

# Automatic Identification Measurement



## **GDM-9052** 5 ½ Digit Dual Display Digital Multimeter

- \* 5 ½ Digit Display: 239,999 Counts Max.
- \* 4.3 TFT Graphic LCD & DCV Basic Accuracy: 0.012 %
- \* A. I. Measurement Offers Automatic Identification and Measurement for Voltage, Resistance, Diode and Continuity Tests Without the Need for Manual Selection
- \* 12 Different Measurement Functions: AC/DC Voltage, AC/DC Current, 2-wire/4-wire Resistance, Frequency, Period, Diode, Continuity, Capacitance and Temperature
- \* True RMS (AC, AC+DC) Measurements
- \* Dual Measurement Function to Providing Two Selected Measurement Simultaneously
- \* Many Math Functions: Max./Min., REL/REL#, Compare, Hold, dB, dBm, MX+B, %, 1/X
- \* Digital I/O Provides Dual Mode (Standard Compare and User Definition Modes)
- \* Standard Interfaces: RS-232C and USB Device (Support USB CDC and USB TMC Modes)

**SPECIFICATIONS (\*1)**

| Range (*2)                                  | Resolution | Input Resistance<br>etc. | Accuracy (*3)<br>1 Year (23 °C ± 5 °C) |
|---------------------------------------------|------------|--------------------------|----------------------------------------|
| DC Voltage                                  |            |                          |                                        |
| 200.000 mV                                  | 1 μV       | 10 MΩ or > 10 GΩ         | 0.012 + 8                              |
| 2.00000 V                                   | 10 μV      | 10 MΩ or > 10 GΩ         | 0.012 + 5                              |
| 20.0000 V                                   | 100 μV     | 11.1 MΩ                  | 0.012 + 5                              |
| 200.000 V                                   | 1 mV       | 10.1 MΩ                  | 0.012 + 5                              |
| 1000.00 V                                   | 10 mV      | 10 MΩ                    | 0.012 + 5                              |
| Resistance                                  |            |                          |                                        |
| 200.000 Ω                                   | 1 mΩ       | 1 mA                     | 0.05 + 8                               |
| 2.00000 kΩ                                  | 10 mΩ      | 1 mA                     | 0.05 + 5                               |
| 20.0000 kΩ                                  | 100 mΩ     | 100 μA                   | 0.05 + 5                               |
| 200.000 kΩ                                  | 1 Ω        | 10 μA                    | 0.05 + 5                               |
| 2.00000 MΩ                                  | 10 Ω       | 1 μA                     | 0.05 + 5                               |
| 10.0000 MΩ                                  | 100 Ω      | 0.5 μA                   | 0.30 + 5                               |
| 100.000 MΩ                                  | 1 kΩ       | 0.5 μA // 10 MΩ          | 3.00 + 8                               |
| DC Current                                  |            |                          |                                        |
| 20.0000 mA                                  | 100 nA     | 1 Ω                      | 0.05 + 15                              |
| 200.000 mA                                  | 1 μA       | 1 Ω                      | 0.05 + 5                               |
| 2.00000 A                                   | 10 μA      | 0.1 Ω                    | 0.20 + 5                               |
| 10.0000 A                                   | 100 μA     | 0.01 Ω                   | 0.20 + 5                               |
| Continuity                                  |            |                          |                                        |
| 2000.00 Ω                                   | 10 mΩ      | 1 mA                     | 0.05 + 5                               |
| Diode Test                                  |            |                          |                                        |
| 6.0000 V                                    | 100 μV     | 1 mA@ 6 V                | 0.05 + 15                              |
| Capacitance                                 |            |                          |                                        |
| 10.00 nF                                    | 0.01 nF    | 10 μA                    | 2.0 + 10                               |
| 100.0 nF                                    | 0.1 nF     | 10 μA                    | 2.0 + 4                                |
| 1.000 μF                                    | 0.001 μF   | 100 μA                   | 2.0 + 4                                |
| 10.00 μF                                    | 0.01 μF    | 1 mA                     | 2.0 + 4                                |
| 100.0 μF                                    | 0.1 μF     | 1 mA                     | 2.0 + 4                                |
| True RMS AC (or AC+DC – AC Coupled) Voltage |            |                          |                                        |
| 200.000 mV                                  | 1 μV       | 20 Hz to 45 Hz           | 1.0 + 100                              |
|                                             |            | 45 Hz to 10 kHz          | 0.3 + 100                              |
|                                             |            | 10 kHz to 30 kHz         | 1.5 + 300                              |
|                                             |            | 30 kHz to 100 kHz        | 5.0 + 300                              |
| 2.00000 V                                   | 10 μV      | 20 Hz to 45 Hz           | 1.0 + 100                              |
|                                             |            | 45 Hz to 10 kHz          | 0.2 + 100                              |
|                                             |            | 10 kHz to 30 kHz         | 1.0 + 100                              |
|                                             |            | 30 kHz to 100 kHz        | 3.0 + 200                              |
| 20.0000 V                                   | 100 μV     | 20 Hz to 45 Hz           | 1.0 + 100                              |
|                                             |            | 45 Hz to 10 kHz          | 0.2 + 100                              |
|                                             |            | 10 kHz to 30 kHz         | 1.0 + 100                              |
|                                             |            | 30 kHz to 100 kHz        | 3.0 + 200                              |
| 200.000 V                                   | 1 mV       | 20 Hz to 45 Hz           | 1.0 + 100                              |
|                                             |            | 45 Hz to 10 kHz          | 0.2 + 100                              |
|                                             |            | 10 kHz to 30 kHz         | 1.0 + 100                              |
|                                             |            | 30 kHz to 100 kHz        | 3.0 + 200                              |
| 750.00 V                                    | 10 mV      | 20 Hz to 45 Hz           | 1.0 + 100                              |
|                                             |            | 45 Hz to 10 kHz          | 0.2 + 100                              |
|                                             |            | 10 kHz to 30 kHz         | 1.0 + 100                              |
|                                             |            | 30 kHz to 100 kHz        | 3.0 + 200                              |
| True RMS AC (or AC+DC – AC Coupled) Current |            |                          |                                        |
| 20.0000 mA                                  | 100 nA     | 20 Hz to 45 Hz           | 1.5 + 100                              |
|                                             |            | 45 Hz to 2 kHz           | 0.5 + 100                              |
|                                             |            | 2 kHz to 10 kHz          | 2.0 + 200                              |
| 200.000 mA                                  | 1 μA       | 20 Hz to 45 Hz           | 1.5 + 100                              |
|                                             |            | 45 Hz to 2 kHz           | 0.5 + 100                              |
|                                             |            | 2 kHz to 10 kHz          | 2.0 + 200                              |
| 2.00000 A                                   | 10 μA      | 20 Hz to 45 Hz           | 1.5 + 100                              |
|                                             |            | 45 Hz to 2 kHz           | 0.5 + 100                              |
|                                             |            | 2 kHz to 10 kHz          | 2.0 + 200                              |
| 10.0000 A                                   | 100 μA     | 20 Hz to 45 Hz           | 1.5 + 100                              |
|                                             |            | 45 Hz to 2 kHz           | 1.0 + 100                              |
|                                             |            | 2 kHz to 10 kHz          | -----                                  |

## SPECIFICATIONS (\*1)

| Range (*2)                                                                             | Resolution | Input Resistance<br>etc. | Accuracy (*3)<br>1 Year (23 °C ± 5 °C) |
|----------------------------------------------------------------------------------------|------------|--------------------------|----------------------------------------|
| Frequency                                                                              |            |                          |                                        |
| (Voltage) 10 Hz to 1 MHz                                                               | -----      | -----                    | 0.01 + 3                               |
| (Current) 20 Hz to 10 kHz                                                              |            |                          |                                        |
| Temperature (Thermocouple)                                                             |            |                          |                                        |
| -200 °C to 0 °C                                                                        | 0.01 °C    | J / T / K                | 0.6 °C (typical)                       |
| 0 °C to +300 °C                                                                        |            |                          | 0.3 °C (typical)                       |
| Display                                                                                |            |                          |                                        |
| 4.3" TFT Graphic LCD                                                                   |            |                          |                                        |
| Interface                                                                              |            |                          |                                        |
| RS-232C, USB device (USBCDC & USBTMC), Digital I/O                                     |            |                          |                                        |
| Power Source                                                                           |            |                          |                                        |
| AC 100 V / 120 V / 220 V / 240 V ± 10 %, 50 Hz to 60 Hz ; Power Consumption Max. 30 VA |            |                          |                                        |
| Dimensions & Weight                                                                    |            |                          |                                        |
| 268 (W) mm x 107 (H) mm x 302 (D) mm ; Approx. 3.2 kg                                  |            |                          |                                        |

Note: \*1. All specifications are applicable to the single (1st) display only and warmed up for at least 30 minutes and operated in the slow rate.

\*2. 20 % overrange on all ranges, except 750 V / 10 A range

\*3. Accuracy: ± (% of Reading + Digits)

Specifications subject to change without notice.

GCM-9052GD1DS

## ORDERING INFORMATION

### GDM-9052 5 ½ Digit Dual Measurement Multimeter

#### ACCESSORIES :

Safety Instruction Sheet x 1, Power cord x 1, Test lead GTL-207A x 1

## OPTIONAL ACCESSORIES

|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| <b>GTL-108A</b> | 4Wire Test Lead (Kelvin Clip), Approx. 1100 mm                         |
| <b>GTL-205A</b> | Temperature probe adaptor with thermocouple (K-type), Approx. 1000 mm  |
| <b>GTL-232</b>  | RS-232 Cable, 9 pin F-F type, null modem for computer, Approx. 2000 mm |
| <b>GTL-246</b>  | USB Cable, A-B type, Approx. 1200 mm                                   |
| <b>GDM-TL1</b>  | Test Lead Set for All DMM                                              |
| <b>GSC-014</b>  | Soft Carrying Case for DMM Accessory                                   |
| <b>GRA-422</b>  | Rack Mount Kit (19" 2U)                                                |
| <b>GRA-454</b>  | Rack Mount Kit (19" 2U) for one set or two sets                        |

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