# LCR-1100/1010

## Handheld LCR Meter









## **FEATURES**

- \* 2.8" TFT Touch LCD
- \* 50,000 Counts Resolution on Primary and **Secondary Display**
- \* 0.2% Basic Accuracy
- \* Six or Eight Selectable Test Frequencies Depends on Model
- \* 15 Kinds Measurement Combinations Available
- \* Test Level Selectable: AC 0.3V/0.7V/1Vrms and DC +/- 1V
- \* Selectable Measurement Speed: Fast 10 Times/s, Slow 2.5 Times/s
- \* Auto LCZ Mode for Automatic Component Type **Identification and Measurement**
- \* Data Hold
- \* USB-HID/USB-VCOM Interfaces for Remote Communication
- \* Software for Datalogging is Available

GW Instek launches the new LCR-1000 Series, which is a handheld LCR meter with the automatic real-time test function. The series adopts TFT-LCD and provides a basic accuracy of 0.2%. Users can choose to use buttons or touch screen operations. The series, with high measurement accuracy and usability, is suitable for precision tests, including maintenance test, component production, schools/research institutes, and even quality test.

The LCR-1000 Series comprises 2 models. The LCR-1100 provides a test frequency up to 100 kHz, and the LCR-1010 provides a test frequency up to 10 kHz. The series provides selectable test voltages (0.3/0.7/1.0Vrms) and equivalent circuits (series/parallel) to automatically measure capacitance, inductance, resistance, reactance, impedance, quality factor, loss factor, phase and DC resistance.

The LCR-1000 Series, with 50,000 display counts for both main and auxiliary parameters and a basic accuracy of 0.2%, supports 2-wire or 5-wire measurement. Furthermore, the series also provides the comparison function and data retention function to meet various test and measurement requirements for different types of components.

The entire series is equipped with USB-HID and USB-VCOM interfaces. A simple and practical free PC software is provided and remote control commands (compatible with SCPI) are available for users to write their own personal software to meet the needs of data acquisition.

MODEL	LCR-1100	LCR-1010
Test Frequency	50/100/120Hz/1k/2k/10k/50k/100kHz	50/100/120Hz/1k/2k/10kHz
Display	Primary/Secondary : 50,000 counts	Primary/Secondary : 50,000 counts
Output Impedance	100Ω	100Ω
Basic Accuracy	0.2%	0.2%
Test Speed	Slow: 2.5 times/s, Fast: 10 times/s	Slow: 2.5 times/s, Fast: 10 times/s
Test Signal Level	0.3V/0.7V/1.0Vrms selectable	0.3V/0.7V/1.0Vrms selectable
Test Parameters	C-D, C-Q, C-R, L-D, L-Q, L-R, L-Rdc,	C-D, C-Q, C-R, L-D, L-Q, L-R, L-Rdc,
Test Farameters	R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z-θr, Z-θd	R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z-θr, Z-θd
Equivalent Circuit	Series / Parallel selectable	Series / Parallel selectable

#### **APPLICATIONS**

- \* Field Service
- \* Passive Component Trouble Shooting
- \* Electronic Assembly
- \* Incoming Inspection







TEST FREQUENCY
FULL SCALE  Main Display
Selectable   Selectable   Selectable
Source
Main Display 50,000 counts  Sub Display 5,0000 counts  CAPACITANCE ( C ) and DISSIPATION ( D )  C Display Range
Source
CAPACITANCE (C) and DISSIPATION (D) C Display Range
C Display Range $ \begin{array}{c} 1pF \sim 50mF \ depends \ on \ the \ selected \ test \ frequency \\ \pm (0.2\% \ rdg + 2 \ counts) \ \pm (3.0\% \ rdg + 10 \ counts) \\ \hline C \ Resolution & 0.001 pF - 0.001mF \ depends \ on \ selected \ range \\ \hline D \ Accuracy \ (De) & 0.002 \sim 0.03 \ depends \ on \ selected \ test \ frequency \ & \ range \\ \hline INDUCTANCE \ (L) \ and \ QUALITY FACTOR \ (Q) \\ L \ Display \ Range & 0.5 \mu - 1000H \ depends \ on \ the \ selected \ test \ frequency \\ \pm (0.2\% \ rdg + 2 \ counts) - \pm (2.5\% \ rdg + 10 \ counts) \\ L \ Resolution & 0.001 \mu H - 0.1 H \ depends \ on \ selected \ test \ frequency \ & \ range \\ \hline IMPEDANCE \ (Z) \ and \ PHASE \ ANGLE \ (\theta) & 0.002 \sim 0.08 \ depends \ on \ the \ selected \ test \ frequency \ & \ range \\ \hline IMPEDANCE \ (Z) \ and \ PHASE \ ANGLE \ (\theta) & 0.05 \Omega \sim 10 M \Omega \ depends \ on \ the \ selected \ test \ frequency \ & \ range \\ \hline IMPEDANCE \ (Z) \ and \ PHASE \ ANGLE \ (\theta) & 0.05 \Omega \sim 10 M \Omega \ depends \ on \ the \ selected \ test \ frequency \ & \ range \\ \hline Z \ Best \ Accuracy & \pm (0.2\% \ rdg + 2 \ counts) \sim \pm (3.0\% \ rdg + 20 \ counts) \\ Z \ Resolution & 0.0001 \Omega \sim 0.001 M \Omega \ depends \ on \ selected \ test \ frequency \ & \ range \\ \hline Z \ Best \ Accuracy \ (De) & 0.2^{\circ} \sim 2^{\circ} depends \ on \ the \ selected \ test \ frequency \ & \ range \\ \hline ESR \ is \ equal \ to \ the \ series \ equivalent \ resistance \ (Rs) \\ \hline Accuracy \ Formula & Rs_e \pm X_s * \sigma_e, X_s = 2\pi fl_n \ or \ 1/2\pi fC_s; \ \sigma_e = \theta e * \pi/180 \\ \hline Parallel \ equivalent \ resistance \\ \hline Accuracy \ Formula & Rs_e \pm X_s * \sigma_e / D_e \neq \sigma_e \\ \hline DC \ RESISTANCE \\ \hline Display \ Range & 0.05\Omega \sim 10 M \Omega \\ \hline Best \ Accuracy \ from \ value \ frequency \ selected \ range \\ \hline MESUREMENT \ CIRCUIT \\ \hline Parallel \ or \ Series \ selectable \\ \hline AUTO \ LCZ \ MODE \\ \hline \pm 10\%, \pm 5\%, \pm 10\%, \pm 20\%, \ Input\%$
C Resolution $0.001 \text{pF} \sim 0.001 \text{ mF}$ depends on selected test frequency & range   0.002 − 0.03 depends on the selected test frequency & range   0.001 \text{mINDUCTANCE (L) and QUALITY FACTOR (Q)}   0.002 − 0.03 depends on the selected test frequency & range   0.5 \text{μH} − 1000 \text{μH} depends on the selected test frequency   0.002 \text{minDuCTANCE (L) and QUALITY FACTOR (Q)}   0.001 \text{μH} − 0.000 \text{μH} depends on the selected test frequency   0.001 \text{μH} − 0.001 \text{μH} − 0.010 \text{μH} − 0.010 \text{μH} depends on selected range   0.001 \text{μH} − 0.001 \text{μH} − 0.010 \text{μH} depends on selected range   0.002 \text{μMPEDANCE (Z) and PHASE ANGLE (θ)}   0.002 − 0.08 depends on the selected test frequency & range   0.05Ω − 10 \text{μMD depends on selected frequency}   0.002 \text{μMPEDANCE (Z) and PHASE ANGLE (θ)}   0.0001 \text{μC} − 0.001 \text{μD mD mD depends on selected frequency}   0.0001 \text{μC} − 0.001 \text{μD mD mD depends on selected frequency}   0.0001 \text{μD mD mD depends on selected frequency}   0.0001 \text{μD mD mD mD depends on selected frequency}   0.0001 μD mD
C Resolution 0.001pF – 0.001mF depends on selected range D Accuracy (De) 0.002 ~ 0.03 depends on the selected test frequency & range INDUCTANCE (L) and QUALITY FACTOR (Q) 1.01pd Agange 0.5μH ~ 1000H depends on the selected test frequency $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) - \pm (2.5\% \text{ rdg} + 10 \text{ counts})$ 1. Resolution 0.001μH ~ 0.1H depends on selected range Q Accuracy (Qe) 0.002 ~ 0.08 depends on the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) and PHASE ANGLE (θ) 7. The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the selected test frequency & range IMPEDANCE (Z) The properties of the sel
D Accuracy (De)
INDUCTANCE ( L ) and QUALITY FACTOR ( Q )  L Display Range
L Display Range
L Best Accuracy $\pm (0.2\% \ rdg + 2 \ counts) - \pm (2.5\% \ rdg + 10 \ counts)$ L Resolution $0.001\mu H - 0.1H \ depends on selected range$ Q Accuracy (Qe) $0.002 \sim 0.08 \ depends on the selected test frequency \& range$ IMPEDANCE ( Z ) and PHASE ANGLE ( Θ)  Z Display Range $0.05\Omega \sim 10 M\Omega \ depends on the selected test frequency$ Z Best Accuracy $\pm (0.2\% \ rdg + 2 \ counts) - \pm (3.0\% \ rdg + 20 \ counts)$ Z Resolution $0.0001\Omega - 0.001 \ M\Omega \ depends on selected range$ $\Theta \ Accuracy (Θe)$ $0.2^{\circ} \sim 2^{\circ} depends on the selected test frequency & range$ ESR and $\emptyset$ ESR is equal to the series equivalent resistance (Rs)  Accuracy Formula $R_s = \pm X_s * \phi_s; X_s = 2\pi RL_s \text{ or } 1/2\pi RC_s; \phi_s = \Theta e * \pi/180$ Parallel equivalent resistance  Accuracy Formula $R_p = \pm R_p * \phi_s / D_e * \phi_s$ DC RESISTANCE  Display Range $0.05\Omega \sim 10 M\Omega$ Best Accuracy $\pm (0.2\% \ rdg + 2 \ counts) \sim \pm (3.0\% \ rdg + 5 \ counts)$ Resolution $0.0001\Omega \sim 0.001 M\Omega \ depends on selected range$ MEASUREMENT CIRCUIT  Parallel or Series selectable  Automatically identifies and measures the DUT when the meter is switch on SORTING MODE $\pm 10.2\% \ rdg + 2.0\%, \ liput \%$
L Best Accuracy $\pm (0.2\% \ rdg + 2 \ counts) - \pm (2.5\% \ rdg + 10 \ counts)$ L Resolution $0.001\mu H - 0.1H \ depends on selected range$ Q Accuracy (Qe) $0.002 \sim 0.08 \ depends on the selected test frequency \& range$ IMPEDANCE ( Z ) and PHASE ANGLE ( Θ)  Z Display Range $0.05\Omega \sim 10 M\Omega \ depends on the selected test frequency$ Z Best Accuracy $\pm (0.2\% \ rdg + 2 \ counts) - \pm (3.0\% \ rdg + 20 \ counts)$ Z Resolution $0.0001\Omega - 0.001 \ M\Omega \ depends on selected range$ $\Theta \ Accuracy (Θe)$ $0.2^{\circ} \sim 2^{\circ} depends on the selected test frequency & range$ ESR and $\emptyset$ ESR is equal to the series equivalent resistance (Rs)  Accuracy Formula $R_s = \pm X_s * \phi_s; X_s = 2\pi RL_s \text{ or } 1/2\pi RC_s; \phi_s = \Theta e * \pi/180$ Parallel equivalent resistance  Accuracy Formula $R_p = \pm R_p * \phi_s / D_e * \phi_s$ DC RESISTANCE  Display Range $0.05\Omega \sim 10 M\Omega$ Best Accuracy $\pm (0.2\% \ rdg + 2 \ counts) \sim \pm (3.0\% \ rdg + 5 \ counts)$ Resolution $0.0001\Omega \sim 0.001 M\Omega \ depends on selected range$ MEASUREMENT CIRCUIT  Parallel or Series selectable  Automatically identifies and measures the DUT when the meter is switch on SORTING MODE $\pm 10.2\% \ rdg + 2.0\%, \ liput \%$
L Resolution 0.001 μH ~ 0.1H depends on selected range Q Accuracy (Qe) 0.002 ~ 0.08 depends on the selected test frequency & range IMPEDANCE ( Z ) and PHASE ANGLE ( θ )  Z Display Range 0.05 $\Omega$ ~ 10M $\Omega$ depends on the selected test frequency Z Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) - \pm (3.0\% \text{ rdg} + 20 \text{ counts})$ Z Resolution 0.0001 $\Omega$ ~ 0.001M $\Omega$ depends on selected range 0.2° ~ 2°depends on the selected test frequency & range ESR and Ø ESR is equal to the series equivalent resistance (Rs)  Accuracy Formula $R_s = \pm X_s * s_s : X_s = 2\pi f f_s \text{ or } 1/2\pi f C_s : s_e = \theta e * \pi/180$ Parallel equivalent resistance  Accuracy Formula $R_p = \pm R_p * s_e / D_e * \pi s_e$ DC RESISTANCE  Display Range $0.05\Omega \sim 10M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) = \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001M\Omega$ depends on selected range  MEASUREMENT CIRCUIT  Parallel or Series selectable  Automatically identifies and measures the DUT when the meter is switch on SORTING MODE $\pm 1\%_c \pm 5\%_c \pm 10\%_c \pm 20\%_c \text{ Input}\%$
Q Accuracy (Qe) $0.002 - 0.08$ depends on the selected test frequency & range IMPEDANCE ( Z ) and PHASE ANGLE ( θ )  Z Display Range $0.05\Omega \sim 10 M\Omega$ depends on the selected test frequency  Z Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 20 \text{ counts})$ Z Resolution $0.0001\Omega \sim 0.001 M\Omega$ depends on selected range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ depends on selected range $0.2\% \sim 2\%$ depends on selected range $0.2\% \sim 2\%$ depends on selected range $0.2\% \sim 2\%$ depends on $0.2\% \sim 2\%$ depends on selected range $0.2\% \sim 2\%$ depends on $0.2\% \sim 2\%$
IMPEDANCE ( Z ) and PHASE ANGLE ( θ )  Z Display Range $0.05\Omega \sim 10 \text{M}\Omega$ depends on the selected test frequency  Z Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 20 \text{ counts})$ Z Resolution $0.0001\Omega \sim 0.001 \text{M}\Omega$ depends on selected range $\theta \text{ Accuracy }(\theta \text{ e})$ $0.2^{\circ} \sim 2^{\circ}$ depends on the selected test frequency & range  ESR and $\theta$ ESR is equal to the series equivalent resistance (Rs)  Accuracy Formula $\text{Rs}_e = \pm \text{X}_x * \theta_e; \text{X}_x = 2\pi \text{fl}_x \text{ or } 1/2\pi \text{fC}_x; \theta_e = \theta e * \pi/180$ Parallel equivalent resistance  Accuracy Formula $\text{Rpe} = \pm \text{R}_p * \theta_e / \text{D}_e * \theta_e$ DC RESISTANCE  Display Range $0.05\Omega \sim 10 \text{M}\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.0011\Omega \Omega$ depends on selected range  MEASUREMENT CIRCUIT  Parallel or Series selectable  AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE
Z Display Range $0.05\Omega \sim 10 \text{M}\Omega$ depends on the selected test frequency $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 20 \text{ counts})$ Z Resolution $0.0001\Omega \sim 0.001 \text{M}\Omega$ depends on selected range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ range $0.2\% \sim 2\%$ depends on the selected test frequency & range $0.2\% \sim 2\%$ range $0.2\% \sim 2\%$ depends on the series equivalent resistance (Rs)  Accuracy Formula $0.2\% \sim 2\%$ range $0$
Z Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 20 \text{ counts})$ Z Resolution $0.0001\Omega \sim 0.001M\Omega$ depends on selected range         Θ Accuracy (Θe) $0.2^{\circ} \sim 2^{\circ}$ depends on the selected test frequency & range         ESR and Ø       ESR is equal to the series equivalent resistance (Rs)         Accuracy Formula $Rs_e = \pm X_x * ø_e; X_x = 2\pi fL_x \text{ or } 1/2\pi fC_x; ø_e = \Theta * \pi/180$ Accuracy Formula       Parallel equivalent resistance         Accuracy Formula $Rpe = \pm R_p * ø_e / D_e * Ø_e$ DC RESISTANCE       Display Range         Display Range $0.05\Omega \sim 10M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001M\Omega$ depends on selected range         MEASUREMENT CIRCUIT       Parallel or Series selectable         AUTO LCZ MODE       Automatically identifies and measures the DUT when the meter is switch on         SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%, \ln put\%$
Z Resolution $0.0001\Omega \sim 0.001M\Omega$ depends on selected range         θ Accuracy (θe) $0.2^{\circ} \sim 2^{\circ}$ depends on the selected test frequency & range         ESR and $\emptyset$ ESR is equal to the series equivalent resistance (Rs)         Accuracy Formula $Rs_e = \pm X_x \times g_e$ ; $X_x = 2\pi fl_x$ or $1/2\pi fC_x$ ; $g_e = \theta e \times \pi/180$ Parallel equivalent resistance       Parallel equivalent resistance         Accuracy Formula $Rpe = \pm R_p \times g_e / D_e \neq g_e$ DC RESISTANCE       Display Range         Display Range $0.05\Omega \sim 10M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001M\Omega$ depends on selected range         MEASUREMENT CIRCUIT       Parallel or Series selectable         AUTO LCZ MODE       Automatically identifies and measures the DUT when the meter is switch on         SORTING MODE $\pm 1\%$ , $\pm 5\%$ , $\pm 10\%$ , $\pm 20\%$ , Input%
$ \theta \  \   \   \  \  \  \  \  \  \  \  \ $
ESR and $\emptyset$ ESR is equal to the series equivalent resistance (Rs)  Accuracy Formula  Rs <sub>e</sub> = ± X <sub>x</sub> × $\varphi_e$ ; $X_x = 2\pi f L_x$ or $1/2\pi f C_x$ ; $\varphi_e = \theta e * \pi/180$ Parallel equivalent resistance  Accuracy Formula  Rpe = ± R <sub>p</sub> * $\varphi_e$ / D <sub>e</sub> $\neq \varphi_e$ DC RESISTANCE  Display Range  0.05Ω ~ 10MΩ  Best Accuracy  ± (0.2% rdg+ 2 counts) ~ ± (3.0% rdg + 5 counts)  Resolution  0.0001Ω ~ 0.001MΩ depends on selected range  MEASUREMENT CIRCUIT  Parallel or Series selectable  AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE  ±1%,±5%,±10%,±20%, Input%
ESR is equal to the series equivalent resistance (Rs)  Rs <sub>e</sub> = ± X <sub>x</sub> × $\varphi_e$ ; X <sub>x</sub> = 2πfL <sub>x</sub> or 1/2πfC <sub>x</sub> ; $\varphi_e$ = θe * π/180  Parallel equivalent resistance  Rccuracy Formula Rpe = ± R <sub>p</sub> × $\varphi_e$ / D <sub>e</sub> $\neq \varphi_e$ DC RESISTANCE  Display Range 0.05Ω ~ 10MΩ  Best Accuracy ± (0.2% rdg+ 2 counts) ~ ± (3.0% rdg + 5 counts)  Resolution 0.0001Ω ~ 0.001MΩ depends on selected range  MEASUREMENT CIRCUIT  Parallel or Series selectable  AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%$ , Input%
Accuracy Formula $Rs_e = \pm X_x * \varnothing_e; X_x = 2\pi fL_x \text{ or } 1/2\pi fC_x; \varnothing_e = \Theta e * \pi/180$ $Parallel \ equivalent \ resistance$ $Rpe = \pm R_p * \varnothing_e / D_e \neq \varnothing_e$ $DC \ RESISTANCE$ $Display \ Range$ $0.05\Omega \sim 10M\Omega$ $Best \ Accuracy$ $\pm (0.2\% \ rdg + 2 \ counts) \sim \pm (3.0\% \ rdg + 5 \ counts)$ $Resolution$ $0.0001\Omega \sim 0.001 M\Omega \ depends \ on \ selected \ range$ $MEASUREMENT \ CIRCUIT$ $Parallel \ or \ Series \ selectable$ $AUTO \ LCZ \ MODE$ $Automatically \ identifies \ and \ measures \ the \ DUT \ when \ the \ meter \ is \ switch \ on$ $SORTING \ MODE$ $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%, \ Input\%$
Parallel equivalent resistance  Accuracy Formula $Rpe = \pm R_p * Ø_e / D_e \neq Ø_e$ DC RESISTANCE  Display Range $0.05\Omega \sim 10M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001 M\Omega \text{ depends on selected range}$ MEASUREMENT CIRCUIT $Parallel \text{ or Series selectable}$ AUTO LCZ MODE $Automatically \text{ identifies and measures the DUT when the meter is switch on}$ SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%, \text{ Input}\%$
Accuracy Formula $Rpe = \pm R_p * ø_e / D_e \mp ø_e$ DC RESISTANCE         Display Range $0.05\Omega \sim 10M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001M\Omega$ depends on selected range         MEASUREMENT CIRCUIT         Parallel or Series selectable         AUTO LCZ MODE         Automatically identifies and measures the DUT when the meter is switch on         SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%$ , Input%
DC RESISTANCE         Display Range $0.05\Omega \sim 10 M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001 M\Omega$ depends on selected range         MEASUREMENT CIRCUIT         Parallel or Series selectable         AUTO LCZ MODE         Automatically identifies and measures the DUT when the meter is switch on         SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%$ , Input%
Display Range $0.05\Omega \sim 10 M\Omega$ Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001 M\Omega$ depends on selected range         MEASUREMENT CIRCUIT         Parallel or Series selectable         AUTO LCZ MODE         Automatically identifies and measures the DUT when the meter is switch on         SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%$ , Input%
Best Accuracy $\pm (0.2\% \text{ rdg} + 2 \text{ counts}) \sim \pm (3.0\% \text{ rdg} + 5 \text{ counts})$ Resolution $0.0001\Omega \sim 0.001 M\Omega$ depends on selected range         MEASUREMENT CIRCUIT         Parallel or Series selectable         AUTO LCZ MODE         Automatically identifies and measures the DUT when the meter is switch on         SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%, \ln put\%$
Resolution $0.0001\Omega \sim 0.001 M\Omega$ depends on selected range  MEASUREMENT CIRCUIT  Parallel or Series selectable  AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%$ , Input%
Parallel or Series selectable  AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE  ±1%,±5%,±10%,±20%, Input%
Parallel or Series selectable  AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%, \text{ Input}\%$
AUTO LCZ MODE  Automatically identifies and measures the DUT when the meter is switch on  SORTING MODE  ±1%,±5%,±10%,±20%, Input%
Automatically identifies and measures the DUT when the meter is switch on SORTING MODE $\pm 1\%, \pm 5\%, \pm 10\%, \pm 20\%, \ Input\%$
SORTING MODE ±1%,±5%,±10%,±20%, Input%
±1%,±5%,±10%,±20%, Input%
OTHER FUNCTIONS
Auto range, Backlight, Data hold, Zero, Auto power off
DISPLAY
2.8 Color LCD display (touch operation available)
INTERFACE
USB (type C)
POWER SOURCE
Rechargeable lithium battery (8.4V)
DIMENSIONS & WEIGHT
$90(W) \times 195(H) \times 41(D)$ mm, Approx. 380g Specifications subject to change without notice. LCR-1100/1010_ID1

### ORDERING INFORMATION

# LCR-1100 100kHz Hand-held LCR Meter

#### **ACCESSORIES**

User manual, Safety Instruction Sheet, Rechargeable Lithium battery (LCR-305), Kelvin Clip (LCR-101), Short circuit bar (LCR-100), USB Cable Type A-C (LCR-205), Carry bag (LCR-503), Tweezers Test fixture (LCR-108)

Specifications subject to change without notice.

LCR-1100/1010\_ID1DH

#### **ORDERING INFORMATION**

LCR-1010 10kHz Hand-held LCR Meter

#### **ACCESSORIES**

User manual, Safety Instruction Sheet, Rechargeable Lithium battery (LCR-305), Kelvin Clip (LCR-101), Short circuit bar (LCR-100), USB Cable Type A-C (LCR-205), Carry bag (LCR-503)

# OPTIONAL ACCESSORIES

LCR-108 Test fixture (Tweezers) for SMD/Chip Components

