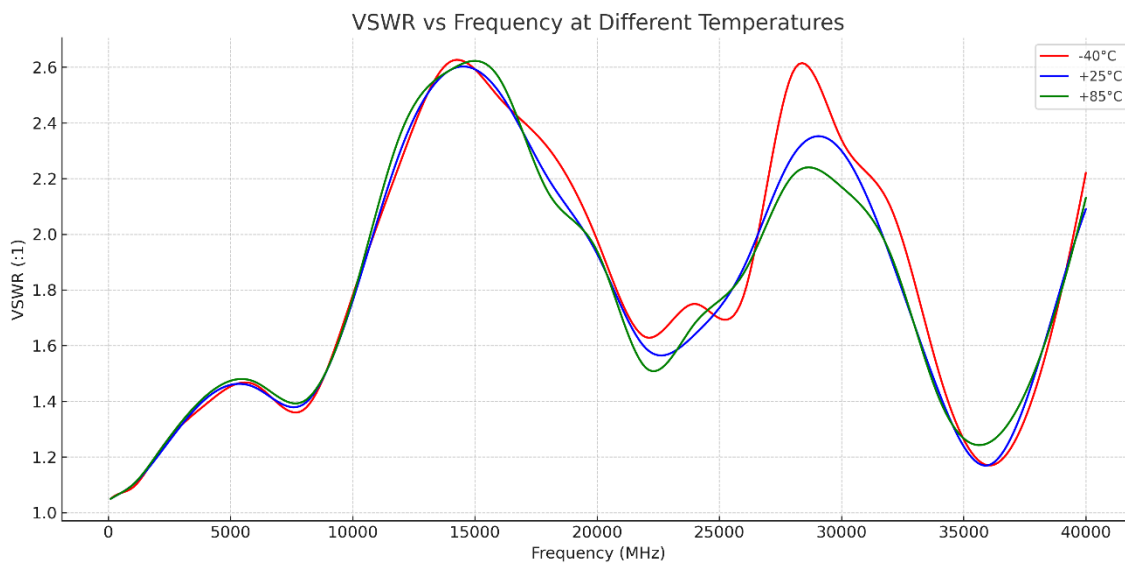


PERFORMANCE GRAPHS (40 GHz model)

1) Deviation from Ideal @ different frequencies:

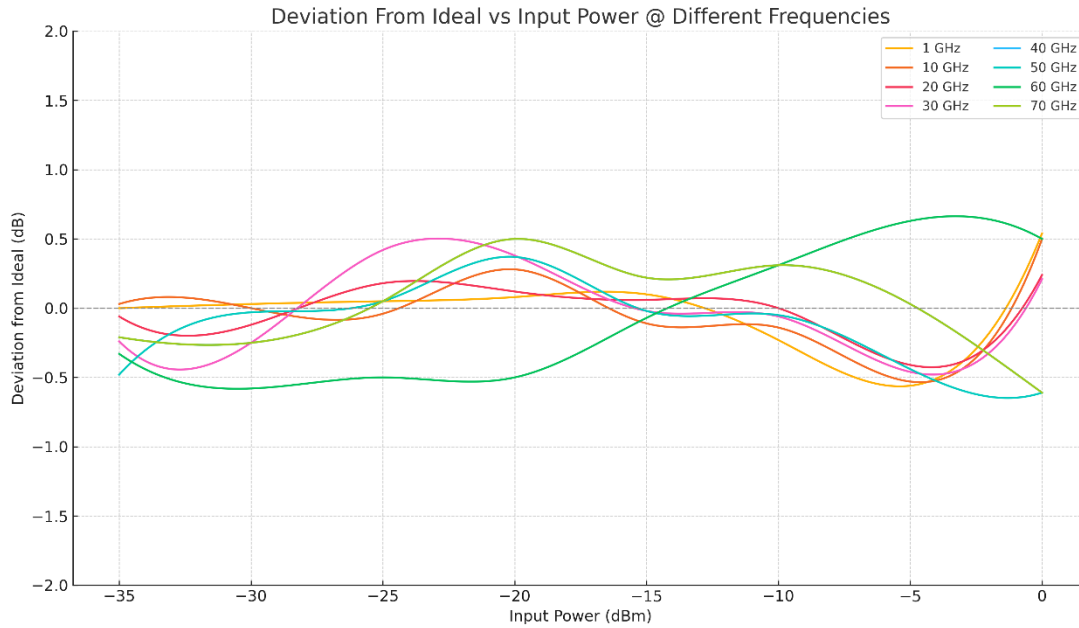


2) VSWR vs frequency @ different temperatures:

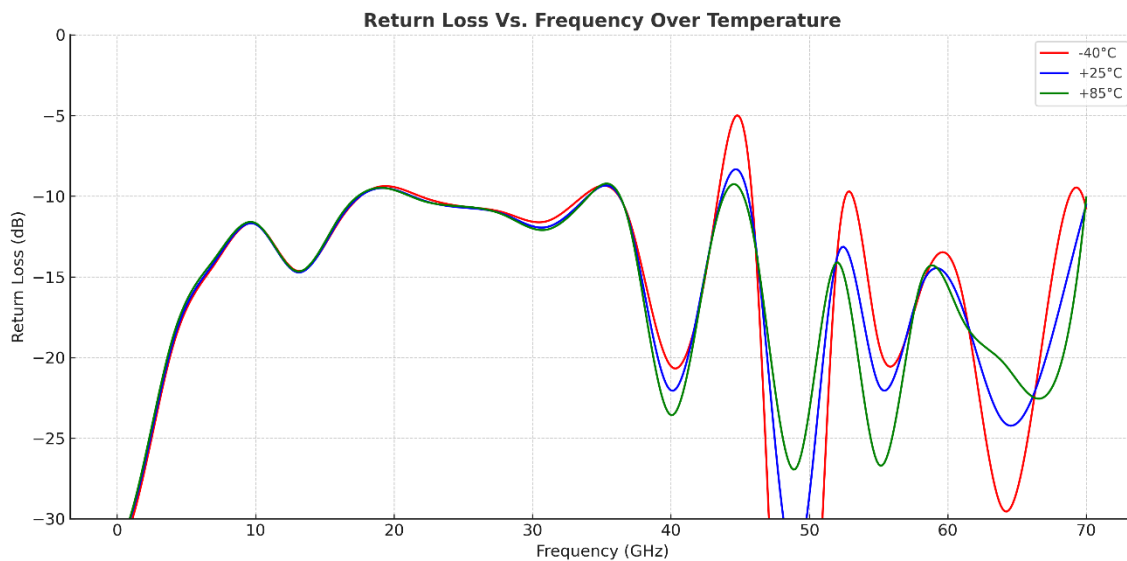


PERFORMANCE GRAPHS (67 GHz model)

1) Deviation from Ideal @ different frequencies:

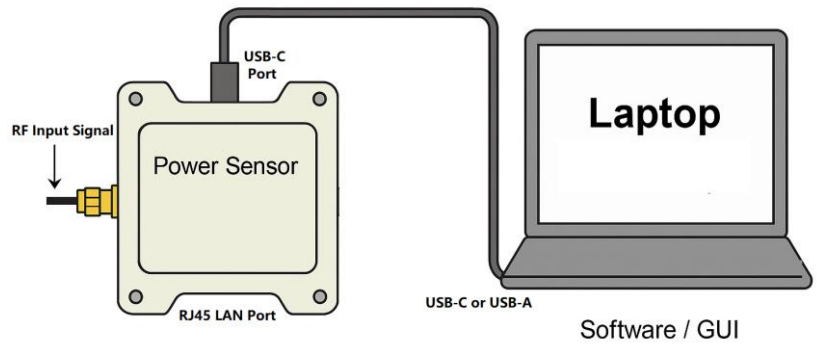


2) VSWR vs frequency @ different temperatures:

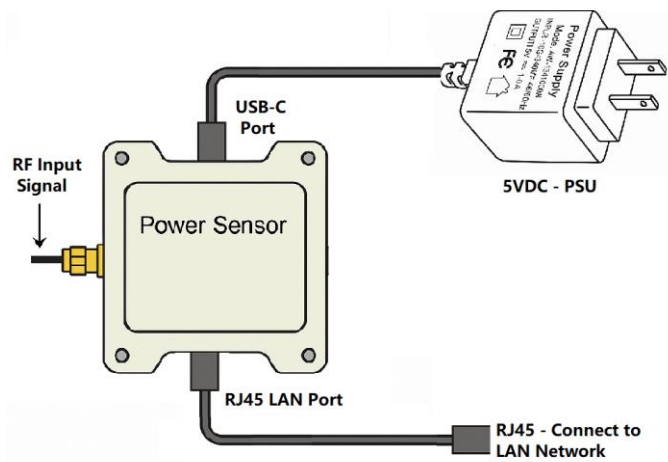


CONNECTION DIAGRAMS:

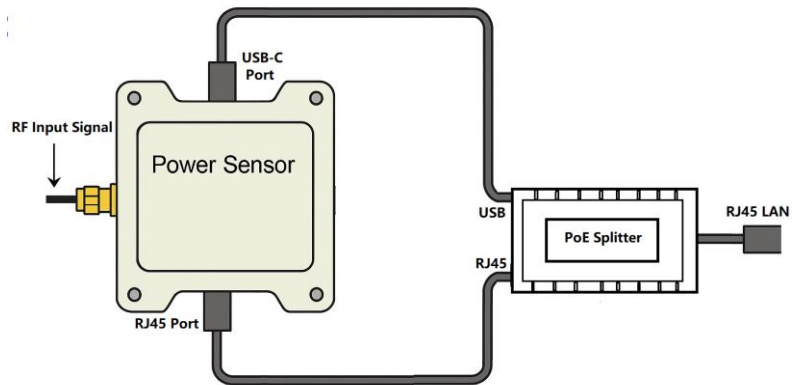
1) USB



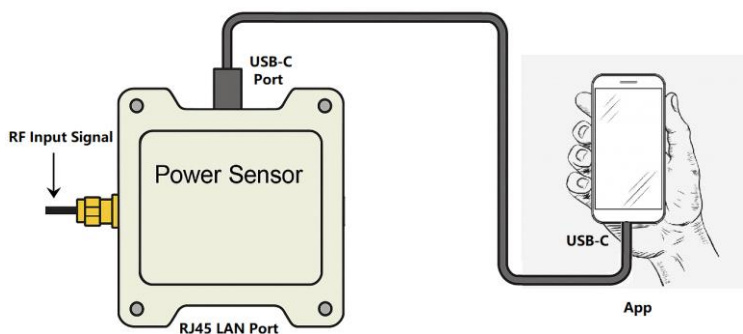
2) ETHERNET USING EXTERNAL PSU



3) ETHERNET USING POE SPLITTER



4) MOBILE DEVICE

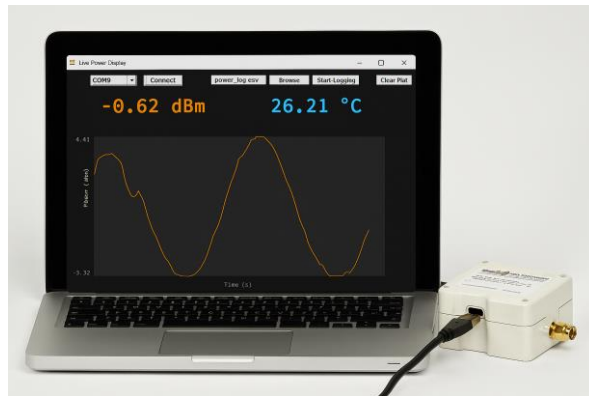


GRAPHICAL USER INTERFACE (GUI) FOR WINDOWS:

KEY FEATURES:

- Connect via USB-A, USB-C or RJ45 (Ethernet) to control the module.
- Control multiple power sensors
- Plot of Power vs Time
- Data recording on file
- Temperature Monitoring

GUI - SCREEN:



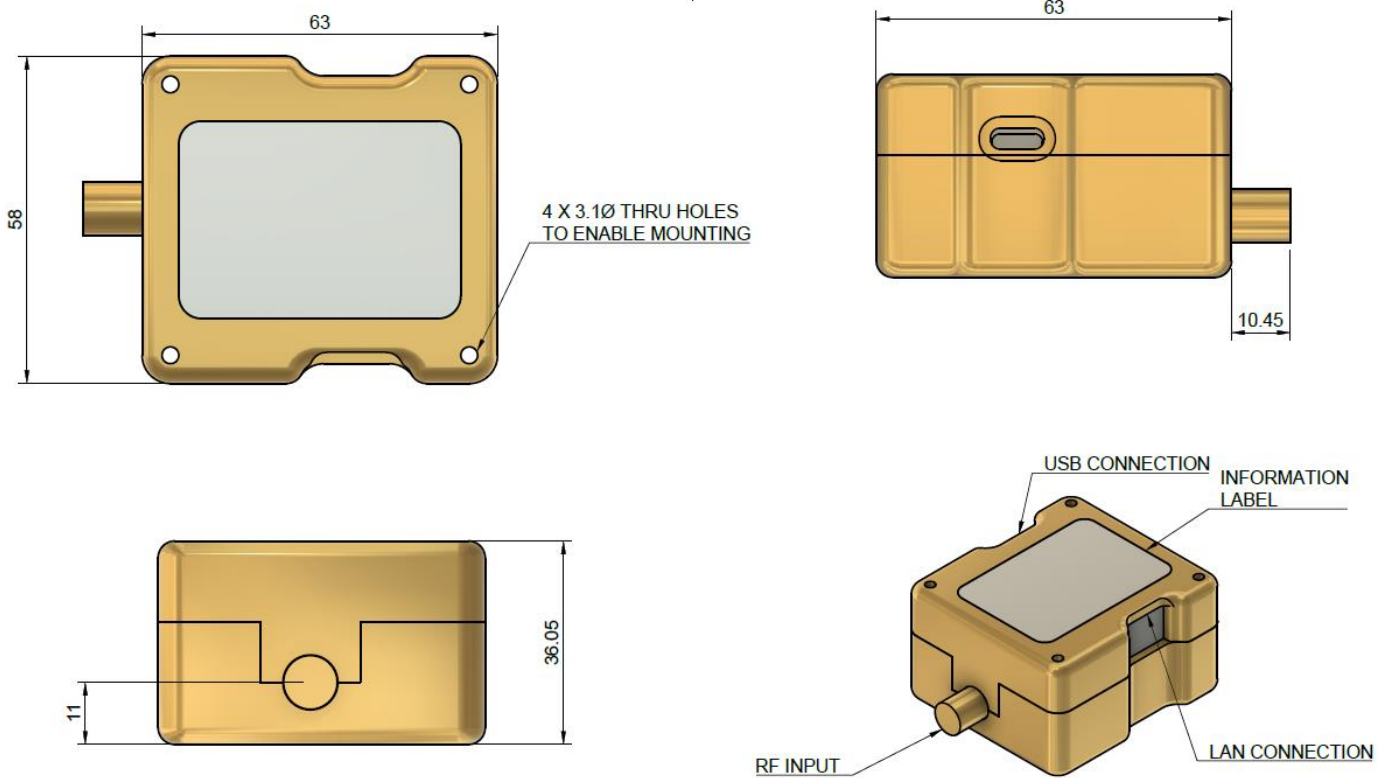
APP FOR ANDROID MOBILE:

- Download the latest version of the **POAM Sensor App** from our website.
- Connect the sensor to your Android device using the included USB-C to USB-C cable.
- When prompted with “**Allow this device?**”, tap **OK** to proceed.
- **Note:** *Currently, only Android devices with a USB-C port are supported. An iPhone-compatible version of the app will be released soon.*

APP - SCREEN:



CASE DRAWING:



Note:

- 1) All dimensions are in millimetre (mm)
- 2) Material: Aluminium 6082-T6
- 3) Weight: Around 120g



Handling Precautions

⚠ Caution: ESD-Sensitive Device!

This device is sensitive to **Electrostatic Discharge (ESD)**, which can cause permanent damage to internal components. ESD can occur when static electricity built up on your body or tools discharges into the device. To prevent this:

- **Always use proper ESD protection**, such as grounded wrist straps, anti-static mats, and conductive gloves when handling the device.
- **Work in an ESD-safe environment**, especially when unpacking, assembling, or testing the product.
- **Avoid touching exposed pins, leads, or circuitry** unless properly grounded.
- **Store the device in anti-static packaging** (e.g., ESD bags or foam) when not in use.

Failure to observe these precautions may lead to device malfunction or complete failure.

Each Device is shipped in a hard and well-protected carry case.



Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

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