



Figure 1 LI19 connected to LP02.

Operation:

- 1 switch on LI19, connect LP02
- 2 connect LI19 to PC, using USB connection box and LI19 software
- 3 check sensor settings
- 4 disconnect from PC
- 5 optional: mark settings on LI19
- 6 start measurement
- 7 switch off LI19

Delivery:

LP02 / LI19 / 2 spare batteries / software / transport casing / USB connection box.

LP02 / LI19
PORTABLE SOLAR RADIATION SENSOR,
WITH READ-OUT UNIT / DATALOGGER

LP02 is a solar radiation sensor that can be applied for most common solar radiation observations. It complies with the latest ISO and WMO standards. The scientific name of this instrument is pyranometer.

The LI19 is a high accuracy hand-held read-out unit / datalogger. It can be used to make mobile measurements, for short term datalogging (as a static logger), and as an accurate millivolt amplifier directly connected to a PC.

LP02 serves to measure the solar radiation flux that is incident on a plane surface in W/m^2 from a 180 degrees field of view (also called "global" solar radiation). Working completely passive, using a thermopile sensor, LP02 generates a small output voltage proportional to this flux. Contrary to photodiode-based- and "black and white" instruments LP02 has a spectrally flat response across the full solar spectrum.

LI19 is used to display the measured flux level; for attaining that, the sensitivity of LP02 is entered into the LI19, by programming it using a PC. USB connection is part of the delivery. Software should be downloaded (this is to ensure that the latest version is applied). The LI19 is battery powered, using 2 AA-type batteries. These are included in the delivery. Batteries allow 50 days of operation.

The system is delivered in a handy carrying case, to make field measurements easy.

LP02 / LI19 SPECIFICATIONS

LP02 ISO classification:	second class
LP02 spectral range:	305 to 2800 nm
LP02 sensitivity (nominal):	15 $\mu V / Wm^{-2}$
LP02 range :	0 to 2000 Wm^{-2}
LP02 calibration traceability:	WRR
LP02 temperature dependence:	< 0.1%/°C
LP02 temperature range:	-40 to +80 °C
LI19 A/D resolution:	1 or 10 μV
LI19 A/D sample rate:	1/second
LI19 power supply:	2 AA-type batteries Alkaline
LI19 compatibility:	Windows 2000, XP, Vista; USB 1.1
LI19 battery life:	> 50 days
LI19 memory capacity:	3500 samples min/max/average over set interval
LI19 temperature range:	-10 to +40 °C