

**METZER-M**  
HIGH-TECH OPTICAL INSTRUMENTS

TECHNOLOGY  
THAT DRIVES  
INNOVATORS



ANALYTICAL INSTRUMENTS

# ANALYTICAL INSTRUMENTS



**METZER – M MICROPROCESSOR PHOTO COLORIMETER  
MODEL METZ – 4001 M**



**METZER – M DIGITAL PHOTO COLORIMETER WITH AUTO  
ZERO CALIBRATION MODEL METZ – 401 M**

## SPECIFICATIONS :-

<b>Standard Glass Filters</b>	8 (Wavelength range 400 – 700nm).
<b>Minimum Volume</b>	1ml.
<b>Display</b>	3.5Digit Bright Red 7 Segment LED Display.
<b>% Transmittance</b>	0 – 100%.
<b>Absorbance</b>	0 – 1.99.
<b>Concentration</b>	0 – 999.
<b>Resolution</b>	1% T, 0.01 Abs, 1 Conc., 0.01 K factor.
<b>Key Board</b>	5 keys, Soft touch membrane type.
<b>Auto Zeroing</b>	Available (for Abs) and 100% for %T.
<b>Light Source</b>	6.3V – 0.3 Amp., Tungsten Lamp.
<b>Power Supply</b>	230V ± 10% 50 Hz AC.
<b>Memory</b>	Facility for storage of 3 standard concentrations.

## SPECIFICATIONS :-

<b>Standard Glass Filters</b>	8 (Wavelength range 400 – 700nm).
<b>Minimum Volume</b>	1ml.
<b>Display</b>	3Digit Bright Red 7 Segment LED Display.
<b>Key Board</b>	1 Keys Soft Touch Membrane Type.
<b>Absorbance</b>	0 – 1.99.
<b>Resolution</b>	0.01.
<b>Accuracy</b>	0.5 % FSI.
<b>Detector</b>	Selenium Photocell / Photodiode.
<b>Light Source</b>	6.3V – 0.3 Amp. Tungsten Lamp.
<b>Power Supply</b>	230V ± 10%, 50Hz. AC.



**METZER – M DIGITAL FULLY AUTOMATIC COLORIMETER  
MODEL METZ – 402 M**



**METZER – M DIGITAL SPECTROPHOTOMETER  
(DOUBLE DISPLAY) MODEL METZ – 3001 M**

**SPECIFICATIONS :-**

<b>Range</b>	400 – 700nm.
<b>Display</b>	Dual Digital Display.
<b>Filters Wavelength</b>	400nm,430nm,500nm,520nm,540nm, 580nm,600nm,620nm,680nm.
<b>Display Mode</b>	Absorbance & Wavelength.
<b>Detector</b>	Silicon photo diode.
<b>Zero Adjustment</b>	Auto zero by microprocessor.
<b>Accuracy</b>	± 0.01 O.D.
<b>Light Source</b>	Highly Accurate Laser Source.
<b>Amplifier</b>	Micro Controller Based.
<b>Volume</b>	1 ml. Minimum.
<b>Power Supply</b>	230V± 10% AC , 50Hz.
<b>Battery Backup</b>	6V Ni – Cd Re-Chargeable Battery.

**SPECIFICATIONS :-**

<b>Range</b>	340 – 960nm.
<b>Resolution</b>	0.1 % T,0.001 Abs.
<b>Output</b>	%T: 0 to 100%, Abs: 0 to 1.999.
<b>Detector</b>	Silicon Photodiode.
<b>Light Source</b>	6V - 1Amp. Halogen Lamp.
<b>Wavelength Resolution</b>	1 nm.
<b>Repeatability</b>	± 1nm.
<b>Display</b>	3.5 Digit LED Display.
<b>Power Supply</b>	230V ± 10% 50 Hz AC.

# ANALYTICAL INSTRUMENTS



**METZER – MICROPROCESSOR VISIBLE SPECTROPHOTOMETER MODEL METZ – 3002 M**



**METZER – M SINGLE BEAM UV-VIS SPECTROPHOTOMETER MODEL METZ – 3003 M**

**SPECIFICATIONS :-**

<b>Display</b>	16 X 2 Alpha Numeric LCD Display.
<b>Photometric Range</b>	% T:0 TO 100%, Abs.:0.097-2.000, Conce, 0-1999.
<b>Photometric Accuracy</b>	±/- %T.
<b>Data Readout</b>	Single Line LCD display
<b>Key Board</b>	4 Keys, Soft touch membrane type.
<b>Light Source</b>	Tungsten Halogen Lamp.
<b>Detector</b>	Wide range Silicon Photodiode.
<b>Sample Holder</b>	4 position adjustable sample holder.
<b>Wavelength</b>	325 to 1000nm.
<b>Spectral Bandwidth &amp; Accuracy</b>	5nm , ± / - 2.0 nm.
<b>Power supply</b>	AC 220V/50 Hz.

**SPECIFICATIONS :-**

<b>Photometric Range</b>	% T:0 TO 100%, Abs.: 0 to 1.999, Conce, 0 to 1.999 K-Factor: 0 to 1.999.
<b>Accuracy</b>	±0.005 Abs at 1.0 Abs ±0.010 Abs at 1.0 Abs.
<b>Data Readout</b>	Single Line LCD display.
<b>Key Board</b>	4 Keys, Soft touch membrane type.
<b>Light Source</b>	Tungsten Halogen Lamp.
<b>Detector</b>	Wide range Silicon Photodiode.
<b>Sample Holder</b>	4 position adjustable sample holder.
<b>Wavelength</b>	Selenium Photocell / Photodiode.
<b>Light Source</b>	195 to 1000nm.
<b>Spectral Bandwidth</b>	2 nm.



**METZER – M DOUBLE BEAM UV-VIS  
SPECTROPHOTOMETER MODEL METZ – 3004 M**



**METZER – M MICROPROCESSOR  
BASED pH METER MODEL METZ – 2001 M**

**SPECIFICATIONS :-**

<b>Optical System</b>	Double Beam , Grating 1200 lines / MM.
<b>Wavelength Range</b>	190-1100nm.
<b>Bandwidth &amp; Wavelength Accuracy</b>	1nm & 0.3 nm.
<b>Wavelength Scanning</b>	Auto.
<b>Key board</b>	Membrane keypad.
<b>Light Source</b>	Deuterium & Tungsten lamp.
<b>Display</b>	320 x 240 LCD with graphic Display.
<b>Detector</b>	Silicon Photodiode.
<b>Power supply</b>	AC 220V/50 Hz.

**SPECIFICATIONS :-**

<b>Display</b>	16 X 2 Alpha Numeric LCD Display.
<b>Range</b>	pH: 0 to 14.00, mV : 0 to $\pm 1999.9$ .
<b>Resolution</b>	0.01 pH , 0.1 mV, Temp. 0.1°C.
<b>Accuracy</b>	$\pm 0.01$ pH, $\pm .1$ mV, Temp. $\pm 1^\circ\text{C}$ . (Auto/Manual)
<b>Temp. Compensation</b>	0 to 100°C.
<b>Calibration</b>	Auto / Manual.
<b>Storage</b>	Up to 100 Samples.
<b>Power Supply</b>	230V $\pm 10\%$ , 50Hz AC.
<b>Auto Buffer Recognition</b>	Auto 4.00, 7.00, 9.20 pH.

# ANALYTICAL INSTRUMENTS



**METZER – M AUTO DELUXE pH METER  
MODEL METZ – 201 M**



**METZER – M AUTO DIGITAL pH METER  
MODEL METZ – 202 M**

## SPECIFICATIONS :-

<b>Display</b>	3.5 Digit LED.
<b>Range</b>	pH 0 to 14.00, mV 0 to $\pm 1999$ . Touch Button Calibration.
<b>Resolution</b>	pH 0.01, mV 1.
<b>Accuracy</b>	pH $\pm 0.01$ , mV $\pm 1$ mV.
<b>Temp. Compensation</b>	Auto 0 to 100 deg. C., Manual 0 to 100 deg. C.
<b>Slope Control</b>	80 to 120%.
<b>Power Supply</b>	230V $\pm 10\%$ 50 Hz AC.

## SPECIFICATIONS :-

<b>Display</b>	3.5 Digit LED
<b>Range</b>	pH 0 to 14.00, mV 0 to $\pm 1999$ Touch Button Calibration.
<b>Resolution</b>	pH 0.01, mV 1.
<b>Accuracy</b>	pH $\pm 0.01$ / mV $\pm 1$ Mv
<b>Temp. Compensation</b>	Manual 0 to 100 deg.C
<b>Slope Control</b>	80 TO 120%
<b>Power</b>	230V $\pm 10\%$ 50 Hz



**METZER – M MICROPROCESSOR  
CONDUCTIVITY / TDS / TEMP. MODEL METZ – 1001 M**



**METZER – M AUTO DELUXE DIGITAL  
CONDUCTIVITY METER MODEL METZ – 601 M**

**SPECIFICATIONS :-**

<b>Display</b>	16 X 2 Alpha Numeric LCD Display.
<b>Range</b>	0.1 $\mu$ S to 100 ms (6 Decadic Ranges).
<b>Resolution</b>	0.01 $\mu$ S.
<b>Accuracy</b>	$\pm$ 1% of F.S. $\pm$ 1 Digit.
<b>Calibration</b>	Auto / Manual.
<b>Temperature Range</b>	0 to 100°C.
<b>Cell Constant</b>	0.1 to 5.0 Adjustable.
<b>Storage</b>	Up to 100 Samples.
<b>Power</b>	230V $\pm$ 50Hz AC.

**SPECIFICATIONS :-**

<b>Display</b>	3.5 Digit LED.
<b>Range</b>	5 Ranges, 0 to 1000 Mhos / cm. Auto Ranging
<b>Accuracy</b>	$\pm$ 1 % FS $\pm$ 1 digit.
<b>Temp. Compensation</b>	Auto / Manual 0 to 50 deg.C.
<b>Cell Constant</b>	Adjustable.
<b>Sensor</b>	Conductivity Cell.
<b>Power</b>	230V $\pm$ 10% 50 Hz. AC.

# ANALYTICAL INSTRUMENTS



**METZER – M DIGITAL CONDUCTIVITY  
METER MODEL METZ – 602 M**



**METZER – M AUTO DIGITAL pH, CONDUCTIVITY &  
TEMP. METER MODEL METZ – 203 M**

## SPECIFICATIONS :-

Display	3.5 Digit LED.
Range	5 Ranges 0 to 1000m Mhos/cm Auto Ranging.
Accuracy	$\pm 1\% \text{ FS} \pm 1$
Temp. Compensation	Manual 0 to 50 deg.C
Cell Constant	Adjustable.
Sensor	Conductivity Cell.
Power	230V $\pm 10\%$ 50 Hz.

## SPECIFICATIONS :-

Display	3.5 Digit LED.
Power	230V $\pm 10\%$ 50 Hz AC.
<b>PH :</b>	
Range & Resolution	pH 0 to 14.00 & pH 0.01.
Accuracy & Temp. Comp.	pH 0.01 $\pm 1$ Digit & 0 to 100 Deg. C.
<b>Conductivity :</b>	
Range	0 to 20mS / cm in 2 ranges.
Resolution	0.001 m Mhos (1Micro Mhos).
Accuracy & Cell Constant	0.5% of range $\pm 1$ digit & adjustable.
<b>Temperature :</b>	
Range & Resolution	0 to 100 deg.C & 0.1 Deg. C.
Accuracy	$\pm 0.2\%$ of range $\pm 1$ digit.
Sensor	PTD (PT-100) Probe.



**METZER – M WATER & SOIL ANALYSIS  
KIT MODEL METZ – 301 M (6 PARAMETERS)**



**METZER – M WATER & SOIL ANALYSIS  
KIT MODEL METZ – 302 M (7 PARAMETERS)**

**SPECIFICATIONS :-**

Display	3.5 Digit LCD.
<b>PH :</b>	
Range & Resolution	pH 0 to 14.00 & pH 0.01.
Accuracy & Temp. Comp.	pH 0.01 ± 1 Digit & 0 to 100 Deg. C.
<b>ORP :</b>	
Range & Resolution	0 to ±1999mV & 1mV.
Accuracy	1 mV ± 1 Digit.
<b>Conductivity :</b>	
Range & Resolution	0 to 200 M Mhos/Cm IN 4 range & 0.1 u Mhos/Cm.
Accuracy & Cell Constant	0.5% of Range ± 1 Digit & 0.4 to 1.5 on Display.
<b>TDS :</b>	
Range & Resolution	0 to 200ppt in 4 range & 0.1 ppm.
Accuracy & Cell Constant	0.5% of Range ± 1 Digit & 0.4 to 1.5 on Display.
<b>DO :</b>	
Range & Resolution	0 to 20ppm & 0.1 ppm.
Accuracy & Cell Constant	0.2 ppm ± 1 digit & 5 deg.C to 55 deg.C.
DO Sensor	Gold/Silver Amperometric probe.
<b>TEMPERATURE :</b>	
Range & Resolution	0 to 100 deg.C & 0.1 deg.C.
Accuracy	0.2% of Range ± 1 Digit.

**SPECIFICATIONS :-**

Display	3.5 Digit LCD.
<b>PH :</b>	
Range & Resolution	pH 0 to 14.00 & pH 0.01.
Accuracy & Temp. Comp.	pH 0.01 ± 1 Digit & 0 to 100 Deg. C.
<b>ORP :</b>	
Range & Resolution	0 to ±1999mV & 1mV.
Accuracy	1 mV ± 1 Digit.
<b>Conductivity :</b>	
Range & Resolution	0 to 200 M Mhos/Cm IN 4 range & 0.1 u Mhos/Cm.
Accuracy & Cell Constant	0.5% of Range ± 1 Digit & 0.4 to 1.5 on Display.
<b>TDS :</b>	
Range & Resolution	0 to 200ppt in 4 range & 0.1 ppm.
Accuracy & Cell Constant	0.5% of Range ± 1 Digit & 0.4 to 1.5 on Display.
<b>DO :</b>	
Range & Resolution	0 to 20ppm & 0.1 ppm.
Accuracy & Cell Constant	0.2 ppm ± 1 digit & 5 deg.C to 55 deg.C.
DO Sensor	Gold/Silver Amperometric probe.
<b>TEMPERATURE :</b>	
Range & Resolution	0 to 100 deg.C & 0.1 deg.C.
Accuracy	0.2% of Range ± 1 Digit.
<b>TURBIDITY :</b>	
Range & Resolution	0 – 1000 NTU & 1NTU.

# ANALYTICAL INSTRUMENTS



**METZER – M MICROPROCESSOR WATER & SOIL ANALYSIS  
KIT MODEL METZ – 303 M (7 PARAMETERS)**

## SPECIFICATIONS :-

<b>Display</b>	16 characters x 2 lines alpha Numeric BL LCD.
<b>PH :</b>	
<b>Range &amp; Resolution</b>	pH 0 to 14.00 & pH 0.01.
<b>Accuracy &amp; Temp. Comp.</b>	pH 0.01 ± (relative) & Automatic with Pt 100 Sensor.
<b>Calibration</b>	Automatic & Manual.
<b>Dissolved Oxygen :</b>	
<b>Range &amp; Resolution</b>	0 to 20 ppm & 0.1 ppm.
<b>Accuracy &amp; Temp. Comp.</b>	± 0.2 ppm ± 1digit & Automatic with Pt 100 Sensor.
<b>Calibration</b>	Automatic & Manual
<b>ORP :</b>	
<b>Range &amp; Resolution</b>	-2000 to ± 2000 mV & 1 mV.
<b>Accuracy</b>	±0.1% ± 1digit.
<b>Calibration</b>	Automatic & Manual
<b>Temperature :</b>	
<b>Range &amp; Resolution</b>	-100 to ± 200 deg.C & 0.1 degree C.
<b>Accuracy</b>	±0.2% ± 1digit.

## SPECIFICATIONS :-

<b>Calibration</b>	Manual
<b>Conductivity :</b>	
<b>Range &amp; Resolution</b>	0-200.0 mS/cm & 0.01 uS/cm.
<b>Accuracy &amp; Temp. Comp.</b>	± 0.5% & Automatic with Pt 100 Sensor
<b>Cell Constant &amp; Ref.Temp</b>	0.05 to 2.0 adjustable & 25 degree C
<b>TDS :</b>	
<b>Range &amp; Resolution</b>	0-200 ppt & 0.1 ppm.
<b>Accuracy</b>	± 0.5%
<b>TDS factor</b>	0.5 by default (adjustable)
<b>Salinity :</b>	
<b>Range &amp; Resolution</b>	0-50 ppt & 0.1 ppt
<b>Accuracy &amp; Temp. Comp.</b>	± 0.5% & Automatic
<b>Salinity factor</b>	0.75 by default (adjustable)
<b>Power supply</b>	AC 220V/50 Hz



**METZER – M DIGITAL TURBIDITY  
METER MODEL METZ – 501 M**



**METZER – M DIGITAL NEPHELO  
METER MODEL METZ – 502 M**

**SPECIFICATIONS :-**

<b>Display</b>	3.5 Digit LED.
<b>Power Supply</b>	230V ± 10% 50 Hz.
<b>Range</b>	0 to 1000 NTU in 2 ranges.
<b>Resolution</b>	1 NTU.
<b>Accuracy</b>	± 3% FS ± 1 Digit.
<b>Sample System</b>	30mm Clear Glass Test Tubes.
<b>Light Source</b>	6V - 1Amp. Tungsten Lamp.
<b>Detector</b>	Photocell / Photodiode.

**SPECIFICATIONS :-**

<b>Display</b>	3.5 Digit LED.
<b>Power Supply</b>	230V ± 10% 50 Hz.
<b>Range</b>	0 to 200 NTU.
<b>Resolution</b>	1 NTU.
<b>Accuracy</b>	± 2% FS ± 1 Digit.
<b>Sample System</b>	30mm Clear Glass Test Tubes.
<b>Light Source</b>	6V - 1Amp. Tungsten Lamp.
<b>Detector</b>	Photocell / Photodiode.

# ANALYTICAL INSTRUMENTS



**METZER – M AUTO DIGITAL TDS  
METER MODEL METZ – 701 M**



**METZER – M DIGITAL FLAME PHOTO METER  
(DUAL CHANNEL Na & K) MODEL METZ – 802 M**

## SPECIFICATIONS :-

<b>Display</b>	3.5 Digit LED.
<b>Power Supply</b>	230V ± 10% 50 Hz.
<b>Range</b>	0 to 1000 ppt in 5 Ranges.
<b>Resolution</b>	0.1ppm.
<b>Accuracy</b>	± 2% FS ± 1 Digit.
<b>Temp. Compensation</b>	0 to 50 deg.C.
<b>Measuring Cell</b>	Platinum Dip Type.

## SPECIFICATIONS :-

<b>Range</b>	Na : 0 – 100 ppm & K : 0 -100 ppm.
<b>Sensitivity</b>	Na : 5 ppm & K : 5 ppm
<b>Display</b>	Dual 2 ½ digit bright LED Display
<b>Accuracy</b>	± 2% upto 100 meq/l , ± 5% above 100 meq/l
<b>Repeatability</b>	± 2 Count
<b>Detector</b>	Silicon Photodiode.
<b>Filters</b>	Narrow band interference glass filters.
<b>Flame System</b>	LPG and dry oil free air.
<b>Warm up time</b>	10 minutes.
<b>Power Supply</b>	230V ± 10% AC 50 Hz



**METZER – M MICRO PROCESSOR BASED  
FLAME PHOTO METER MODEL METZ – 803 M**



**METZER – M DIGITAL DISSOLVED OXYGEN  
ANALYSER CUM TEMP. METER MODEL METZ – 901 M**

**SPECIFICATIONS :-**

<b>Range &amp; Resolution</b>	Na : 0.1 – 100 ppm & K : 0.1 -100 ppm & 0.1 ppm/meq
<b>Sensitivity</b>	Na : 0.5 ppm & K : 0.5 ppm
<b>Display</b>	Graphical LCD Display
<b>Accuracy</b>	± 2% upto 100 meq/l , ± 5% above 100 meq/l
<b>Reproducibility</b>	2% for 25 sample
<b>Detector</b>	Silicon Photodiode
<b>Filters</b>	Filters for Sodium and Potassium.
<b>Flame System</b>	LPG and dry oil free air.
<b>Range Selection</b>	Automatic
<b>Calibration</b>	Up to 5-point calibration with curve fitting software
<b>Power Supply</b>	230V ± 10% AC, 50/60 Hz

**SPECIFICATIONS :-**

<b>Range</b>	0 to 20.0ppm.
<b>Resolution</b>	0.1ppm.
<b>Accuracy</b>	± 0.2ppm.
<b>Temp. Compensation</b>	0 to 50 deg.C Manual.
<b>Display</b>	3.5 Digit LED.
<b>Power Supply</b>	230V ± 10% 50 Hz AC.
<b>Sensor</b>	DO Amperometric Gold / Silver Temp.RTD (PT-100).
<b>Time Response</b>	10 Sec.



**METZER – M DIGITAL DISSOLVED OXYGEN METER MODEL METZ – 902 M**



**METZER – M DIGITAL HAEMOGLOBIN METER MODEL METZ – 903 M**

**SPECIFICATIONS :-**

<b>Display</b>	3.5 Digit LED.
<b>Range</b>	0 to 20.0ppm
<b>Resolution</b>	0.1ppm
<b>Accuracy</b>	± 0.2ppm
<b>Temp. Compensation</b>	0 to 50 deg.C.
<b>Sensor</b>	DO Amperometric Gold / Silver
<b>Time Response</b>	10 sec.
<b>Power Supply</b>	230V ± 10% 50 Hz AC

**SPECIFICATIONS :-**

<b>Display</b>	Digital 3½ Digit, Bright LED.
<b>Display Mode</b>	% T , O.D. and 3 Concentration Modes C1 , C2 , C3
<b>Zero Adjustment</b>	Automatic ( Without Knob Rotation )
<b>Accuracy</b>	± 0.02 O.D.
<b>Light Source</b>	6.8 Volt, 0.3 Amp Tungsten Lamp
<b>Memory</b>	In built memory to retain Last "K" factor factor for concentration even after power loss.
<b>Sample Volume</b>	1 ml. Minimum.
<b>Power Supply</b>	230V ± 10% AC 50 Hz



**METZER – M DIGITAL DRY BATH  
INCUBATOR MODEL METZ – 904 M**



**METZER – M DIGITAL COLONY  
COUNTER MODEL METZ – 905 M**

**SPECIFICATIONS :-**

<b>Display</b>	LCD Display for time & temperature.
<b>Block size</b>	24 Holes for 12mm tubes
<b>Temperature Range</b>	+5 °C above ambient to 100°C
<b>Temperature Accuracy</b>	± 2°C
<b>Maximum heating power</b>	125 W
<b>Timer</b>	1 min to 99 min.
<b>Power Supply</b>	230 V ± 10% AC , 50Hz

**SPECIFICATIONS :-**

<b>Digital Display</b>	4 digit, LED display.
<b>Range</b>	0 – 9999 with 125 memory.
<b>Dish Size</b>	110 mm.
<b>Magnification</b>	x 1.7
<b>Power Supply</b>	230 V ± 10% AC , 50Hz
<b>Accessories</b>	Marking Pen (1 No.), Magnifier Lens (1 No.)



Manufactured by:  
**METZER OPTICAL INSTRUMENTS PVT. LTD.**

E-mail: [info@metzerlab.com](mailto:info@metzerlab.com), [delhi@metzeropto.com](mailto:delhi@metzeropto.com)

[www.metzerlab.com](http://www.metzerlab.com)