



## ACCUPAR LP-80 PAR-LAI CEPTOMETER

### METER



#### Measuring canopy density can be problematic

There are several methods to measure 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.

#### Rapid readings. Easy to use.

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 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 35 years of research, the LP-80 is one of the most trusted and relied upon instruments among crop scientists, ecologists, and foresters for publishable data year after year. Why? It uses precise sun angle calculations to accurately and automatically calculate **leaf area index** (LAI) in real time, so you can be confident your data is right while in the field. And it includes 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.

#### Accurate. Automated. Affordable.

Measure leaf area index (LAI) and fractional interception simply and accurately to estimate ET and canopy growth. 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, and time, labor, and cost savings.

#### Simplifies the measurement and the data

Rather than the painstaking 4- to 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 analysis.

LP-80 doesn't just automate the measurement but also the data itself. Even in raw form, data are collected, stored, and can even be downloaded so you can analyze your data 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.



**BİLMAR BİLİMSEL ARAŞTIRMA VE MÜHENDİSLİK ANONİM ŞİRKETİ**

Web page : [www.bilmar.com.tr](http://www.bilmar.com.tr)

E-mail : [bilkim@bilmar.com.tr](mailto:bilkim@bilmar.com.tr)



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#### 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.

#### Features

- Measures canopy PAR
- Automatically calculates Leaf Area Index in real-time
- Lightweight and self-contained
- Powered by four AAA 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

##### MEASUREMENT SPECIFICATIONS

<b>Probe PAR sensors</b>	<b>Range:</b> 0.0-2500.0 $\mu\text{mol}/(\text{m}^2\text{s})$ <b>Resolution:</b> 1.0 $\mu\text{mol}/(\text{m}^2\text{s})$
<b>External PAR sensor</b>	<b>Range:</b> 0 to 4,000 $\mu\text{mol}/(\text{m}^2\text{s})$ (full sunlight $\sim 2,000 \mu\text{mol}/(\text{m}^2\text{s})$ ) <b>Resolution:</b> 1 $\mu\text{mol}/(\text{m}^2\text{s})$ <b>Accuracy:</b> $\pm 5\%$
<b>Unattended logging interval</b>	Between 1 and 60 min (user selectable)

##### PHYSICAL SPECIFICATIONS

<b>Power</b>	4 AAA batteries, included
<b>Data storage</b>	1 MB flash memory
<b>Operating temperature range</b>	0°C to 50°C
<b>Operating relative humidity range</b>	0% to 100%
<b>Controller dimensions</b>	<b>Length:</b> 15.8 cm <b>Width:</b> 9.5 cm <b>Height:</b> 3.3 cm <b>Weight:</b> 0.6 kg with batteries
<b>Probe dimensions</b>	<b>Length:</b> 86.5 cm <b>Width:</b> 19 mm <b>Height:</b> 9.5 mm
<b>External sensor dimensions</b>	<b>Height:</b> 27 mm <b>Diameter:</b> 24 mm
<b>External sensor</b>	<b>Number:</b> 1 <b>Type:</b> Apogee SQ110 photosynthetically active radiation sensor
<b>Probe sensors</b>	<b>Number:</b> 80 <b>Type:</b> Photosynthetically active radiation sensor
<b>External PAR sensor</b>	Locking 5-pin sealed circular connector on 5-m cable
<b>Computer interface</b>	Locking 5-pin sealed circular connector to RS-232 cable
<b>Compliance (CE Mark)</b>	EM ISO/IEC 17050:2010



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