

I.No - 8474.

ELRON INSTRUMENT COMPANY PRIVATE LIMITED

301, SKYLINE HOUSE, 85, NEHRU PLACE, NEW DELHI 110019 INDIA

PHONE: (011)26439006, 26469613 Fax: 91-11-26469613

Email: info@elroninstrument.com; satish@elroninstrument.com.

Web.: www.elroninstrument.com

CIN No. U74899 DL1985PTCO22500

GSTIN: 07AAACE 3085A1Z5

Our Ref: EPL/094-Rev/20-21

Dated : August 5, 2020

The Executive Director
Regional Centre for Biotechnology
NCR Biotech Science Cluster
3rd Milestone, Faridabad Gurgaon Expressway
Faridabad – 121001 (Haryana)

Kind Attn.: Dr. Ramu S. Vemanna

Sub: Procurement of Portable Photosynthesis System
Ref : As per our telephonic discussion

Dear Sir,

Thank you very much for your valuable inquiry of Portable Photosynthesis System.

We are pleased to inform you that LI-6800 Portable Photosynthesis System is advance instrument in the field of Photosynthesis Measurement worldwide, touch screen with fully automatic control of all parameter and self-diagnostics.

LI-6800F (Package): With help of this package the user can study the Photosynthesis and Chlorophyll Fluorescence simultaneously on the same leaf under controlled conditions of CO₂, H₂O, Temperature and Light.

LI-COR Portable Photosynthesis System is a true differential Field Portable Photosynthesis System with latest technology. LI-6800 features **Four Absolute Independent IRGAS- TWO for CO₂ & TWO for H₂O in the Sensor Head**. Making the system as the most technically advanced System with nearly ZERO (0.1 sec. Only) response time. **All other instruments have very high Response time.**

Analyzers in the sensor head is a patented technology vide Patent No. US 5332901 and US 5457320.

Data is taken at 10 Hz and averaged. No other instrument takes data at 10Hz.

PORTABLE PHOTOSYNTHESIS SYSTEM from LICOR is most referenced instrument in the published papers. More than 90% users all over the world are using LI-COR Portable Photosynthesis System. Please visit [Googlescholar.com](https://scholar.google.com) and search for LI 6400/6800 you will get > 72,000 references.

We hope, you will find the above information in order. Please finalize the order in favour of our principals and send us your formal confirmation, to enable us to take further necessary action at our end. If you need any more information, please feel free to contact us.

Thanking you and assuring of our best services.

Yours faithfully
For ELRON INSTRUMENT CO. PVT. LTD.

Mahavir Singh

Authorized Signatory

Satish

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Singh

Contact no = 9911313700

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LI-6800 Portable Photosynthesis & Fluorescence System

Building on LI-COR's legacy of innovation, the **LI-6800 Portable Photosynthesis System** delivers a new experience along with unprecedented capabilities for measuring gas exchange and Fluorescence. **Improved gas analyzer precision, light source uniformity, flow path design, environmental controls—and many more design features—are coupled with a touch screen interface** that provides **real-time guidance** from the instrument through Software.

The **LI-6800** sets a new global standard for gas exchange- Photosynthesis and fluorescence measurements in every aspect. A user experience built from the latest technological innovations—combined with integrated game-changing improvements in performance—yield the most advanced system in the market.

SALIENT FEATURES:

Integrated gas exchange-, Photosynthesis and fluorescence Measurement:

The system is capable of simultaneous gas exchange and chlorophyll fluorescence measurements on the same 6 cm² leaf area, making it possible to study the role of alternative electron sinks and estimate mesophyll conductance. The Fluorometer provides modulated and non-modulated chlorophyll fluorescence data, together with induction kinetics and the Multiphase Flash™ fluorescence protocol.

Maximized control:

A full suite of features allows precise, automated control of leaf chamber conditions with speed and accuracy. Improved environmental control opens up new areas of research.

- Improved high-precision analyzers are located in the sensor head to minimize time delays between the chamber and the analyzers.
- Fully automated water vapor control allows you to humidify or dry the air stream as needed
- High flow rates (up to 1400 μmol s⁻¹ in the leaf chamber) minimize time delays and expand system versatility
- Unrivaled light uniformity across the entire aperture ensures that the leaf is responding to equal, unvarying illumination
- A large temperature control range (10 °C below and above ambient) permits a better understanding of plant response to stress
- A large leaf area optimizes signal-to-noise ratio

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- A gas input port permits adding O₂ or other custom blends for studying plant response under various conditions
- Support for low CO₂ concentrations and 1 ppm step changes allows you to find the CO₂ compensation point in C₄ plants without customization

Improved sealing:

Design features minimize the loss or ingress of gasses throughout the LI-6800 system. Leak detection ensures measurements that better represent actual gas exchange.

- A patented flow-split in the sensor head reduces diffusion
- Automated flow control with a chamber overpressure option prevents the ingress of ambient air
- A dual-articulated, self-adjusting chamber closure ensures the best possible seal on the leaf
- An advanced system of O-ring-sealed metal tubing minimizes internal leaks

Real-time guidance:

The LI-6800 helps you understand your measurements and get the most out of your instrument.

- A color touch screen with advanced graphing capabilities provides real-time guidance from your instrument
- Battery charge indicators show the remaining capacity
- Alerts and data are viewable on the sensor head
- Uses commonly available 8-gram CO₂ cartridges and provides alerts when your cartridge is low
- Leak monitoring alerts you when the chamber is open or if the instrument fails a leak test

The LI-6800 is a technological innovation that will unlock the secrets of photosynthesis for researchers around the world.

MORE IMPORTANT FEATURES OF LI-6800F PORTABLE PHOTOSYNTHESIS SYSTEM

LI-6800 Portable Photosynthesis System is a user-friendly instrument with so many unique features which makes photosynthesis measurement an ultimate experience for the user, Mounting the analyzers in the sensor head provides several advantages over systems which place the analyzers in the console. Some of the highlighted features are mentioned below

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- ❖ Guides you to better measurement with a large touchscreen display.
- ❖ Displays informative, full color plots – so you can track the progress of each measurement.
- ❖ On-screen messages alert you to issues with the measurement and control ranges – so you can collect consistent, high quality data.
- ❖ Automated System tests to ensure that the instrument is performing at its best.
- ❖ Capable of survey measurements in less than one minute with batteries that can last all day.
- ❖ Achieves an ideal balance of light weight and high performance.
- ❖ User-cleanable optics and simple maintenance procedure minimizes downtime and maintenance cost. No other manufacturer provides user cleanable optics.
- ❖ Rugged and dependable, the LI-6800 is ready to collect data wherever your research takes you.

UNIQUE FEATURES to PROVIDE YOU BEST PERFORMANCE:

- ❖ **Gas Analysis:** Gas analysers- the core of any gas exchange system – precisely measures CO₂ and H₂O in sample and reference air streams. The small-volume analysers are located adjacent to the leaf chamber to provide remarkable speed and precision. High-speed temperature measurements of air as it enters the gas analysers improve the precision of each measurement. Typical CO₂ noise is $\leq 0.1 \mu\text{mol mol}^{-1} \text{ RMS}$ at $400 \mu\text{mol mol}^{-1}$ with 4-second signal averaging.
- ❖ **High-Speed Mixing Fan:** The leaf chamber mixing fan reduces the leaf boundary layer thickness to minimize boundary layer resistance, which closely couples the leaf and chamber conditions. This provides greater certainty in stomatal conductance calculations and fast plant response to changing chamber conditions.
- ❖ **Large Leaf Chamber Aperture:** A large leaf chamber aperture means you can measure photosynthesis from a larger leaf area. This provides a bigger difference between sample and reference gas concentrations, higher signal-to-noise ratios, and more precise assimilation measurements. The improved chambers can measure up to 9 cm^2 using standard leaf chambers in LI-6800F portable photosynthesis System in, and for fluorescence the leaf area covered is 6 cm^2 .
- ❖ **Low-Diffusion Materials and Coatings:** Leaf-level gas exchange measurements are represented by the difference in CO₂ between two gas streams, but diffusion leaks can lead to differences that are not a result of a leaf. LI-6800 uses carefully tested materials and coatings, combined with a patented air stream split and valves, minimize diffusion leaks, meaning that gas exchange measurements are more precise and repeatable.

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Faridabad – 121001 (Haryana)

PROFORMA INVOICE
LICOR INC.,
4421, SUPERIOR ST.
LINCOLN, NE 6850, USA

Kind Attn.: Dr. Ramu S. Vemanna

Sub: Procurement of Portable Photosynthesis System
Ref: As per our telephonic discussion

PART NO.	DESCRIPTION	QTY	AMOUNT IN USD
LI-6800F	Portable Photosynthesis and Fluorescence System A Complete Gas Exchange and Chlorophyll Fluorescence. This package is ideal for field or lab work that includes with CO2 Control, H2O Control, Temperate Control, LED Light Control and Chlorophyll Fluorescence Measurement. The system includes: <ul style="list-style-type: none"> ➤ Console - 1 No. ➤ Sensor head - 1 No. ➤ Cable assembly - 1 No. ➤ Fluorometer Chamber – 1 No. ➤ Instrument carries case - 1 No. ➤ Accessory Carry case - 1 No. ➤ Carrying harness - 1 No. ➤ Tripod 1Nos. ➤ Lithium Ion Batteries - 3 Nos ➤ AC to Dc power Supply – 1 No. ➤ Single bay battery charger -1 No. ➤ Silica Gel Desiccants – 2 Nos (1lb each) (SORBEAD ORANGE CHAMELEON). ➤ Soda Lime – 2 Nos. ➤ Stutt garter masse - 1 No, for gas conditioning ➤ 8 gm CO2 Cartridges (3 Box of 25 each) - Total 75 ➤ Spare kit 	1	\$ 59,740.00
6800-12A	3X3 cm Leaf chamber with apertures 3x3, 2x3, 1x3 cm The specifications as per the catalogue enclosed	1	\$ 2,790.00
EX-FACTORY PRICE			\$ 62,530.00
Less Special discount			7,880.00
NET EX-FACTORY PRICE			\$ 54,650.00
Documentation Charges			650.00
FCA LINCOLN, NE			\$ 55,530.00
Shipping Charges			700.00
TOTAL CIP NEW DELHI INT'L AIRPORT PRICE			\$ 56,000.00
CIP NEW DELHI INT'L AIRPORT FOR OPENING L/C: USD FIFTY SIX THOUSAND ONLY.			

NOTE: The price quoted does not include custom duty, custom clearance and delivery charges. You will have to make your own arrangements to get the consignment cleared through customs at your own cost and responsibility.

[Handwritten signatures in blue ink: "Dor", "Singh", "Santosh", and a small mark]

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TERMS & CONDITIONS

PRICES	Prices quoted are CIP NEW DELHI INT'L AIRPORT Order should be issued in favour of : LICOR INC., 4421, Superior St., Lincoln, NE, 68504 U.S.A. With a copy of ELRON INSTRUMENT CO.PVT.LTD., NEW DELHI.
PAYMENT	By irrevocable Letter of Credit in favour of LICOR INC. USA. BENEFICIARY BANKDETAILS: First National Bank 1620 Dodge Street, SC1111, Omaha, NE 68197-111 U.S.A. Phone : 402- 602-3047 Fax : 402-633-3554 Transfer funds to : First National Bank SWIFT Code: FNBOUS44XX BENEFICIARY: LI-COR INC. Account No. 110392530, ABA Routing: 104000016
VALIDITY	Prices quoted are valid for 120 days from date of opening
SHIPMENT	Within 10-12 weeks after receipt of L/C complete in every respect
WARRANTY	ONE YEAR from date of installation against any manufacturing defect. This warranty, however, does not cover physical damage, mis-handling, natural calamities & consumable like thermocouple, bulbs, fuses, chemicals and batteries.
INSTALLATION/ DEMONSTRATION	Will be done by our engineer free of charge at your Institute.
THE L/C MUST INCLUDE THE FOLLOWING CONDITIONS WITHOUT WHICH THE L/C WILL NOT BE ACCEPTED:	
<ul style="list-style-type: none">• The L/C must be valid for 120 days (To account for banking delays)• L/C must be available for negotiation through any bank.• Country of Origin: U.S.A.• All bank charges including reimbursing and amendment charges are to Opener's A/c. (Beneficiary will not pay any bank charges)• Certificate of Country of Origin will be CERTIFIED by Chamber of Commerce (NOT issued by)• Test Certificate/Inspection Certificate will be issued by beneficiary• Transshipment must be allowed by Airfreight, Part shipment –NOT allowed. Beneficiary Address: LICOR INC., 4421 SUPERIOR ST. LINCOLN, NEBRASKA 68504, U.S.A.	

For ELRON INSTRUMENT CO. PVT. LTD.

Mahavir Singh

Authorized Signatory