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Irfora PV28-AW

Irfora PV28-AW Smart WiFi Mini CO2 Detector User Manual

Model: PV28-AW

1. Product Overview

The Irfora PV28-AW is a portable 3-in-1 indoor air quality monitor designed to detect carbon dioxide (CO2) concentration, temperature, and humidity. This compact device features a clear LED screen display and smart functionalities like automatic brightness adjustment and distance sensing wake-up.

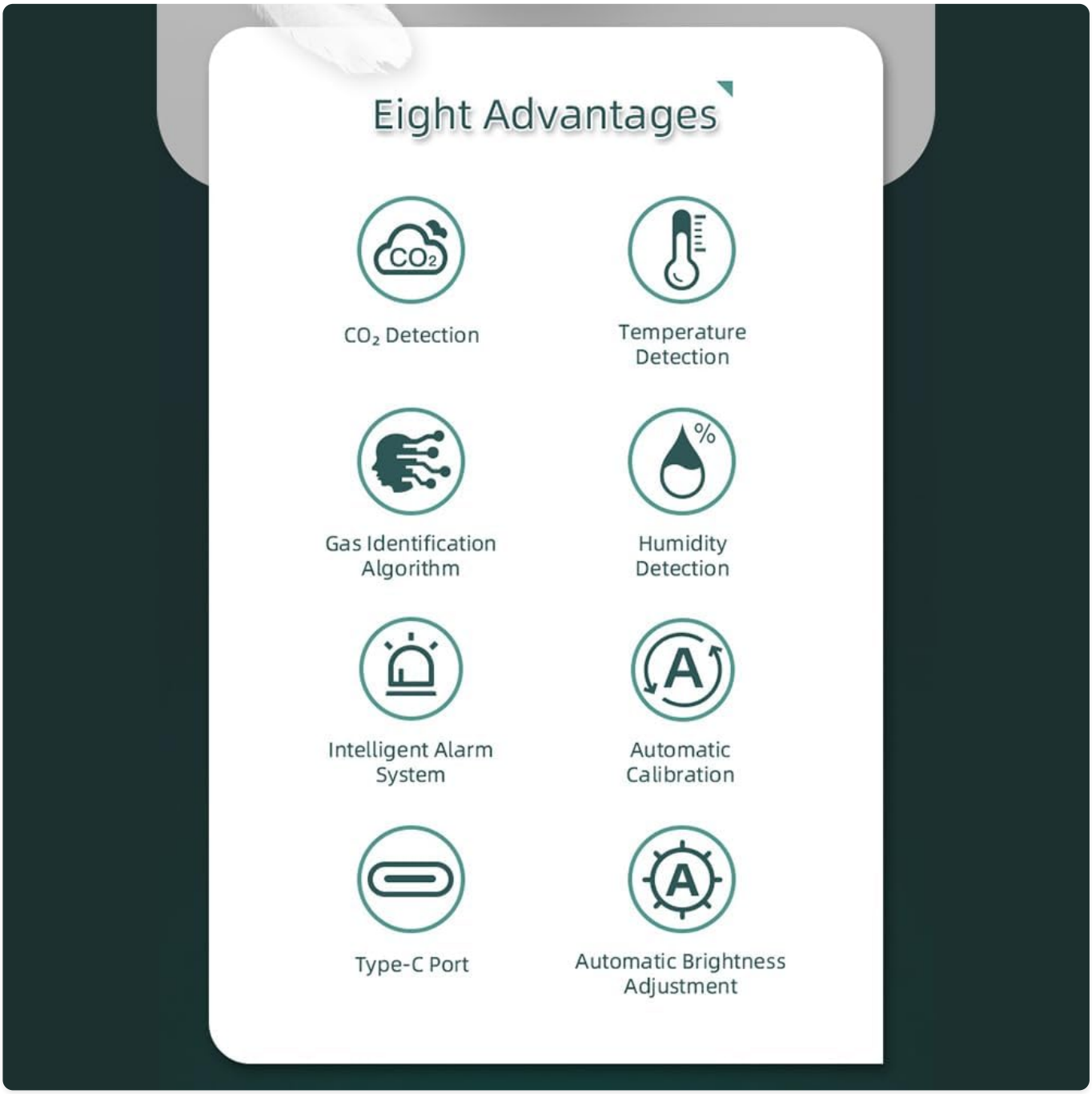


Image: The Irfora PV28-AW monitor displaying CO2, temperature, and humidity, highlighting key features such as automatic brightness adjustment, automatic calibration, WiFi connections, and wake-up by proximity sensor.

Key Features:

- **3-in-1 Detection:** Monitors CO2 concentration (400-5000 PPM), temperature (0-50°C), and humidity (0-99% RH).
- **LED Screen Display:** Full-color digital display for clear readings of CO2, temperature, and humidity.
- **CO2 Concentration Stages & Alarm:** Visual and audible alerts for different CO2 levels (Good, Moderate, Poor, Unhealthy, Very Unhealthy). An alarm sounds when CO2 exceeds 1500 PPM.
- **Automatic Brightness Adjustment:** Screen brightness adjusts automatically based on ambient light.
- **Distance Sensing Wake-up:** The screen can be woken up by approaching the device, with an option to disable this feature via the app.
- **Self-developed NDIR Sensor:** Utilizes a Non-Dispersive Infrared sensor for high precision and strong anti-interference.
- **Type-C Charging:** Convenient USB Type-C port for power.

2. Getting Started

2.1 Package Contents

Please ensure all items are present in the package:

- 1 x Irfora PV28-AW Air Quality Monitor
- 1 x USB Type-C Charging Cable
- 1 x User Manual (English)

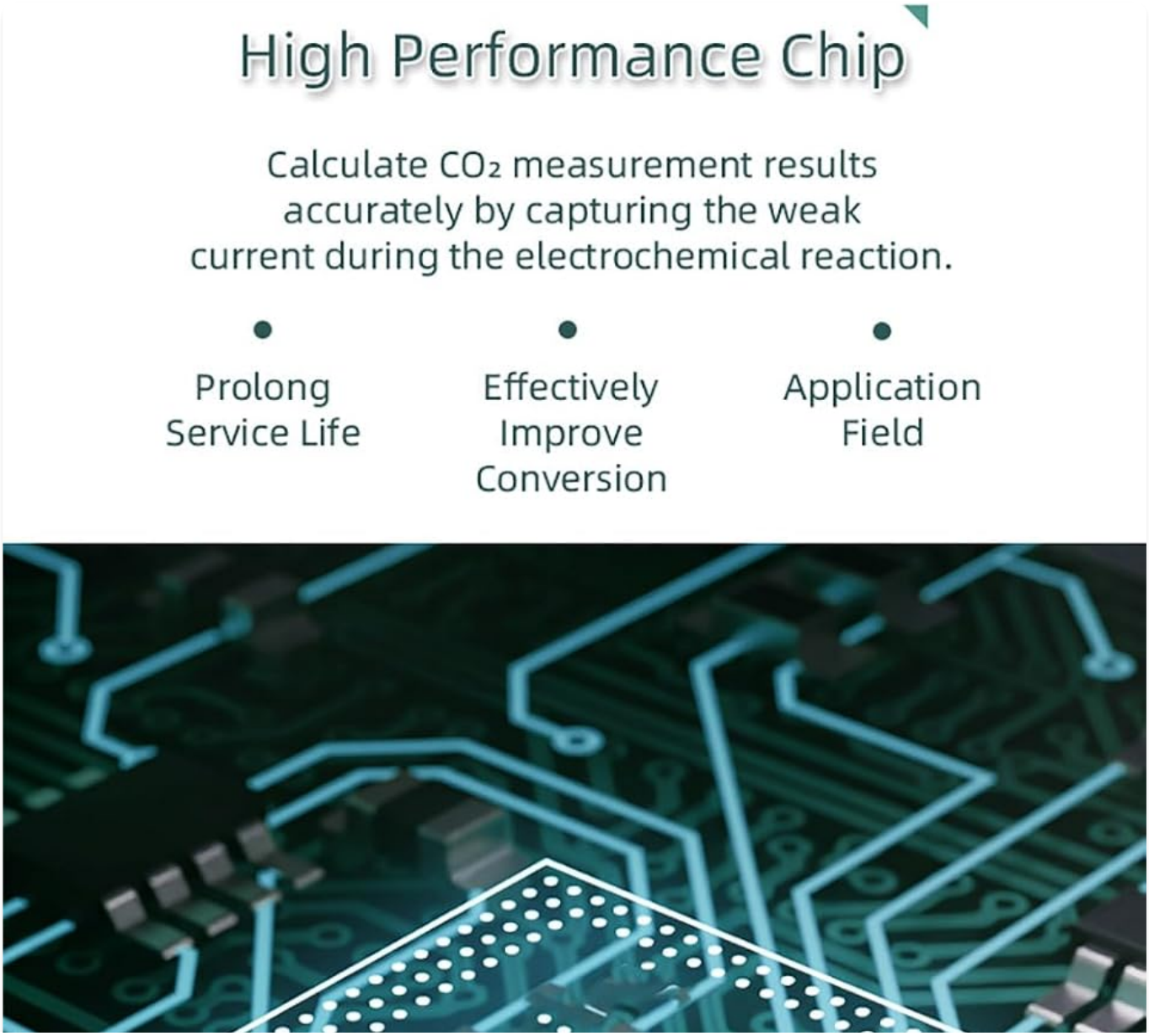
2.2 Charging the Device

Before first use, fully charge the device. Connect the provided USB Type-C charging cable to the Type-C port on the device and the other end to a 5V=2A USB power adapter (not included).

- The battery indicator on the display will show charging status.
- A full charge typically takes approximately 2-3 hours.

2.3 Powering On/Off

To power on the device, press and hold the multi-function button located on the back of the unit until the screen illuminates. To power off, press and hold the same button until the screen turns off.



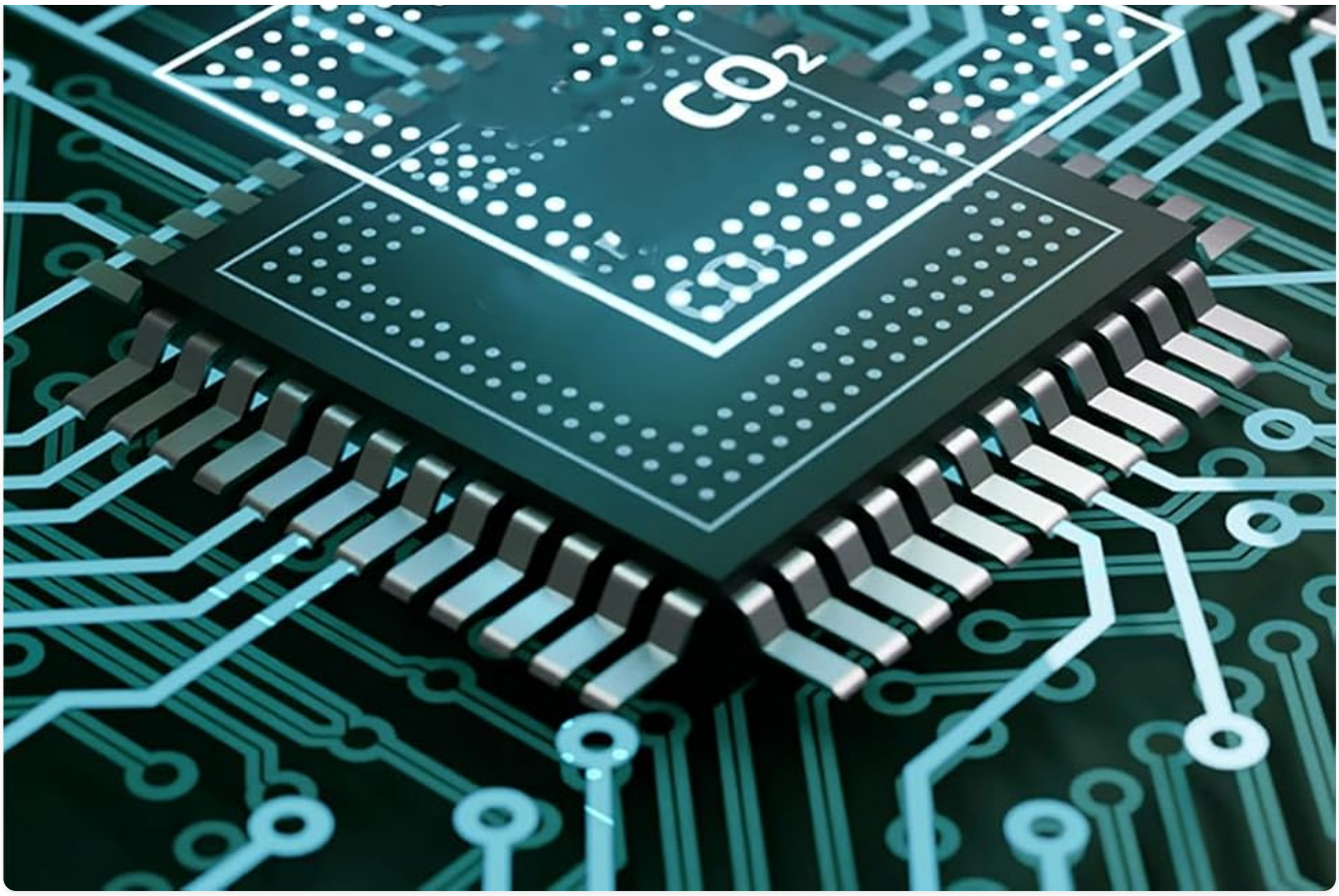


Image: Rear view of the Irfora PV28-AW monitor, indicating the multi-function button, temperature and humidity sensors, and the Type-C charging port, along with product dimensions.

2.4 WiFi Connection (Optional)

The device supports WiFi connectivity for remote monitoring and app control. Refer to the dedicated mobile application instructions for detailed steps on connecting your device to your home WiFi network and pairing it with the app.

- Download the companion app from your device's app store.
- Follow the in-app instructions to add and configure your PV28-AW detector.
- Through the app, you can view real-time values and manage settings, including the distance sensing wake-up function.

3. Operation

3.1 Understanding the Display

The LED screen displays the current CO2 concentration, temperature, and humidity. The CO2 reading is shown in Parts Per Million (PPM).



Image: A detailed view of the Irfora PV28-AW's digital display, showing the CO2 concentration in PPM, current temperature in Celsius/Fahrenheit, and relative humidity percentage.

3.2 CO2 Concentration Stages and Alarm

The device indicates CO2 levels through color changes on the display and an audible alarm for high concentrations. The stages are as follows:

- **Good:** 400-799 ppm
- **Moderate:** 800-1199 ppm
- **Poor:** 1200-1599 ppm
- **Unhealthy:** 1600-1999 ppm
- **Very Unhealthy:** 2000-5000 ppm

When the CO2 concentration reaches or exceeds 1500 PPM, the product will sound an alarm to alert you to potentially unhealthy air quality.

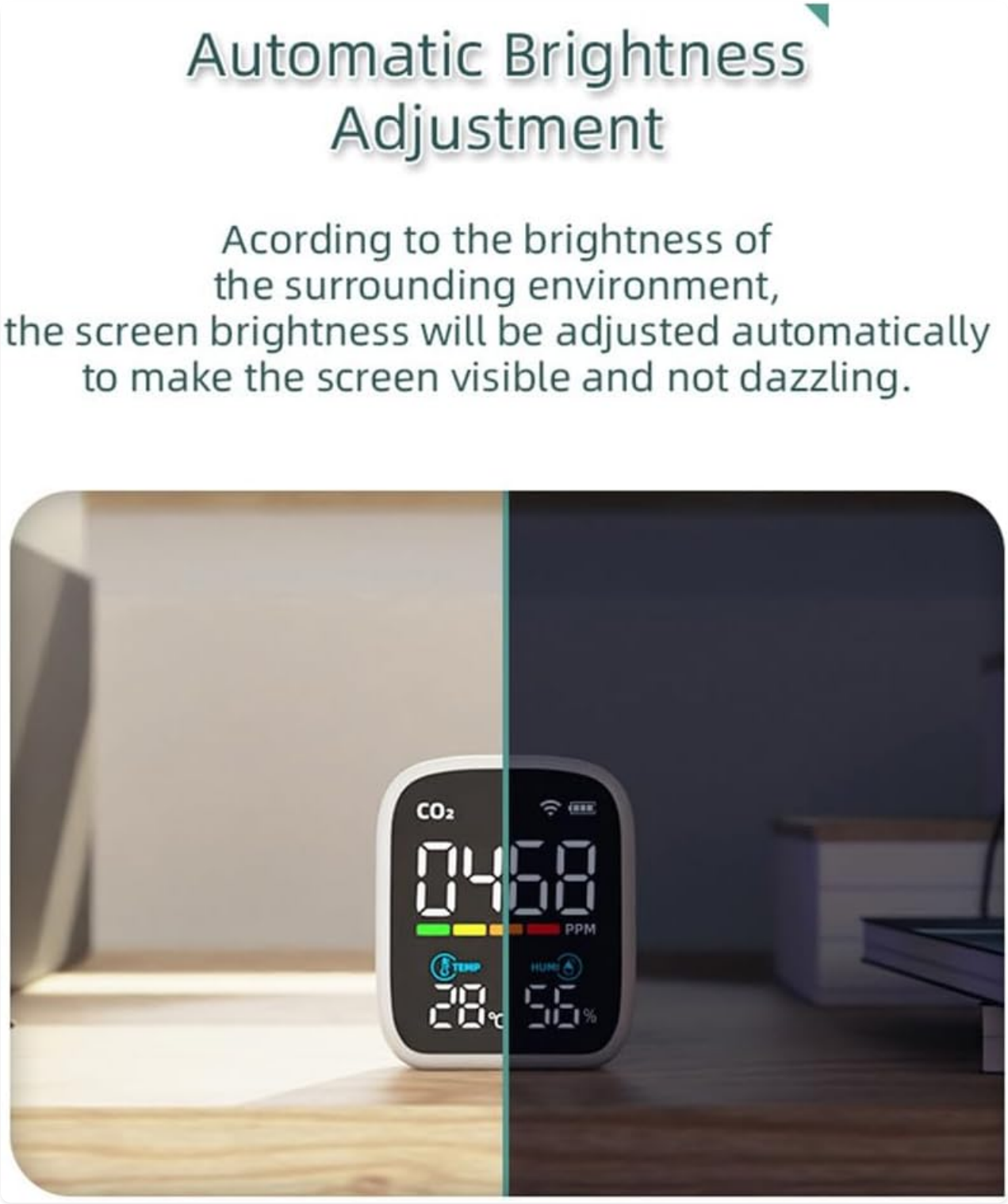


Image: Visual representation of how the display changes color to indicate different CO2 concentration levels, from Good (green) to Very Unhealthy (red), with corresponding PPM ranges.

3.3 Automatic Brightness Adjustment

The device is equipped with a light sensor that automatically adjusts the screen brightness based on the surrounding environment. This feature ensures the display is always visible without being overly bright or dim, enhancing readability and user comfort.

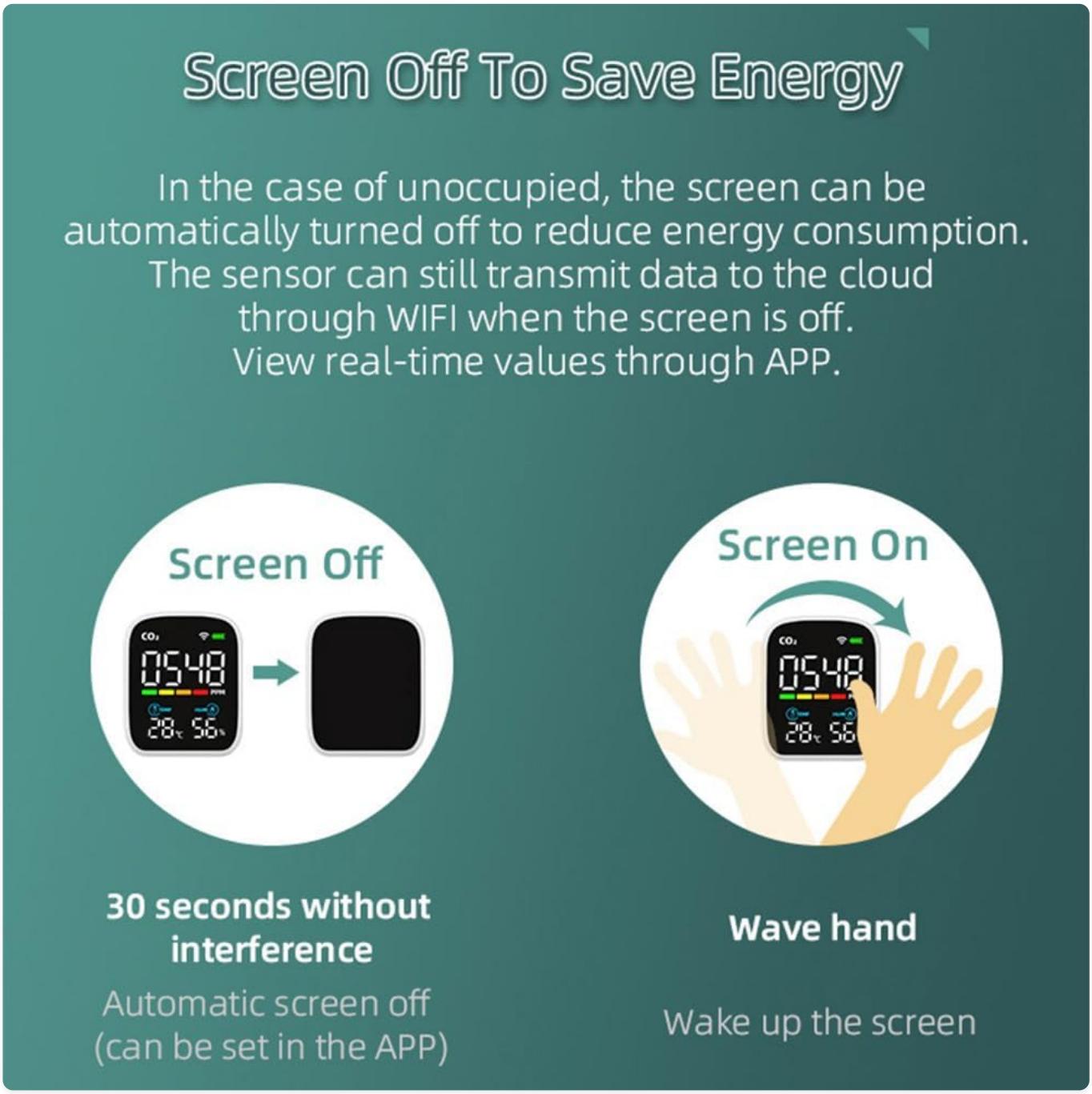


Image: A split image showing the device's screen brightness adapting to different ambient light conditions, demonstrating the automatic brightness adjustment feature.

3.4 Distance Sensing Wake-up / Screen Off to Save Energy

To conserve battery, the screen can automatically turn off after 30 seconds of inactivity (no sensing). The device features a distance sensor that allows you to wake up the screen by approaching or waving your hand in front of it. This function can be enabled or disabled via the companion mobile application.

Even when the screen is off, the sensor continues to transmit data to the cloud via WiFi, allowing you to view real-time values through the app.



Image: An illustration depicting the device's energy-saving feature where the screen turns off after 30 seconds of no interference, and how to wake it up by waving a hand.

4. Maintenance

4.1 Cleaning

To maintain the accuracy and longevity of your device, follow these cleaning guidelines:

- Wipe the exterior of the device with a soft, dry, or slightly damp cloth.
- Do not use abrasive cleaners, solvents, or strong chemicals, as these may damage the device's surface or internal components.
- Ensure no liquid enters the ventilation openings or charging port.

4.2 Calibration

The Irfora PV28-AW features automatic calibration for its NDIR CO2 sensor, ensuring consistent accuracy over time. Manual calibration is generally not required under normal operating conditions. If you suspect a significant discrepancy

in readings, refer to the mobile application for any available calibration options or contact customer support.



Image: An illustration highlighting the self-developed NDIR sensor used in the device, emphasizing its higher precision and stronger anti-interference compared to semiconductor sensors, with specified sensitivity and accuracy.

5. Troubleshooting

Problem	Possible Cause	Solution
Device does not turn on.	Low battery or no charge.	Connect the device to a power source using the Type-C cable and allow it to charge for at least 30 minutes before attempting to power on again.
Inaccurate CO2/Temperature/Humidity readings.	Sensor obstruction or environmental factors.	Ensure the sensor vents on the back of the device are not blocked. Avoid placing the device near heat sources, direct sunlight, or in areas with extreme drafts. Allow the device to stabilize in its environment for 10-15 minutes.
WiFi connection issues.	Incorrect WiFi password, out of range, or network interference.	Ensure the device is within range of your WiFi router. Double-check the WiFi password entered in the app. Restart your router and the device, then attempt to reconnect. Ensure your WiFi network is 2.4GHz, as 5GHz networks may not be supported.
Screen does not wake up with hand gesture.	Distance sensing feature disabled or sensor obstruction.	Check the mobile application to ensure the distance sensing wake-up function is enabled. Ensure there is no obstruction in front of the sensor.
Alarm sounds frequently.	High CO2 concentration detected.	Increase ventilation in the area by opening windows or doors. Move the device to an area with better air circulation.

6. Specifications

Parameter	Value
Sensors	Infrared CO2 sensor, Optical sensor
Detection Technology	Infrared Detection Technology (NDIR)
Applicable Temperature	0 ~ 50℃
CO2 Detection Range	400 ~ 5000 ppm
CO2 Detection Accuracy	±(50 + 5% * reading) PPM
Temperature Detection Range	0 ~ 50℃
Temperature Detection Accuracy	±1℃
Humidity Detection Range	0 ~ 99% RH
Humidity Detection Accuracy	±5% RH

Parameter	Value
Battery	Built-in 1200mAh lithium battery
Power Specification	USB Type-C 5V = 2A
Material	ABS
Item Size	70 * 84 * 35 mm / 2.75 * 3.31 * 1.38 inch
Item Weight	98g / 3.45oz

7. Warranty and Support

This Irfora product is covered by a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your purchase or visit the official Irfora website.

For technical support, troubleshooting assistance, or any inquiries regarding your PV28-AW Smart WiFi Mini CO2 Detector, please contact Irfora customer service through the contact information provided on their official website or through your retailer.

Please have your model number (PV28-AW) and purchase details ready when contacting support.

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