

## ■ CI-340 Comparison Chart

|                      | CID Bio-Science                                                                                                               | LI-COR                                                                                                                       |                               | PP Systems                                                                                           | ADC BioScientific                                                           |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Specification        | CI-340                                                                                                                        | LI-6400XT                                                                                                                    | LI-6800                       | CIRAS-3                                                                                              | LCi-SD                                                                      |
| Power Supply         | 7.2 VDC, 4400 mAh for 5 continuous use, extended hours of use with additional batteries. AC adapter/battery charger supplied. | 10.5 to 15 V DC; 4 -8 hours                                                                                                  | 12 – 18 VDC or 24 VDC         | Internal, rechargeable 7.2V Li-ion battery providing up to 8 hours of continuous use.                | Small 12V rechargeable battery with universal input voltage battery charger |
| Battery              | 7.2 volt rechargeable Li-ion                                                                                                  | 4 12 VDC batteries                                                                                                           | Lithium ion; 6800 hAh         | Li-ion, up to 8 hours                                                                                | 2.8 AH 12V lead acid-10 hours                                               |
| Data Storage         | 4 MB internal flash RAM                                                                                                       | 64MB internal flash RAM                                                                                                      | 512 MB RAM; 8 GB Flash memory | 512 MB flash memory for programming and data storage. Unlimited data storage using USB thumb drives. | Removable 1 Gb SD card                                                      |
| Data Output          | USB                                                                                                                           | RS232, compact flash, ethernet card                                                                                          | RJ-45 Ethernet                | USB-Mini b, 2 USB                                                                                    | PC Link, RS232                                                              |
| Dimensions           | 45 x 5.3 x 4.8 cm                                                                                                             | n/a                                                                                                                          | 18.5 x 27.5 x 21 cm           | 28 x 14.5 x 24 cm                                                                                    | 24 x 12.5 x 14 cm                                                           |
| Weight               | 1.5Kg with battery                                                                                                            | 10.5 Kg                                                                                                                      | 6.1 kg                        | 4.3 Kg                                                                                               | 2.4Kg                                                                       |
| Flow rate to chamber | 100 ~ 1000 cm <sup>1</sup>                                                                                                    | 0-700 $\mu\text{mol s}^{-1}$ with CO <sub>2</sub> injector; 150-1000 $\mu\text{mol s}^{-1}$ without CO <sub>2</sub> injector | 50-100 cc min <sup>-1</sup>   | 50-100 cc min <sup>-1</sup>                                                                          | 100-500ml min <sup>-1</sup>                                                 |

|                           | CID Bio-Science                            | LI-COR                                                         |                                                                                                                                           | PP Systems                              | ADC BioScientific                              |
|---------------------------|--------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|
| Specification             | CI-340                                     | LI-6400XT                                                      | LI-6800                                                                                                                                   | CIRAS-3                                 | LCi-SD                                         |
| Operating temperature     | 0-45°C                                     |                                                                |                                                                                                                                           |                                         | 5-45°C                                         |
| Display size              | 320 x 4 pixels<br>(40 x 6 characters)      | 240 x 64-dot<br>(40 characters x 8 lines)                      | 1024 x 600 pixels<br>(26 cm diagonally)                                                                                                   | 7.0" WSVGA<br>transflective color LCD   | 240 x 64 dot matrix super<br>twist graphic LCD |
| CO <sub>2</sub> ANALYZER  |                                            |                                                                |                                                                                                                                           |                                         |                                                |
| Sensor                    | Non-dispersive infrared<br>gas analyzer    | Non-dispersive Infrared                                        | Absolute non-dispersive<br>infrared gas analyzer                                                                                          | Non-dispersive Infrared                 | Infrared gas analyzer                          |
| Range                     | 0-2000 ppm (standard)<br>0-3000 (optional) | 0-3100 µmol mol <sup>-1</sup>                                  | 0-3100 µmol mol <sup>-1</sup>                                                                                                             |                                         | 0-2000 ppm                                     |
| Resolution                | .1 ppm                                     | 0.3 µmol mol <sup>-1</sup> @ 350ppm                            | RMS 4-second signal<br>averaging at 400 µmol<br>mol <sup>-1</sup> : 0.1 µmol mol <sup>-1</sup>                                            | 0.2 µmol mol <sup>-1</sup> @<br>300 ppm | 1ppm                                           |
| Accuracy                  | < ± 2% up to 2000 ppm                      | ± 5 µmol mol <sup>-1</sup> from<br>0-1500 ppm                  | Within 1% of reading at<br>200 µmol mol <sup>-1</sup> or above,<br>plus or minus µmol mol <sup>-1</sup><br>at <200 µmol mol <sup>-1</sup> | n/a                                     | n/a                                            |
| H <sub>2</sub> O ANALYZER |                                            |                                                                |                                                                                                                                           |                                         |                                                |
| Range                     | 0 ~ 100%                                   | 0-75 mmol mol <sup>-1</sup>                                    | 0-75 mmol mol <sup>-1</sup>                                                                                                               | 0-75 mb                                 | 0 ~ 75 mbar                                    |
| Sensor                    | Humidity sensitive<br>capacitor            | Non-dispersive Infrared                                        | Absolute non-dispersive<br>infrared gas analyzer                                                                                          | Non-dispersive Infrared                 | 2 Laser water vapor<br>sensors                 |
| Accuracy                  | ±2% at 10% RH :<br>±3.5% at 95% RH         | ± 1 mmol mol <sup>-1</sup><br>from 0-75 mmol mol <sup>-1</sup> | Within 1.5% of reading<br>at >5 mmol mol <sup>-1</sup> ; plus or<br>minus 0.08rr mol <sup>-1</sup><br>at <5 mmol mol <sup>-1</sup>        | 0.015 mb at 0 mb                        | n/a                                            |
| PAR SENSOR                |                                            |                                                                |                                                                                                                                           |                                         |                                                |
| Type                      | Filtered GaAsP photodiode                  | Filtered GaAsP photodiode                                      | Silicon photodiode                                                                                                                        | 2 Filtered silicon cells                | Silicon photocell                              |

|                         | CID Bio-Science                              | LI-COR                                        |                                                | PP Systems                                     | ADC BioScientific                            |
|-------------------------|----------------------------------------------|-----------------------------------------------|------------------------------------------------|------------------------------------------------|----------------------------------------------|
| Specification           | CI-340                                       | LI-6400XT                                     | LI-6800                                        | CIRAS-3                                        | LCi-SD                                       |
| Range                   | 0 ~ 2500 $\mu\text{mol m}^{-2}\text{s}^{-1}$ | 0 ~ 3000 $\mu\text{mol m}^{-2} \text{S}^{-1}$ | 0 ~ 3000 $\mu\text{mol m}^{-2} \text{S}^{-1}$  | 0 ~ 3000 $\mu\text{mol m}^{-2}\text{s}^{-1}$   | 0 ~ 3000 $\mu\text{mol m}^{-2}\text{s}^{-1}$ |
| Accuracy                | $\pm 5 \mu\text{mol m}^{-2}\text{s}^{-1}$    | $< 1 \mu\text{mol mol}^{-1}$                  | plus or minus 5% of reading; Traceable to NIST | $1 \mu\text{mol m}^{-2}\text{s}^{-1}$          | n/a                                          |
| <b>AIR TEMP SENSOR</b>  |                                              |                                               |                                                |                                                |                                              |
| Type                    | Precision Thermistor                         | 3 wire Thermistor                             | Thermistor                                     | Thermistor                                     | Precision Thermistor                         |
| Display                 | LCD 40 x 6 characters or 320 x 64 pixels     |                                               |                                                |                                                |                                              |
| Range                   | -15 ~ 50°C                                   | -10 ~ 50°C                                    | -10 - 60°C                                     | n/a                                            | 5~ 50°C                                      |
| Accuracy                | $\pm 0.1^{\circ}\text{C}$                    | $\pm 0.5^{\circ}\text{C}$                     | $\pm 0.15^{\circ}\text{C}$                     | $\pm 0.5^{\circ}\text{C} @ 25^{\circ}\text{C}$ | $\pm 0.2^{\circ}\text{C}$                    |
| <b>LEAF TEMP SENSOR</b> |                                              |                                               |                                                |                                                |                                              |
| Type                    | Infrared                                     | Thermocouple                                  | Type E fine-wire thermocouple                  | Radiation Sensor                               | Microchip Thermistor                         |
| Range                   | -10 ~ 50°C                                   | 0 ~ 50°C                                      | n/a                                            | n/a                                            | -5°C to 50°C                                 |
| Accuracy                | $\pm 0.3^{\circ}\text{C}$                    | $< 0.2^{\circ} \text{C}$                      | -10 - 60°C                                     | $\pm 0.5^{\circ}\text{C} @ 25^{\circ}\text{C}$ |                                              |

Specifications gathered March 2016 and are subject to change at any time. Please consult competitor companies directly to validate current product specifications.