

# Ultrameter II™

Professional water quality analysis tools



- *Conductivity*
- *Resistivity*
- *TDS*
- *pH*
- *ORP*
- *Free Chlorine*
- *Temperature*



Model 6Psi with bluDock™ option installed

**MYRON L COMPANY**  
Water Quality Instrumentation  
Accuracy • Reliability • Simplicity

# ULTRAMETER II™

*Advanced Design • Superior Performance*

**LSI/Hardness Calculator (6Psi)  
for water balance analysis**

**ORP mV to ppm free  
chlorine conversion (6Psi)**

**pH/ORP Sensor  
protective cap (6Psi)**

**Four-digit display for  
full 9999 readings, with  
autoranging capability  
up to 200 mS/200 ppt**

**Powerful microprocessor  
based surface mount  
circuitry**

**Display prompts for simple  
pH calibration**

**Memory for 100 readings  
with Date & Time Stamp**

**Real Time Clock**

**Factory calibrations  
stored in microprocessor**



Fast and accurate in the laboratory, both Ultrameter II models are rugged enough for daily in-line controller checks in hostile process applications.

## Multiple Applications

- Irrigation Water • Hydroponics
- Laboratories • Homeland Security
- Reverse Osmosis • Deionization
- Wastewater • Cooling Towers
- Environmental • Desalination
- Fountain Solutions



Both Ultrameter IIs are capable of wireless data transfer with bluDock™ option installed

**ULTRA-FAST**  
**ULTRA-EASY**  
**ULTRA-POWERFUL**

**Waterproof  
& Buoyant**

Since 1957, the Myron L Company has designed and manufactured highly reliable analytical instruments for a wide variety of applications. Thousands of professionals around the world rely every day on the performance of our instruments. Demanding uses range from boiler water testing to ultrapure water control to medical instruments for artificial kidney machines.

We are proud of the trust our handheld instruments and monitor/controllers have earned in the past. Our product line has evolved to a new level of outstanding performance and value in analytical instruments in the Ultrameter II series. While priced like affordable single-parameter instruments, the Ultrameter II does the job of three, four or even six instruments.

## Accuracy You Can Trust

Both Ultrameter II models deliver exceptional accuracy of  $\pm 1\%$  of reading (**not merely full scale**). This high level of accuracy is achieved through advanced four-electrode conductivity cell technology, a powerful microprocessor, proprietary circuit design and conversion algorithms for three of the most common solution

types, as well as a unique pH/ORP sensor. With displayed values of up to 9999, the full four-digit LCD ensures resolution levels never before possible in such affordable instruments. Factory calibrated with NIST traceable solutions, each Ultrameter II may be supplied with both certification of traceability and NIST traceable solutions for definitive calibration.

## Innovative Engineering

The Ultrameter II is a prime example of how high-tech engineering can greatly simplify and streamline a task. Whether in the lab, industrial plant, or in a remote field location, merely:

1. Fill the cell cup
2. Push a parameter key
3. Take the reading

Temperature compensation and range selection are both rapid and automatic. The Ultrameter II is a true one-hand operation instrument.

## Easy to Calibrate

All calibrations are quickly accomplished by pressing the ▲ or ▼ keys to agree with our NIST traceable Standard Solution. When calibration is necessary, display prompts simplify pH calibration and make sure the correct buffer is being used. Plus, all parameters (excluding factory-set temperature) have an internal electronic setting that can be used for field calibration and as a check on pH/ORP sensor life.

## Water Balance Analysis

The LSI calculator makes it easy to analyze the scaling nature of water in the lab or in the field. Using a calcium carbonate saturation index algorithm developed by Dr. Wilfred Langelier in 1936, the calculator computes the saturation index of a sample based on measured and inferred values for pH, temperature, hardness and alkalinity. You can then change any of these values in user adjust mode to analyze the effect of the change on water balance. User mode also allows you to input measured values for alkalinity and hardness as determined by other independent testing for a precise saturation index value.

## Hardness Unit Conversion

Within the LSI Calculator is a Hardness calculator that allows you to select ppm or grains of hardness units for the LSI calculation. The hardness unit conversion is based on the equivalency  $17.1 \text{ ppm (mg/L)} = 1 \text{ grain}$ .

## Free Chlorine Measurements

Ultrameter II now features the ability to convert Oxidation Reduction Potential measurements from mV to parts per million free chlorine. The mV to ppm free chlorine conversion algorithm is based on a published conversion curve and bench testing performed at the Myron L Company. The accuracy of low-range ppm free chlorine readings has been increased by extrapolating from the published data. With this new feature Myron L instruments can measure a dynamic range of sanitizer concentrations that is wider than the range of a colorimetric test kit.

## Advanced Features

- Langelier Saturation Index Calculator
- Hardness Calculator
- Standardized to three most common solution types: KCl, NaCl and 442™ Natural Water
- Fully automatic temperature compensation
- User adjustable temperature compensation (up to 9.99%/°C) which can also be disabled for applications requiring non-compensated readings.
- User adjustable conductivity/TDS conversion ratio for greater accuracy when measuring solutions not contained in the microprocessor.
- Auto-shutoff maximizes the life of the single 9V battery to more than 100 hours/5000 tests.
- Non-volatile microprocessor provides data back-up, even when the battery is changed. This assures all calibrations and memory data will be retained.
- Extended life pH/ORP sensor is user replaceable in the field.

## High Performance at a Low Cost

Measure for measure, Ultrameter IIs give you a better return on your investment than any other handheld instrument. And they're backed by our commitment to quality. To see for yourself, contact your distributor or the Myron L Company today. [www.myronl.com](http://www.myronl.com)

# BENEFITS DESIGNED TO SAVE YOU TIME & MONEY



Hardness/Langelier Saturation Index Calculator allows you to determine water balance adjustments on the spot.

Easily transfer stored readings to Macintosh and PC platforms with the optional bluDock™ accessory package.

Ample memory provides increased flexibility to record and store 100 separate readings.

Real Time Clock with Date & Time Stamp allows you to maintain the integrity of each individual reading.

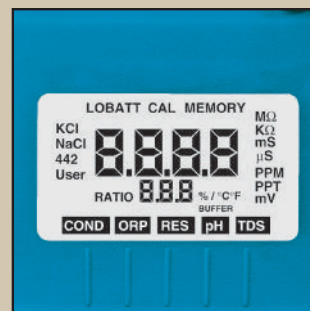
The advanced four-electrode cell for conductivity/resistivity/TDS eliminates polarization, allowing greater accuracy and stability with minimal maintenance.

The pH/ORP sensor chamber provides protection to a unique porous liquid-junction.

The large capacity KCl reservoir guarantees extended life.

A custom LCD helps simplify calibration and operation by using annunciators and prompts to indicate various conditions.

IP67/NEMA 6 rated Ultrameter IIs are waterproof and buoyant and can be fully immersed to 3 feet/1 meter.



## Features

| Ultrameter II™ Models                | 4PII  | 6Psi   |
|--------------------------------------|---|--|
|                                      | Conductivity<br>TDS, Resistivity<br>Temperature | Conductivity, TDS<br>Resistivity, pH<br>ORP, Temperature |
| <b>LSI/Hardness Calculator†</b>      |   | •  |
| <b>Autoranging</b>                   | •   | •  |
| <b>Adjustable Temp. Compensation</b> | •   | •  |
| <b>Adjustable Cond/TDS ratio</b>     | •   | •  |
| <b>Memory (100 readings)</b>         | •   | •  |
| <b>Date &amp; Time Stamp</b>         | •   | •  |
| <b>pH Calibration Prompts</b>        | •   | •  |
| <b>Low battery indicator</b>         | •   | •  |
| <b>Auto-off</b>                      | •   | •  |

† The hardness range is limited to 0.0 - 1710 ppm and 0.0 - 100 grains of hardness in the 6Psi.

## Specifications

|  |   |
|--|---|
| <b>Display</b>                         | 4 Digit Liquid Crystal Display                        |
| <b>Dimensions: LxWxH</b>               | 196 x 68 x 64 mm/7.7 x 2.7 x 2.5 inches               |
| <b>Weight</b>                          | 352 g/12.4 oz.  |
| <b>Case/conductivity cell material</b> | VALOX*  |
| <b>Cell capacities</b>                 | pH/ORP: 1,2 ml/0.04 oz.<br>Cond/TDS/Res: 5 ml/0.2 oz. |
| <b>Power</b>                           | 9V alkaline battery                                   |
| <b>Battery life</b>                    | >100 hours (5000 readings)                            |
| <b>Operating/storage temperature</b>   | 0 - 55°C/32 - 132°F                                   |
| <b>Protection ratings</b>              | IP67/NEMA 6<br>Waterproof to 1 meter/3 feet           |

\* © Sabic Innovative Plastics IP BV

## Parameters

| Ranges   | Conductivity  | TDS  | Resistivity                                     | pH                 | ORP mV or ppm Free Chlorine      | Temperature        |
|--|---|--|---|--------------------|----------------------------------|--------------------|
|  | 0-9999 µS/cm<br>10-200 mS/cm<br>in 5 autoranges                                     | 0-9999 ppm<br>10-200 ppt<br>in 5 autoranges  | 10 KΩ-30 MΩ                                     | 0-14 pH            | ±999 mV<br>0.00-9.99 ppm         | 0-71°C<br>32-160°F |
| <b>Resolution</b>                                  | 0.01 (<100 µS)<br>0.1 (<1000 µS)<br>1.0 (<10 mS)<br>0.01 (<100 mS)<br>0.1 (<200 mS) | 0.01 (<100 ppm)<br>0.1 (<1000 ppm)<br>1.0 (<10 ppt)<br>0.01 (<100 ppt)<br>0.1 (<200 ppt) | 0.01 (<100 KΩ)<br>0.1 (<1000 KΩ)<br>0.1 (>1 MΩ) | ±0.01 pH           | ±1 mV<br>0.01 ppm                | 0.1°C/F            |
| <b>Accuracy</b>                                    | ±1% of reading  | ±1% of reading   | ±1% of reading                                  | ±0.01 pH*          | ±1 mV<br>± 2.5% of reading ppm** | ±0.1°C<br>—        |
| <b>Auto Temperature Compensation</b>               | 0-71°C<br>32-160°F  | 0-71°C<br>32-160°F   | 0-71°C<br>32-160°F                              | 0-71°C<br>32-160°F | —                                | —                  |
| <b>Adjustable Temperature Compensation to 25°C</b> | 0-9.99%/°C  | 0-9.99%/°C   | 0-9.99%/°C                                      | —                  | —                                | —                  |
| <b>Conductivity/TDS Ratios Preprogrammed</b>       | KCl, 442***, NaCl   | KCl, 442***, NaCl  | —   | —                  | —                                | —                  |
| <b>Adjustable Conductivity/TDS Ratio Factor</b>    | 0.20-7.99   | 0.20-7.99  | —   | —                  | —                                | —                  |

\*± .2 pH in presence of RF fields ≥ 3V/m and >300MHz  
\*\*\*442 Natural Water Standard™ Myron L Company

\*\*Given water is sanitized by chlorine only at a pH of 7.5 and a temperature of 25°C

## Accessories

**bluDock™ Accessory Package** includes bluDock™, Macintosh/PC application software for downloading data and printed instructions. MODEL: BLUDOCK

**Certificates** confirming the NIST traceability of an Ultrameter II are available (must be specified when placing instrument order). MODEL: MC

**Conductivity Standard Solutions** are necessary to maintain accuracy and for periodic calibration of conductivity/TDS parameters. All Standard Solutions are NIST traceable for your complete confidence. RECOMMENDED VALUES: KCl-7000 (7 mS), 442-3000 (TDS), or NaCl-14.0 (mS) available in 2 oz/59 ml, 1 qt/1 L, and 1 gal/3,8 L.

**pH Buffers** are necessary to maintain accuracy and for periodic calibration of pH and ORP parameters. Calibration with pH 7 Buffer is especially important. All pH 4, 7, and 10 Buffers are NIST traceable and are available in 2 oz/59 ml, 1 qt/1 L, and 1 gal/3,8 L.

**pH Sensor Storage Solution** Available in 2 oz/59 ml, 1 qt/1 L, and 1 gal/3,8 L. MODEL: SS20Z, SSQ and SSG

**Certificate** of NIST traceability for pH Buffer or Conductivity Standard Solutions are available (must be specified when placing solution order). MODEL: SC

**Hard protective case (small)** MODEL: UPP

**Hard protective case (kit)** with three buffers (pH 4, 7, and 10), one pH/ORP storage solution, and two standard solutions, (KCl-7000 and 442-3000). All bottles are 2 oz/59 ml. MODEL: PKUJ (Replaces PKU)

**Soft protective case** is constructed of padded Nylon and features a belt clip for hands-free mobility. MODEL: UCC (Blue)  
UCCDT (Desert Tan)

**Replacement pH/ORP sensor** user-replaceable, features a unique/porous liquid-junction. MODEL: RPR



## Built on Trust

Founded in 1957, Myron L Company is one of the world's leading manufacturers of water quality instruments. Because of our policy of continuous product improvement, changes in design and the specifications in this brochure are possible. You have our assurance any changes will be guided by our product philosophy: Accuracy, Reliability, Simplicity.

## Limited Warranty

All Myron L Ultrameter IIs have a Two (2) Year Limited Warranty. The pH/ORP sensors have a Six (6) Month Limited Warranty. Warranty is limited to the repair or replacement of the Ultrameter II only, at our discretion. Myron L Company assumes no other responsibility or liability.

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Water Quality Instrumentation  
Accuracy • Reliability • Simplicity

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