

# Portable Leaf Area Index Meter MIJ-15LAI/P Leaf Area Index Sensor MIJ-15LAI TypeII/K2



MIJ-15LAI/P Full-Package



MIJ-15LAI/P



MIJ-15LAI TypeII/K2

Conventional measuring instruments of Leaf Area Index (hereinafter referred to as LAI) used comparison of light intensity between outside and inside of plant canopy. MIJ-15LAI/P and MIJ-15LAI Type2/K2 quantify LAI by measuring the spectral ratio of sunlight transmitted through plant canopy.

### <Features>

- The world's only sensor that adopted the relationship that the spectral ratio of PAR and IR correlates with LAI.
- Regardless of cloudy weather, fine weather, just by pressing a button, instantaneous LAI measurement on the spot has been completed.
- True LAI measurement capable of counting only live leaves is possible, not PAI (Plant Area Index) where influences such as dead leaves, branches, trunks remain.
- /K2 for fixed - point observation, /P for mobile handheld measurement can be selected.

### <Explanation>

The measurement principle with the conventional plant canopy analyzer was the same principle as the area ratio of so-called monochrome photographs, which detects the light intensity ratio inside and outside the plant canopy and replaces the bright / dark ratio with LAI. Generally in sunny weather, the intensity of sunlight on the ground is temporally unstable due to the influence of clouds. For this reason the principle does not hold unless we measure both the light intensity of outside and inside of the canopy at the same time. In order to measure LAI only by measurement inside the canopy, there was the inconvenience that it was only in the cloudy weather where the solar radiation intensity was relatively stable. Even if such a troublesome work was carried out, the light shielding structure, the trunk, the branches, and the dead leaves other than the leaves also greatly affected the light intensity, so it was practically not the LAI but only the PAI was measured. If you want to measure LAI instead of PAI, you need to correct the value of PAI and convert it to LAI using measurement data of canopy which became only branch and trunk after complete fallen leaves in winter every year is. In the case of plants that do not deciduous, this kind of correction is also impossible.

MIJ-15s use patented measurement method JP 5410323 B2 2014.2.5 discloses two kinds of lights, PAR (400-700 nm) and NIR (700-1000 nm) are reflected and absorbed by chlorophyll in leaves and the ratio of transmitted light correlates with LAI. With this method, it is possible to measure LAI stably regardless of the weather. The light environment outside the canopy is irrelevant. Overall, LAI measurement with less disturbance factors and high repeatability has been realized.

### <MIJ-15 LAI/P specification>

Display	1. LAI, 2. NIR, 3. PAR, 4. Battery voltage	
Regression eq.	LAI=2.80ln(NIR/PAR)+0.69	
Unit	NIR and PAR / $\mu\text{E} (\mu\text{mol} \cdot \text{S}^{-1} \cdot \text{m}^{-2})$ , LAI / Dimensionless	
Operating temp.	-25~60 Degree	
Data strage	125,000 data	
Battery	4AA	
Shape	Sensor 126(W), 49(H), 60(D) (W/O Gun grip) Logger : 80(W), 189(H), 35(D)	
Cable length	Around 1500mm	
Weight	1250 grams, 3500grams (Full package)	
Price	MIJ-15LAI/P full package	YEN 360,000
	MIJ-15LAI TypeII/K2	YEN 200,000
	Optional MonoPod for /P	YEN 20,000



<Optional MonoPod for /P>  
variable length from 260 to 1560mm  
Weigt 350g. Use it like a cane with /P.

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