

HI83300

# Multiparameter Photometer

with Digital pH Electrode Input for Laboratories

HI83300 is a compact, multiparameter photometer for use in the lab or in the field. The meter is one of the most advanced photometers available with an innovative optical design that utilizes a reference detector and focusing lens to eliminate errors from changes in the light source and from imperfections in the glass cuvette. This meter has 63 different programmed methods measuring 37 key water quality parameters and also offers an absorbance measurement mode for performance verification and for users that would like to develop their own concentration versus absorbance curves.

To save valuable laboratory benchtop space, the HI83300 doubles as a professional pH meter with its digital pH/temperature electrode input. Now one meter can be used for both photometric and pH measurements.



- **Advanced optical system**
  - Innovative optical design that utilizes a reference detector and focusing lens to eliminate errors from changes in the light source and from imperfections in the glass cuvette
- **Backlit 128 x 64 Pixel Graphic LCD Display**
  - Backlit graphic display allows for easy viewing in low light conditions
  - The 128 x 64 Pixel LCD allows for a simplified user interface with virtual keys and on-screen help to guide the user through use of the meter
- **Built-in Reaction Timer for Photometric Measurements**
  - The measurement is taken after the countdown timer expires.
  - Countdown timer ensures that all readings are taken at the appropriate reaction intervals regardless of user for better consistency in measurements
- **Absorbance mode**
  - Hanna's exclusive CAL Check™ cuvettes for validation of light source and detector
  - Allows for the user to plot concentration versus absorbance for a specific wavelength for use with user supplied chemistry or for teaching principles of photometry
- **Units of Measure**
  - Appropriate unit of measure along with chemical form is displayed along with reading
- **Result Conversion**
  - Automatically convert readings to other chemical forms with the touch of a button
- **Cuvette Cover**
  - Aids in preventing stray light from affecting measurements
- **Digital pH Electrode Input**
  - Measure pH and temperature with a single probe
  - Good Laboratory Practice (GLP) to track calibration information including date, time, buffers used, offset and slope for traceability
  - pH CAL Check alerts user to potential problems during the calibration process
  - Space saving having a pH meter and photometer built into one meter
- **Data Logging**
  - Up to 1000 photometric and pH readings can be stored by simply pressing the dedicated LOG button. Logged readings are just as easily recalled by pressing the RCL button
- Sample ID and User ID information can be added to a logged reading using the alphanumeric keypad
- **Connectivity**
  - Logged readings can be quickly and easily transferred to a flash drive using the USB-A host port or to a computer using the micro USB-B port
  - Data is exported as a .CSV file for use with common spreadsheet programs
- **Rechargeable Battery**
  - Li-polymer rechargeable battery lasts for 500 measurements or 50 hours of pH measurement
- **Battery Status Indicator**
  - Indicates the amount of battery life left
- **Error Messages**
  - Photometric error messages
  - pH calibration messages include clean electrode, check buffer and check probe



HI83300-11

Parameter	Range	Resolution	Accuracy (@ 25°C)	LED (λ nm) with Narrow Band Interference Filter	Method	Reagent Code
Alkalinity	0 to 500 mg/L (as CaCO <sub>3</sub> )	1 mg/L	±5 mg/L ±5% of reading	@ 610 nm	bromocresol green	<b>HI775-26</b> 25 tests
Alkalinity, Marine	0 to 300 mg/L (as CaCO <sub>3</sub> )	1 mg/L	±5 mg/L ±5% of reading	@ 610 nm	bromocresol green	<b>HI755-26</b> 25 tests
Aluminum	0.00 to 1.00 mg/L (as Al <sup>3+</sup> )	0.01 mg/L	±0.04 mg/L ±4% of reading	@ 525 nm	aluminon	<b>HI93712-01</b> 100 tests
Ammonia LR	0.00 to 3.00 mg/L (as NH <sub>3</sub> -N)	0.01 mg/L	±0.04 mg/L ±4% of reading	@ 420 nm	Nessler	<b>HI93700-01</b> 100 tests
Ammonia MR	0.00 to 10.00 mg/L (as NH <sub>3</sub> -N)	0.01 mg/L	±0.05 mg/L ±5% of reading	@ 420 nm	Nessler	<b>HI93715-01</b> 100 tests
Ammonia HR	0.0 to 100.0 mg/L (as NH <sub>3</sub> -N)	0.1 mg/L	±0.5 mg/L ±5% of reading	@ 420 nm	Nessler	<b>HI93733-01</b> 100 tests
Bromine	0.00 to 8.00 mg/L (as Br <sub>2</sub> )	0.01 mg/L	±0.08 mg/L ±3% of reading	@ 525 nm	DPD	<b>HI93716-01</b> 100 tests
Calcium	0 to 400 mg/L (as Ca <sup>2+</sup> )	1 mg/L	±10 mg/L ±5% of reading	@ 466 nm	oxalate	<b>HI937521-01</b> 50 tests
Calcium, Marine	200 to 600 mg/L (as Ca <sup>2+</sup> )	1 mg/L	±6% of reading	@ 610 nm	zincon	<b>HI758-26</b> 25 tests
Chloride	0.0 to 20.0 mg/L (as Cl <sup>-</sup> )	0.1 mg/L	±0.5 mg/L ±6% of reading	@ 466 nm	mercury (II) thiocyanate	<b>HI93753-01</b> 100 tests
Chlorine Dioxide	0.00 to 2.00 mg/L (as ClO <sub>2</sub> )	0.01 mg/L	±0.10 mg/L ±5% of reading	@ 575 nm	chlorophenol red	<b>HI93738-01</b> 100 tests
Chlorine Dioxide, Rapid	0.00 to 2.00 mg/L (as ClO <sub>2</sub> )	0.01 mg/L	±0.10 mg/L ±5% of reading	@ 525 nm	DPD-Glycine	<b>HI96779-01</b> 100 tests
Chlorine, Free	0.00 to 5.00 mg/L (as Cl <sub>2</sub> )	0.01 mg/L	±0.03 mg/L ±3% of reading	@ 525 nm	DPD	<b>HI93701-01</b> 100 tests
Chlorine, Free ULR	0.000 to 0.500 mg/L (as Cl <sub>2</sub> )	0.001 mg/L	±0.020 mg/L ±3% of reading	@ 525 nm	DPD	<b>HI95762-01</b> 100 tests
Chlorine, Total	0.00 to 5.00 mg/L (as Cl <sup>-</sup> )	0.01 mg/L	±0.03 mg/L ±3% of reading	@ 525 nm	DPD	<b>HI93711-01</b> 100 tests
Chlorine, Total ULR	0.000 to 0.500 mg/L (as Cl <sub>2</sub> )	0.001 mg/L	±0.020 mg/L ±3% of reading	@ 525 nm	DPD	<b>HI95761-01</b> 100 tests
Chlorine, Total UHR	0 to 500 mg/L (as Cl <sub>2</sub> )	1 mg/L	±3 mg/L ±3% of reading	@ 525 nm	iodometric	<b>HI95771-01</b> 100 tests
Chromium(VI) LR	0 to 300 µg/L (as Cr <sup>6+</sup> )	1 µg/L	±10 µg/L ±4% of reading	@ 525 nm	diphenylcarbohydrazide	<b>HI93749-01</b> 100 tests
Chromium(VI) HR	0 to 1000 µg/L (as Cr <sup>6+</sup> )	1 µg/L	±5 µg/L ±4% of reading	@ 525 nm	diphenylcarbohydrazide	<b>HI93723-01</b> 100 tests
Color of Water	0 to 500 PCU (Platinum Cobalt Units)	1 PCU	±10 PCU ±5% of reading	@ 420 nm	colorimetric platinum cobalt	
Copper LR	0.000 to 1.500 mg/L (as Cu <sup>2+</sup> )	0.001 mg/L	±0.010 mg/L ±5% of reading	@ 575 nm	bicinchoninate	<b>HI95747-01</b> 100 tests
Copper HR	0.00 to 5.00 mg/L (as Cu <sup>2+</sup> )	0.01 mg/L	±0.02 mg/L ±4% of reading	@ 575 nm	bicinchoninate	<b>HI93702-01</b> 100 tests
Cyanuric Acid	0 to 80 mg/L (as CYA)	1 mg/L	±1 mg/L ±15% of reading	@ 525 nm	turbidimetric	<b>HI93722-01</b> 100 tests
Fluoride LR	0.00 to 2.00 mg/L (as F <sup>-</sup> )	0.01 mg/L	±0.03 mg/L ±3% of reading	@ 575 nm	SPADNS	<b>HI93729-01</b> 100 tests
Fluoride HR	0.0 to 20.0 mg/L (as F <sup>-</sup> )	0.1 mg/L	±0.5 mg/L ±3% of reading	@ 575 nm	SPADNS	<b>HI93739-01</b> 100 tests
Hardness, Calcium	0.00 to 2.70 mg/L (as CaCO <sub>3</sub> )	0.01 mg/L	±0.11 mg/L ±5% of reading	@ 525 nm	calmagite	<b>HI93720-01</b> 100 tests
Hardness, Magnesium	0.00 to 2.00 mg/L (ppm) (as CaCO <sub>3</sub> )	0.01 mg/L	±0.11 mg/L ±5% of reading	@ 525 nm	calmagite	<b>HI93719-01</b> 100 tests
Hardness, Total LR	0 to 250 mg/L (as CaCO <sub>3</sub> )	1 mg/L	±5 mg/L ±4% of reading	@ 466 nm	calmagite	<b>HI93735-00</b> 100 tests
Hardness, Total MR	200 to 500 mg/L (as CaCO <sub>3</sub> )	1 mg/L	±7 mg/L ±3% of reading	@ 466 nm	calmagite	<b>HI93735-01</b> 100 tests
Hardness, Total HR	400 to 750 mg/L (as CaCO <sub>3</sub> )	1 mg/L	±10 mg/L ±2% of reading	@ 466 nm	calmagite	<b>HI93735-02</b> 100 tests
Hydrazine	0 to 400 µg/L (as N <sub>2</sub> H <sub>4</sub> )	1 µg/L	±4% of full scale reading	@ 466 nm	p-Dimethylaminobenzaldehyde	<b>HI93704-01</b> 100 tests
Iodine	0.0 to 12.5 mg/L (as I <sub>2</sub> )	0.1 mg/L	±0.1 mg/L ±5% of reading	@ 525 nm	DPD	<b>HI93718-01</b> 100 tests
Iron LR	0.000 to 1.600 mg/L (as Fe)	0.001 mg/L	±0.01 mg/L ±8% of reading	@ 575 nm	TPTZ	<b>HI93746-01</b> 50 tests
Iron HR	0.00 to 5.00 mg/L (as Fe)	0.01 mg/L	±0.04 mg/L ±2% of reading	@ 525 nm	phenanthroline	<b>HI93721-01</b> 100 tests
Iron (II) (ferrous)	0.00 to 6.00 mg/L Fe <sup>2+</sup>	0.01 mg/L	±0.10 mg/L ±2% of reading	@ 525 nm	phenanthroline	<b>HI96776-01</b> 100 tests
Iron (II)/(III) (ferrous and ferric)	0.00 to 6.00 mg/L Fe	0.01 mg/L	±0.10 mg/L ±2% of reading	@ 525 nm	phenanthroline	<b>HI96777-01</b> 100 tests
Magnesium	0 to 150 mg/L (as Mg <sup>2+</sup> )	1 mg/L	±5 mg/L ±3% of reading	@ 466 nm	calmagite	<b>HI937520-01</b> 50 tests
Manganese LR	0 to 300 µg/L (as Mn)	1 µg/L	±10 µg/L ±3% of reading	@ 575 nm	PAN	<b>HI93748-01</b> 50 tests
Manganese HR	0.0 to 20.0 mg/L (as Mn)	0.1 mg/L	±0.2 mg/L ±3% of reading	@ 525 nm	periodate	<b>HI93709-01</b> 100 tests
Molybdenum	0.0 to 40.0 mg/L (as Mo <sup>6+</sup> )	0.1 mg/L	±0.3 mg/L ±5% of reading	@ 420 nm	mercaptoacetic acid	<b>HI93730-01</b> 100 tests
Nickel LR	0.000 to 1.000 mg/L (as Ni)	0.001 mg/L	±0.010 mg/L ±7% of reading	@ 575 nm	PAN	<b>HI93740-01</b> 50 tests
Nickel HR	0.00 to 7.00 g/L (as Ni)	0.01 g/L	±0.07g/L ±4% of reading	@ 575 nm	photometric	<b>HI93726-01</b> 100 tests
Nitrate	0.0 to 30.0 mg/L (as NO <sub>3</sub> <sup>-</sup> -N)	0.1 mg/L	±0.5 mg/L ±10% of reading	@ 525 nm	cadmium reduction	<b>HI93728-01</b> 100 tests
Nitrite ULR, Marine	0 to 200 µg/L (as NO <sub>2</sub> <sup>-</sup> -N)	1 µg/L	±10 µg/L ±4% of reading	@ 466 nm	diazotization	<b>HI764-25</b> 25 tests
Nitrite LR	0 to 600 µg/L (as NO <sub>2</sub> <sup>-</sup> -N)	1 µg/L	±20 µg/L ±4% of reading	@ 466 nm	diazotization	<b>HI93707-01</b> 100 tests
Nitrite HR	0 to 150 mg/L (as NO <sub>2</sub> <sup>-</sup> -N)	1 mg/L	±4 mg/L ±4% of reading	@ 575 nm	ferrous sulfate	<b>HI93708-01</b> 100 tests
Oxygen, Dissolved	0.0 to 10.0 mg/L (as O <sub>2</sub> )	0.1 mg/L	±0.4 mg/L ±3% of reading	@ 420 nm	Winkler	<b>HI93732-01</b> 100 tests
Oxygen Scavengers	0.00 to 1.50 mg/L (as Carbohydrazide)	0.01 mg/L	±0.02 µg/L ±3% of reading	@ 575 nm	iron reduction	<b>HI96773-01</b> 100 tests
Oxygen Scavengers	0 to 1000 µg/L (as DEHA)	1 µg/L	±5 µg/L ±5% of reading	@ 575 nm	iron reduction	<b>HI96773-01</b> 100 tests
Oxygen Scavengers	0.00 to 2.50 mg/L (as Hydroquinone)	0.01 mg/L	±0.04 µg/L ±3% of reading	@ 575 nm	iron reduction	<b>HI96773-01</b> 100 tests
Oxygen Scavengers	0.00 to 4.50 mg/L (as Iso-ascorbic acid)	0.01 mg/L	±0.03 µg/L ±3% of reading	@ 575 nm	iron reduction	<b>HI96773-01</b> 100 tests
Ozone	0.00 to 2.00 mg/L (as O <sub>3</sub> )	0.01 mg/L	±0.02 mg/L ±3% of reading	@ 525 nm	DPD	<b>HI93757-01</b> 100 tests
pH	6.5 to 8.5 pH	0.1 pH	±0.1 pH	@ 525 nm	phenol red	<b>HI93710-01</b> 100 tests
Phosphate ULR, Marine	0 to 200 µg/L (as P)	1 µg/L	±5 µg/L ±5% of reading	@ 610 nm	ascorbic acid	<b>HI774-25</b> 25 tests
Phosphate LR	0.00 to 2.50 mg/L (ppm)	0.01 mg/L	±0.04 mg/L ±4% of reading	@ 610 nm	ascorbic acid	<b>HI93713-01</b> 100 tests
Phosphate HR	0.0 to 30.0 mg/L (as PO <sub>4</sub> <sup>3-</sup> )	0.1 mg/L	±1 mg/L ±4% of reading	@ 525 nm	amino acid	<b>HI93717-01</b> 100 tests
Potassium	0.0 to 20.0 mg/L (as K)	0.1 mg/L	±3.0 mg/L ±7% of reading	@ 466 nm	turbidimetric tetraphenylborate	<b>HI93750-01</b> 100 tests
Silica LR	0.00 to 2.00 mg/L (as SiO <sub>2</sub> )	0.01 mg/L	±0.03 mg/L ±3% of reading	@ 610 nm	heteropoly blue	<b>HI93705-01</b> 100 tests
Silica HR	0 to 200 mg/L (as SiO <sub>2</sub> )	1 mg/L	±1 mg/L ±5% of reading	@ 466 nm	molybdosilicate	<b>HI96770-01</b> 100 tests
Silver	0.000 to 1.000 mg/L (as Ag)	0.001 mg/L	±0.020 mg/L ±5% of reading	@ 575 nm	PAN	<b>HI93737-01</b> 50 tests
Sulfate	0 to 150 mg/L (as SO <sub>4</sub> <sup>2-</sup> )	1 mg/L	±5 mg/L ±3% of reading	@ 466 nm	turbidimetric	<b>HI93751-01</b> 100 tests
Surfactants, Anionic	0.00 to 3.50 mg/L (as SDBS)	0.01 mg/L	±0.04 mg/L ±3% of reading	@ 610 nm	methylene blue	<b>HI95769-01</b> 100 tests
Zinc	0.00 to 3.00 mg/L (as Zn)	0.01 mg/L	±0.03 mg/L ±3% of reading	@ 575 nm	zincon	<b>HI93731-01</b> 100 tests
<b>Ordering Information</b>	<b>HI83300-01</b> (115V) and <b>HI83300-02</b> (230V) is supplied with sample cuvettes and caps (4 ea.), cloth for wiping cuvettes, USB to micro USB cable connector, power adapter, instrument quality certificate, and instruction manual.					
<b>Standards</b>	<b>HI83300-11</b> CAL Check Cuvette Kit for HI83300					