

# Canopy Interception and Leaf Area Index

[metergroup.com/environment/products/accupar-lp-80-leaf-area-index/](https://metergroup.com/environment/products/accupar-lp-80-leaf-area-index/)



## Accurate canopy analysis in real time

### ACCUPAR LP-80

Measuring canopy density can be problematic

There are several methods to measuring how much light is intercepted by a canopy in order to determine if water loss is from evaporation or transpiration. There's the hard way. There's the expensive way. And then there's the smart way: the LP-80.

It isn't a magic wand. Just a smarter one.

The optimal method for measuring fractional PAR (photosynthetically active radiation) is with the LP-80 Ceptometer. It's a highly-accurate way to determine canopy growth and canopy light interception, along with calculating fractional interception and crop coefficient. And because the methodology is mostly automated, it spares you from intensive hand labor, saving you time. The LP-80's low-cost also saves your entire budget from evaporating.

Reliable results never get old

Backed by 15 years of research, the LP-80 is one of the most trusted and relied upon instruments among crop scientists, ecologists, and foresters. Why? One of the main reasons is because it uses radiation measurements and other parameters to accurately calculate leaf area index (LAI) in real time, so you can be confident your data is right while in the field.

Another reason for the LP-80's popularity is an included external PAR sensor which can be used to make simultaneous above- and below-canopy PAR measurements as a reference for intercepted light in clear, partly cloudy, or even overcast sky conditions. No wonder it's relied on for publishable measurements year after year.

### Automatically the favorite

The LP-80's simplicity of use has a lot to do with its automation. Rather than the painstaking 4-5 hour destructive method of running leaves through a conveyor belt, the LP-80 instead measures the photosynthetically active radiation that is impinging on the measurement wand. This is also a lot easier than the other time-consuming, multi-step alternative of placing a camera beneath a canopy, taking a picture with a fisheye lens and then using software for photo measurement.

LP-80 doesn't just automate measurement, but also the data itself. Even in its raw form, data is collected, stored, and can even be downloaded so you can analyze it anywhere. This allows you to look at correlations to make sure what you saw in the field is consistent with your measurements. In addition, the attached controller can be used to take measurements manually or log data unattended for short periods of time. Because it's so simple to use, the LP-80 continues to be the automatic choice for those that want to save a lot of time and labor.

### The same measurements for less

The LP-80 costs less than competitor instruments that make the exact same measurements. It weighs less as well. At a little over one pound (0.5 kg), it's not only lightweight, but smaller and self-contained, so it's easier to carry around. And because the display is integrated with the measurement wand, you aren't burdened by having to bring a separate instrument to read data. There aren't any complex sets of buttons or screens to navigate either, allowing the LP-80 to provide the most value for less everything.

### Accurate. Automated. Affordable.

A lightweight, portable, linear array of PAR sensors designed for real time, non-destructive LAI measurements, the LP-80 has you covered when it comes to reliable results, along with time, labor, and cost savings.

[Get pricing](#)

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### Features

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- Measures canopy PAR
- Automatically calculates Leaf Area Index in real-time
- Lightweight
- Self-contained
- Powered by four AA batteries
- Can log data unattended for short periods of time
- Stores over 2,000 readings for later download and analysis
- Above-canopy sensor enables simultaneous above- and below-canopy PAR measurements

## Specifications

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Data storage capacity	1 MB RAM (over 2,000 measurements)
Number of sensors	80
PAR range	0 to > 2,500 $\mu\text{mol m}^{-2}\text{s}^{-1}$
Resolution	1 $\mu\text{mol m}^{-2}\text{s}^{-1}$
Probe length	84 cm
Overall length	99 cm (40 in)
Unattended logging interval	User selectable, between 1 and 60 min
Instrument weight	0.56 kg (1.23 lbs)
Data retrieval	Direct via RS-232
Keypad	7 key, menu-driven
Operating environment	0-50 °C (32-122 °F), 0-100% relative humidity
External PAR sensor cable length	5 m
Interface cable	RS-232 cable
Power	Four AAA Alkaline cells
Minimum spatial resolution	1 cm

## Accessories

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RS232 Cable

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External Replacement Sensor

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## Leveling Plate

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### Support

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Have a question or problem? Our support team can help.

We manufacture, test, calibrate, and repair every instrument in house. Our scientists and technicians use the instruments every day in our product testing lab. No matter what your question is, we have someone who can help you answer it.

Email: [support.environment@metergroup.com](mailto:support.environment@metergroup.com)

Phone US: +1 509-332-5600

Phone Europe: +49 89 12 66 52 0

### Downloads

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Acculink 2.2 EXE / 1.66 MB

[ACCUPAR LP-80 Manual PDF / 1.53 MB](#)

[LAI Calculator XLS / 32.50 KB](#)

LP-80 Firmware Updater EXE / 1.08 MB

LP-80 Utility Installer EXE / 13.70 MB

Related Products

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## PHYTOS 31

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The PHYTOS 31 measures both the onset and duration of wetness on a simulated leaf, which in turn predicts when the onset of certain diseases or infections may occur. It's not only a more accurate instrument, it's also the easiest to set up, making it a simple and straightforward solution to several problems.

[Learn more](#)

[Get pricing](#)

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