CID Bio-Science Inc.
Portable Instruments for Precision Plant Measurement

CI-340 Photosynthesis System

Specifications Document

THE CI-340 PROVIDES

- Lightest and most portable complete Photosynthesis System for scientific research at 1.5 kg.
- Measures photosynthesis, transpiration, stomatal conductance, and internal CO_2 concentration
- Open- and closed-system measurements
- Nine interchangeable chambers available for different leaf types
- Available soil respiration chamber
- Optional, modular attachments include: light, temperature control, CO_2 / H_2O supply and chlorophyll fluorescence measurement
- Infrared non-contact leaf temperature measurement
- The data can be displayed in real time through a projector, making it a good classroom demonstration tool.
- Free support via Skype
- No charge for annual service, including CO2 gas analyzer maintenance, at end of first year -- a $780 value
- Trade-in allowance for new model within three years at a 25% discount.

The CI-340 is a field ready, portable (44cm x 5.5cm x 5cm), lightweight (1.5kg) photosynthesis system gas exchange monitoring system. It is very easy to use.

The CI-340 comes ready to take ambient measurements right out of the case, and available environmental control modules allow the researcher to control: CO2 , H2O, temperature, light and measure chlorophyll fluorescence and photosynthesis rates simultaneously.

SPECIFICATIONS

Main Unit	On board IRGA for CO_2 / H_2O Analysis, Flow Control, Display & Key Board, Leaf Chamber attachment facility and Battery.
Display	LCD 40 x 6 characters or 320 x 60 pixel
Data Storage	4 MB Internal FLASH RAM, external SD memory
Data output	USB or RS232C PC Link Cable
Flow Rate	100 ~ 1000 cm^2 min^{-1}
Power Supply	7.2 VDC, 3.2 mAh for 5 hours continuous use, extended hours of use with additional batteries. AC Adapter / Battery Charger supplied.

Specifications continued on next page.

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CO_2 ANALYZER SPECIFICATIONS

Sensor	Low power Non-Dispersive Infrared Gas Analyzer
Chopping Frequency	1Hz
Sensors response time	35 seconds
Source life	5000 hours
Measuring Range (optional)	0 to 2000 ppm (Standard) - 0 to 3000 ppm
Resolution	0.1 ppm
Repeatability	±0.1 ppm (short term)
Accuracy	< ± 2% up to 3000 ppm
Sample cell	100 mm x 10.2 mm (3.94" L x 0.40" Dia)
Warm-up time	Approximately 3 minutes
Battery	7.2 volt rechargeable NiMH
Battery Capacity	Over 250 scans per charge
Operating Temperature	0 - 50° C
Dimensions	35.5cm x 4.5cm x 5cm

H_2O ANALYZER SPECIFICATIONS

Sensor Type	Humidity Sensitive Capacitor
Stability	Stable Analyzer for accurate H2O measurements
Measuring Range	0 to 100%
Resolution	0.1%
Accuracy	±2% at 10% RH, ±3.5% at 95% RH

PAR MEASUREMENT

Sensor Type	Filtered GaAsP - Photodiode
Measuring Range	0 ~ 2500 µmol $m^{-2}s^{-1}$
Accuracy	±5 µmol $m^{-2}s^{-1}$

CHAMBER TEMPERATURE MEASUREMENT

Sensor Type	Thermocouple
Measuring Range	- 15 ~ 50 °C
Accuracy	±0.1 °C

LEAF TEMPERATURE MEASUREMENT

Sensor Type	Infared Sensor
Measuring Range	- 10 ~ 50 °C
Accuracy	±0.3 °C

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