AC Infinity AC-COS3

AC Infinity CO2 + Light Sensor User Manual

Model: AC-COS3

1. INTRODUCTION

The AC Infinity CO2 + Light Sensor (Model AC-COS3) is designed to monitor carbon dioxide (CO_2) levels and light intensity within controlled environments. This sensor integrates exclusively with AC Infinity AI+ Controllers to provide precise data for automated environmental management, optimizing conditions for plant growth through adaptive programming.

Image: The AC Infinity CO2 + Light Sensor, a compact black device with a cable connection.

2. SAFETY INFORMATION

- Ensure the sensor is installed in a dry environment, away from direct water exposure or high humidity, to prevent damage.
- Do not attempt to open or modify the sensor. This may void the warranty and cause malfunction.
- Keep the sensor away from extreme temperatures or direct heat sources.
- Use only with compatible AC Infinity AI+ Controllers as specified.
- Handle the sensor and its cable with care to avoid physical damage.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- AC Infinity CO2 + Light Sensor (Model AC-COS3)
- Integrated UIS Cord (12 feet / 144 inches)

1.41" (3.6 cm)

AC INFINITY

2.83"
(7.2 cm)

**UIS Cord
Length:
12'
(144")**

0.55" (1.4 cm)
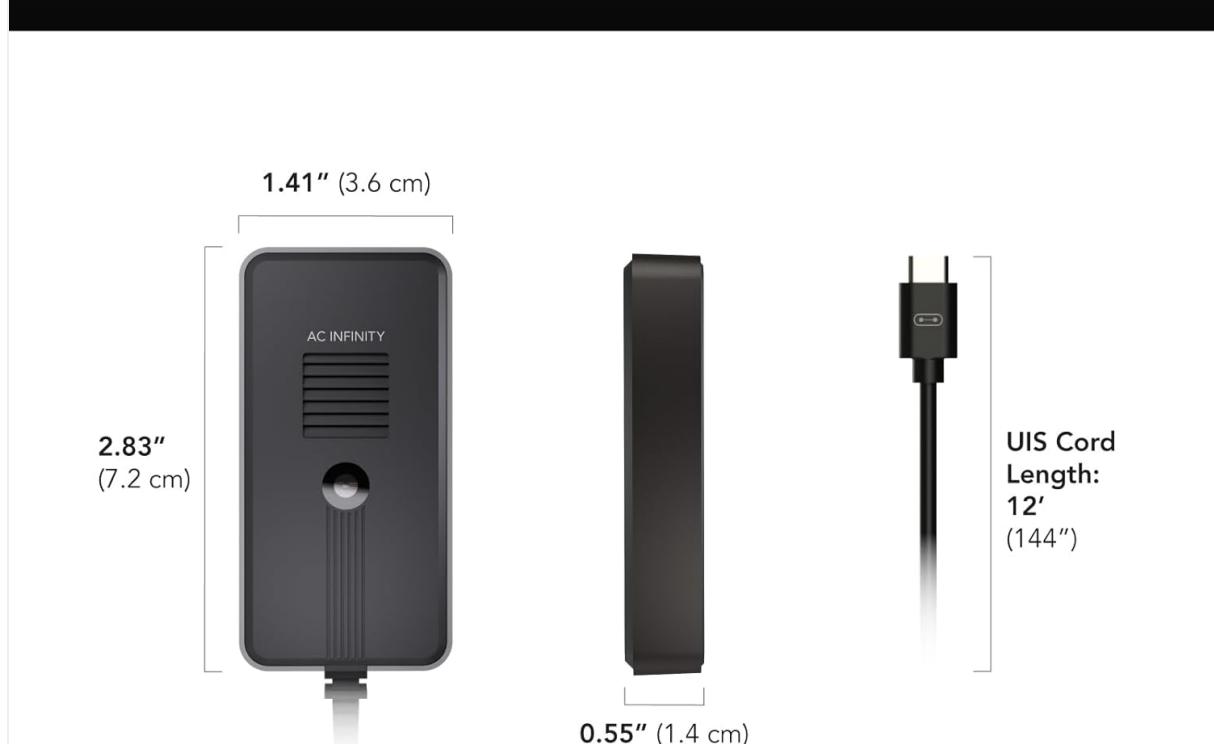
Image: Diagram showing the dimensions of the AC Infinity CO2 + Light Sensor and its integrated 12-foot UIS cord.

4. SETUP

4.1. Compatibility

The AC-COS3 sensor is designed to work exclusively with AC Infinity AI+ Controllers. It is not compatible with older AC Infinity controller models.

4.2. Physical Installation

Mount the sensor in a central location within your grow space, ensuring it is not obstructed by plants or equipment that could interfere with CO2 or light detection. Avoid placing it directly in the path of air currents from fans or CO2 dispersal systems, which could lead to inaccurate readings. The sensor can be mounted on a wall or other flat surface using appropriate fasteners (not included).

Image: The AC Infinity CO2 + Light Sensor mounted vertically on a wall, demonstrating a typical installation scenario.

4.3. Connection

Connect the integrated UIS cord from the AC-COS3 sensor to an available UIS port on your AC Infinity AI+ Controller. Ensure the connection is secure. The controller will automatically detect the sensor upon connection.

5. OPERATING INSTRUCTIONS

5.1. Initial Pairing and App Integration

Once connected to your AI+ Controller, the sensor will begin transmitting data. For advanced control and monitoring, pair your AI+ Controller with the AC Infinity Wi-Fi enabled app. The app provides real-time data, historical tracking, and access to advanced programming features for the CO_2 and light sensor.

PRECISE MEASUREMENT

Designed exclusively for Controller AI+, this sensor detects precise CO_2 levels that can be tracked using the app via WiFi.

Image: The CO2 + Light Sensor displayed alongside an AC Infinity AI+ Controller and a smartphone showing the AC Infinity app interface, illustrating the integrated system.

5.2. CO2 Monitoring and Control

The sensor precisely detects CO2 levels. Through the AI+ Controller and app, you can set target CO2 levels. The system will then dynamically activate connected CO2 dispersal equipment (e.g., CO2 generators or tanks connected via UIS plugs) to maintain desired concentrations. This programming also optimizes Fresh Air Exchange (FAE) by coordinating fan operation based on CO2 levels.

LIGHT-POWERED

Fully automated light cycles optimized to benefit the photosynthesis process through CO_2 dispersal.

Image: A close-up view of the AC Infinity CO2 + Light Sensor, highlighting its central light sensor component, which glows blue.

5.3. Light Cycle Management

The integrated light sensor allows the AI+ Controller to detect ambient light conditions. This enables automated light cycles, ensuring CO2 dispersal and fan operations are synchronized with the plant's day and night phases for optimal photosynthesis.

5.4. Advanced Programming Features

Utilize the AC Infinity app to access advanced programming options:

- **Day & Night Scheduling:** Configure distinct CO2 and fan settings for light and dark periods.
- **Precision Cycling:** Implement specific on/off cycles for CO2 dispersal and fan activity.
- **Environmental Data Tracking:** Monitor and log historical CO2 and light data for analysis and optimization.
- **Minimum Intake Speed:** Set minimum fan speeds to maintain air circulation while optimizing CO2 levels.

INTELLIGENT ECOSYSTEM

Custom CO_2 and fan programming dynamically alternate to activate in response to carbon dioxide levels optimizing FAE (fresh air exchange).

Image: An illustration of the AC Infinity CO2 + Light Sensor integrated within a complete grow tent setup, demonstrating its role in an intelligent environmental control ecosystem.

6. MAINTENANCE

- **Cleaning:** Periodically wipe the sensor's exterior with a soft, dry cloth to remove dust or debris. Do not use harsh chemicals or abrasive materials.
- **Sensor Vents:** Ensure the CO2 sensor vents are clear of obstructions to allow for accurate air sampling.
- **Cable Inspection:** Regularly check the UIS cable for any signs of wear or damage.

7. TROUBLESHOOTING

Issue	Possible Cause	Solution
Sensor not detected by controller.	Loose connection, incompatible controller, faulty sensor/port.	Ensure UIS cable is fully inserted. Verify controller is an AI+ model. Try a different UIS port. Contact support if issue persists.

| Issue	Possible Cause	Solution
Inaccurate CO2 readings.	Sensor obstructed, placed near CO2 source/vent, dirty vents.	Relocate sensor to a central, unobstructed area. Clean sensor vents. Allow time for sensor to stabilize.
Light sensor not responding.	Sensor obstructed, direct light not reaching sensor.	Ensure the light sensor component is exposed to ambient light. Check for physical obstructions.
App connectivity issues.	Wi-Fi interference, controller not connected to Wi-Fi, app error.	Verify your AI+ Controller is connected to Wi-Fi. Restart the AC Infinity app. Check your network connection.

8. SPECIFICATIONS
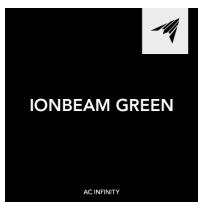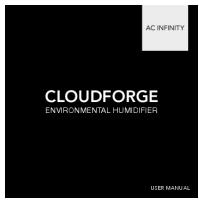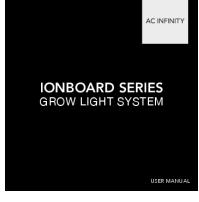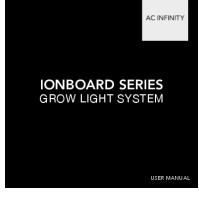
Feature	Detail
Model Number	AC-COS3
Detection	CO2 + Light
Compatibility	Controller AI+
Connector	Male UIS
Power Consumption	50mW
CO2 Accuracy	50 ppm
Light Accuracy	1.2 lx
UIS Cord Length	12 feet (144 inches)
Item Weight	5.3 ounces
Package Dimensions	6.5 x 2.6 x 1.73 inches
Operating Temperature	32 Degrees Fahrenheit (minimum)
UPC	819137024779

9. WARRANTY AND SUPPORT

AC Infinity products are designed for reliability and performance. For specific warranty details, please refer to the warranty information provided with your purchase or visit the official AC Infinity website. For technical support, troubleshooting assistance, or to inquire about replacement parts, please contact AC Infinity customer service through their official website or the contact information provided in your product packaging.

Additional protection plans may be available for extended coverage. Please consult your retailer for details on available protection plans.

Related Documents - AC-COS3

IONBEAM GREEN	[AC Infinity IONBEAM GREEN LED Grow Light Manual and Features](#) Comprehensive guide to the AC Infinity IONBEAM GREEN LED grow light, covering features, installation, programming, UIS platform integration, and warranty information. Includes product details and safety warnings.
CLOUDFORGE ENVIRONMENTAL HUMIDIFIER	[AC Infinity Cloudforge Environmental Humidifier User Manual](#) Comprehensive user manual for the AC Infinity Cloudforge Environmental Humidifier. Learn about installation, setup, features, programming, cleaning, and warranty information for models T3, T5, T7, and T9.
CLOUDLAB SERIES HEAVY-DUTY GROW TENT	[AC Infinity Cloudlab Series Heavy-Duty Grow Tent User Manual](#) User manual for the AC Infinity Cloudlab Series heavy-duty grow tents, covering setup, features, product contents, and warranty information.
IONBOARD SERIES GROW LIGHT SYSTEM	[AC Infinity IONBOARD Series Grow Light System User Manual](#) Comprehensive user manual for the AC Infinity IONBOARD Series LED Grow Light System. Covers product features, installation, setup, starter guide, UIS™ platform integration, adding more lights, programming, other AC Infinity products, and warranty information.
IONBOARD SERIES GROW LIGHT SYSTEM	[AC Infinity IONBOARD Series LED Grow Light System User Manual](#) Comprehensive user manual for the AC Infinity IONBOARD Series LED Grow Light System, covering key features, installation, setup, programming, and warranty information. Learn about Samsung LED diodes, even coverage, dimmable drivers, and UIS™ compatibility for models S22, S24, S33, and S44.
	[AC Infinity Hydrone Series Dehumidifier Quick Start Guide - DHT2411X1](#) Quick start guide for the AC Infinity Hydrone Series dehumidifier (model DHT2411X1). Learn how to set up, power, drain, clean, and program your dehumidifier for optimal environmental control in grow tents.