








# *Pocket PEA* *Rapid Screening* *Chlorophyll Fluorimeter*

InfoSheet



-  *Ultra-portable Chlorophyll Fluorimeter.*
-  *Rapid screening capability with single button operation & storage of up to 200 full data sets.*
-  *Automatic calculation of parameters including  $F_v/F_m$  & OJIP analysis.*
-  *Robust enclosure with sealed, high intensity optics.*
-  *100kHz sampling frequency with 16 bit resolution.*
-  *Bluetooth wireless data transfer as standard.*
-  *Powerful Windows data transfer & analysis software included.*

*"The Pocket PEA Chlorophyll Fluorimeter provides an affordable & convenient method of rapidly screening samples using 1 second measurements of the fast chlorophyll fluorescence kinetics. "*

*Instrumentation for Cellular Respiration & Photosynthesis Studies.*

## Overview.

The Pocket PEA Chlorophyll Fluorimeter is suitable for teaching, research & a wide variety of commercial applications. The robust yet compact hand-held design provides ease of use & reliable operation.

Samples are conveniently dark adapted prior to measurement using the leafclips supplied. Easy single key operation fully automates the complete measurement process from data capture through to calculation & display of the key Fv/Fm & Performance Index (PI) parameters. The rapid 1 second measurement capability & 200 measurement memory capacity make Pocket PEA an invaluable tool in large plant screening programs.

Bluetooth wireless transfer conveniently allows records to be transferred in the field to a suitable PDA/IPAQ or PC for detailed review & analysis using our custom Windows Mobile & Windows PC software.

## Ultra-Portable, Robust & Capable.

Sealed optics, optimised & temperature compensated for field conditions & the latest integrated electronics ensure reliable operation from a robust yet ultra-portable design. Weight 250g, Dimensions 175mm (L) x 75mm (W) x 35mm (D).

Saturating illumination is supplied by a single red LED emitter (627nm), optically filtered & precisely focused to deliver calibrated user selectable light intensities of up to  $3500 \mu\text{mol}/\text{m}^2/\text{s}^{-1}$  at the leaf surface. A high sensitivity PIN photodiode detector optically filtered for maximum discrimination of fluorescence emissions ensures the highest quality fluorescence signals. The 100kHz sampling frequency provides maximum resolution of fast fluorescence kinetics & 16bit signal resolution ensures excellent precision & repeatability.

The latest Lithium Polymer battery technology ensures a full day of field usage & the convenience of rapid (<4hrs) recharge to full capacity using either the mains charger provided or an optional 12v DC vehicle charger.

## Software Analysis.

Data transfer is via Bluetooth wireless communications. A suitable Windows Mobile IPAQ/ PDA may be used in the field for data storage & limited review of parameters & traces. Alternatively, data may be transferred to a suitable PC for in-depth analysis using our comprehensive Windows PEA Plus software. This provides many additional features including presentation & printing of all fluorescence parameters & trace data presentation by Graph, Rank & Spider Plot.

Downloaded Pocket PEA data files are saved in .csv format for ease of import to Windows Excel etc.

Parameters recorded by the Pocket PEA include  $F_o$ ,  $F_m$ ,  $F_v$ ,  $F_v/F_m$ ,  $T_{fm}$ , Area over the fluorescence curve and Performance Index (PI) using OJIP Analysis\*.

\* OJIP data calculated according to Strasser R.J., Srivasatava A. & Govindjee, 1995  
Polyphasic chlorophyll a fluorescence transient in plants and cyanobacteria, *Photochemistry & Photobiology*, 61, 32-34.)

# Hansatech

Web Site : <http://www.naskr.co.kr>

