

## CI-340

### Handheld Photosynthesis System

The CI-340 is a field ready, portable, and lightweight photosynthesis analyzer. This gas exchange system is easy to operate in the lab or the field, in any conditions.

The CI-340 comes ready to take ambient measurements of gas exchange right out of the case. Optional environmental modules allow the researcher to control CO<sub>2</sub>, H<sub>2</sub>O, temperature, and light, as well as measure chlorophyll fluorescence and photosynthesis rates simultaneously.



<b>Main unit</b>	On board IRGA for CO <sub>2</sub> / H <sub>2</sub> O Analysis, H <sub>2</sub> O Analysis Flow Control, display & keyboard, leaf chamber attachment facility and battery
<b>Display</b>	LCD 40 x 6 characters or 320 x 64 pixels
<b>Data storage</b>	4 MB Internal FLASH RAM
<b>Data output</b>	USB
<b>Flow rate</b>	100 ~ 1000 cm <sup>2</sup> / min
<b>Power supply</b>	7.2 VDC, 4400 mAh for 5 hours continuous use, extended hours of use with additional batteries. AC adapter / battery charger supplied
<b>Weight</b>	1.5 kg (3 Lbs) with battery
<b>Dimensions</b>	44 cm x 5.5 cm x 5 cm
<b>Operating Temperature</b>	0-45°C

### Product Features

- ▶ Lightest Photosynthesis System for scientific research at 1.5 kg
- ▶ Measurements of
  - photosynthesis
  - transpiration
  - stomatal conductance
  - internal CO<sub>2</sub> concentration
- ▶ Open and closed system measurement methods
- ▶ Nine interchangeable chambers available to accommodate broadleaf plants, grasses, conifers, and succulents
- ▶ Soil respiration chamber available
- ▶ Optional, modular environmental control attachments including: light, temperature control, CO<sub>2</sub>/H<sub>2</sub>O supply and chlorophyll fluorescence measurement
- ▶ Infrared, non-contact leaf temperature measurement
- ▶ Data can be displayed in real time through a projector, making it a convenient classroom demonstration tool
- ▶ Free support via Skype
- ▶ Annual service, including CO<sub>2</sub> gas analyzer maintenance (first year included for no additional cost)

<b>Operating RH</b>	0-90% non-condensing
<b>Warm-up time</b>	Approximately 3 minutes
<b>Battery</b>	7.2 volt rechargeable Li-Ion

CO <sub>2</sub> ANALYZER SPECIFICATIONS	
<b>Sensor</b>	Low power non-dispersive infrared gas analyzer
<b>Chopping frequency</b>	1Hz
<b>Sensors response time</b>	35 seconds
<b>Source life</b>	5000 hours
<b>Measuring range</b>	0 to 2000 ppm (standard) - 0 to 3000 ppm (optional)
<b>Resolution</b>	0.1 ppm
<b>Repeatability</b>	±0.1 ppm (short term)
<b>Accuracy</b>	< ±2% up to 2000 ppm
<b>Sample cell</b>	100 mm x 10.2 mm (3.94"L x 0.40" Dia)
<b>Warm-up time</b>	Approximately 3 minutes
<b>Battery</b>	7.2 volt rechargeable Li-Ion
<b>Operating temperature</b>	-5 - 45 °C
<b>Dimensions</b>	35. 5 cm x 4.5 cm x 5 cm
H <sub>2</sub> O ANALYZER SPECIFICATIONS	
<b>Sensor type</b>	Humidity sensitive capacitor
<b>Stability</b>	Stable analyzer for accurate H <sub>2</sub> O measurements
<b>Measuring range</b>	0-100%
<b>Resolution</b>	0.1%
<b>Accuracy</b>	±2% at 10% RH, ±3.5% at 95% RH

PAR MEASUREMENT	
<b>Sensor type</b>	Filtered GaAsP - Photodiode
<b>Measuring range</b>	0 ~ 2500 μmol m <sup>-2</sup> s <sup>-1</sup>
<b>Accuracy</b>	±5 μmol 0-2500 μmol / m <sup>2</sup> / sec
CHAMBER TEMPERATURE MEASUREMENT	
<b>Sensor type</b>	Thermocouple
<b>Display</b>	LCD 40 x 6 characters or 320 x 64 pixels
<b>Measuring range</b>	- 15 ~ 50 °C
<b>Accuracy</b>	±0.1 °C
LEAF TEMPERATURE MEASUREMENT	
<b>Sensor type</b>	Infrared sensor
<b>Measuring range</b>	- 10 ~ 50 °C
<b>Accuracy</b>	±0.3 °C