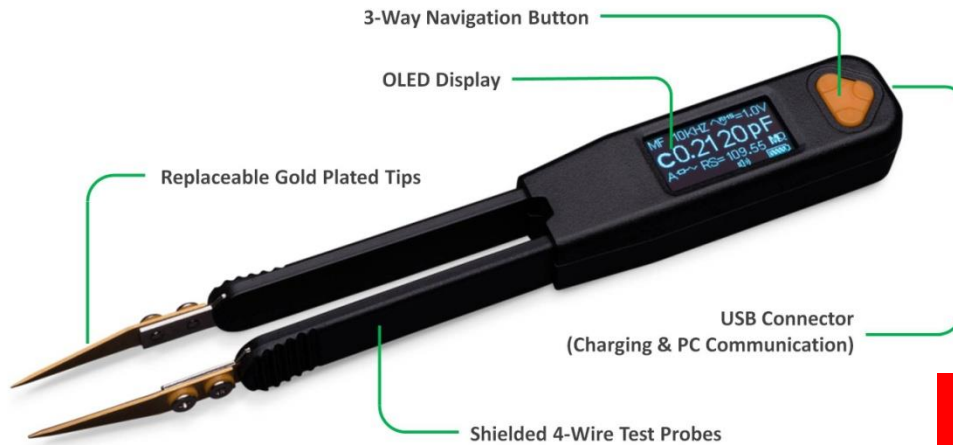


LCR Pro1/Pro1 Plus

World's first tweezer-style LCR meter with 0.1% accuracy and PC connectivity

The LCR Pro1/Pro1 Plus integrate a pair of tweezers like probes and a LCR meter into one compact, lightweight, battery powered device. It is an all-in-one miniature device that provides a simple and efficient solution for not only measuring SMD components, but also making in-circuit debugging.

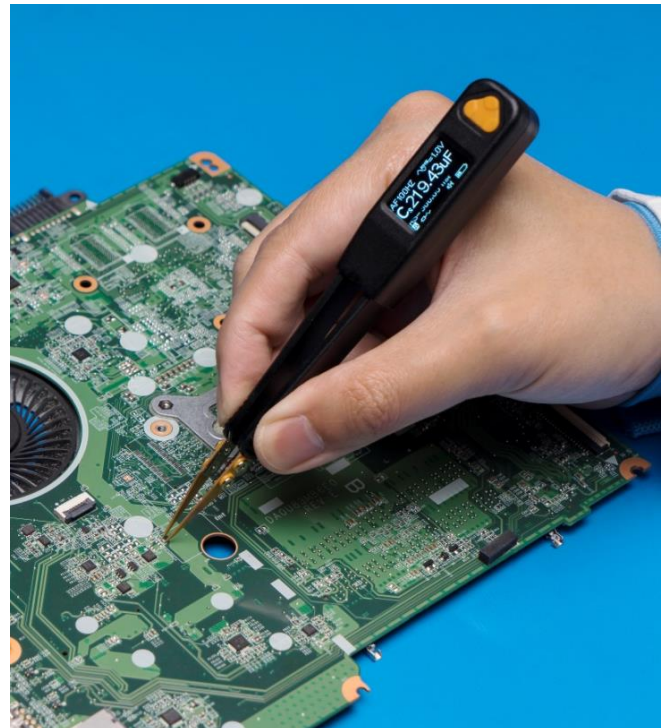


Made in Canada

Key Features and Benefits

- **Multiple measurement functions**
 - R, L, C, Z, ESR, DCR, D, Q, θ , diode
- **High accuracy**
 - R: 0.1%, L: 0.2%, C: 0.2%
- **5 test frequencies**
 - 100Hz, 120Hz, 1kHz, 10kHz, 100kHz
- **3 test voltages**
 - 0.2Vrms, 0.5Vrms, 1.0Vrms
- **Fully auto/manual selection**
- **Wide measurement range**
 - R: 20m Ω to 10M Ω
 - C: 0.1pF to 10mF
 - L: 10nH to 1H
- **Small size**
 - L * W * H: 151 x 19 x 15mm
- **Large OLED display**
 - 0.96", 128 * 64 resolution
- **Ultra precise gold plated tips**
- **USB charging**
 - 2.5 hours charging time, all day battery life
- **PC remote control for data logging, parameter setting and programming***

* Require LCR Link1 (purchase separately)



A Breakthrough in Accuracy

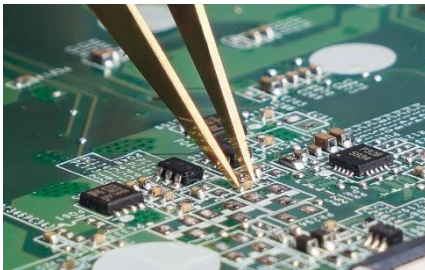
LCR Pro1/Pro1 Plus deliver high accuracy once found only in high-end desktop LCR meters. It provides basic accuracy 0.1% for resistance and 0.2% for capacitance and inductance with 5-digit resolution. Each device is fully calibrated during production and shipped with NIST (National Institute of Standards and Technology) traceable calibration certificate.

The test frequencies can be selected from 100Hz to 100kHz. 100kHz is ideal for measuring small inductance under 1uH. The test voltage can be selected from 0.2Vrms to 1.0Vrms.

1.0Vrms allows precision measurements of ceramic capacitors with high dielectric constant (K), such as X5R type. 0.2Vrms is specially designed for in-circuit debugging because it is low enough to prevent the silicon chips from being active during measurement.



Ultra-Precise Tips



The redesigned gold-plated tips are more precise than ever. You can use them to pick up and measure SMD components quickly and reliably, even for the most tiny parts with 01005 size.

Thanks to the sharp tips, you can easily reach the component under test without touching the adjacent components during in-circuit troubleshooting even in a very crowded area.

PC Communication

LCR Pro1/Pro1 Plus make measurement and charge battery simultaneously when it connects to PC via the LCR Link1, a USB dongle style communication module.

The Link1 is built with a fully integrated isolation technology for delivering power and data safely and blocking the noise from PC effectively. Therefore it ensures that the device performance and accuracy don't get degraded when it is connected to PC.



Multiple Functions



LCR Pro1/Pro1 Plus are able to test additional component parameters such as ESR, DCR, D, Q, θ , etc. They can also test diode and indicate polarity and forward voltage/current.

LCR Pro1 Plus offers an additional LED testing function. In LED testing, it lights up the LED and displays its electrical parameters, such as polarity, voltage and current. When testing bi-directional LEDs, the electrical parameters will be displayed in each direction.

Tech Specs

Product Characteristics

Dimensions (L x W x H)	151 x 19 x 15 mm
Weight	30 grams
Display	0.96-inch, 128x64 OLED display
Battery	150 mAH internal lithium-ion polymer battery
Battery Life	1 day in typical measurement ⁽¹⁾
Charging Source	USB port USB power adapter (output voltage DC 5V ± 5%)
Charging Time	2.5 hours (typical)
Safety and EMC Compliance	IEC61000-4-2 - ESD (4 kV Contact, 8 kV Air) EN 61000-4-3 - Radiated Immunity IEC61000-4-8 - Magnetic Field Immunity FCC15/EN 55011/ICES-003 - Class B, Radiated Emissions FCC15 Class B Conducted Emissions

Testing Signal Specifications

Testing Frequency	100Hz, 120Hz, 1kHz, 10kHz, 100kHz
Testing Frequency Accuracy	50 ppm (0.005%)
Testing Signal Level	0.2Vrms/0.5Vrms/1.0Vrms, +/- 5% sine wave
Source Impedance	100Ω ± 1%

Measurement Ranges and Optimal Testing Frequency

Parameter	Measurement range	Optimal testing frequency
Resistance	20mΩ to 10MΩ	1kHz
Capacitance	0.1pF to 40nF	10kHz
	40nF to 40uF	1kHz
	40uF to 10mF	100Hz
Inductance	10nH to 1uH	100kHz
	1uH to 1mH	10kHz
	1mH to 100mH	1kHz
	100mH to 1H	100Hz

LCR Pro1/Pro1 Plus Resistance Accuracy Specification (at 1.0Vrms test voltage)

Range	Resolution	Accuracy = $A_z + \text{Offset}$				
		100Hz	120Hz	1kHz	10kHz	100kHz
1000mΩ	0.01mΩ	0.5% + 20mΩ	0.5% + 20mΩ	0.5% + 20mΩ	0.5% + 20mΩ	1.0% + 20mΩ
10Ω	0.0001Ω	0.3% + 0.02Ω	0.3% + 0.02Ω	0.3% + 0.02Ω	0.3% + 0.02Ω	0.7% + 0.02Ω
100Ω	0.001Ω	0.2% + 0.03Ω	0.2% + 0.03Ω	0.2% + 0.03Ω	0.2% + 0.03Ω	0.5% + 0.03Ω
1000Ω	0.01Ω	0.2% + 0.3Ω	0.2% + 0.3Ω	0.2% + 0.3Ω	0.2% + 0.3Ω	0.3% + 0.3Ω
10kΩ	0.0001kΩ	0.2% + 0.003kΩ	0.2% + 0.003kΩ	0.1% + 0.003kΩ	0.2% + 0.003kΩ	0.5% + 0.003kΩ
100kΩ	0.001kΩ	0.1% + 0.05kΩ	0.1% + 0.05kΩ	0.1% + 0.05kΩ	0.1% + 0.05kΩ	---
1000kΩ	0.01kΩ	0.3% + 0.5kΩ	0.3% + 0.5kΩ	0.3% + 0.5kΩ	0.3% + 0.5kΩ	---
10MΩ	0.0001MΩ	2.0% + 0.008MΩ	2.0% + 0.008MΩ	2.0% + 0.008MΩ	---	---

LCR Pro1/Pro1 Plus Capacitance Accuracy Specifications (at 1.0Vrms test voltage)

Range	Resolution	Accuracy = $A_c + \text{Offset}$				
		100Hz	120Hz	1kHz	10kHz	100kHz
10pF	0.0001pF	---	---	---	1.0% + 0.05pF	2.5% + 0.2pF
100pF	0.001pF	---	---	---	0.8% + 0.2pF	2.0% + 0.2pF
1000pF	0.01pF	---	---	0.5% + 0.5pF	0.5% + 0.3pF	2.0% + 1.0pF
10nF	0.0001nF	---	---	0.5% + 0.003nF	0.5% + 0.003nF	0.7% + 0.01nF
100nF	0.001nF	---	---	0.2% + 0.03nF	0.2% + 0.03nF	1.0% + 0.1nF
1000nF	0.01nF	---	---	0.2% + 0.3nF	0.2% + 0.3nF	---
10uF	0.0001uF	0.3% + 0.003uF	0.3% + 0.003uF	0.2% + 0.003uF	---	---
100uF	0.001uF	0.3% + 0.03uF	0.3% + 0.03uF	0.5% + 0.03uF	---	---
1000uF	0.01uF	0.5% + 0.5uF	0.5% + 0.5uF	---	---	---
10mF	0.0001mF	0.8% + 0.005mF	0.8% + 0.005mF	---	---	---

LCR Pro1/Pro1 Plus Inductance Accuracy Specifications (at 1.0Vrms test voltage)

Range	Resolution	Accuracy = $A_L + \text{Offset}$				
		100Hz	120Hz	1kHz	10kHz	100kHz
1000nH (Pro1)	0.01nH	---	---	---	---	2.5% + 10nH
1000nH (Pro1 Plus)	0.01nH	---	---	---	---	2.5% + 5nH
10uH (Pro1)	0.0001uH	---	---	---	1.0% + 0.01uH	2.5% + 0.02uH
10uH (Pro1 Plus)	0.0001uH	---	---	---	1.0% + 0.01uH	2.0% + 0.01uH
100uH	0.001uH	---	---	---	0.7% + 0.03uH	2.0% + 0.2uH
1000uH	0.01uH	---	---	0.5% + 0.3uH	0.5% + 0.3uH	0.8% + 2.0uH
10mH	0.0001mH	---	---	0.2% + 0.003mH	0.5% + 0.003mH	---
100mH	0.001mH	0.5% + 0.03mH	0.5% + 0.03mH	0.2% + 0.03mH	0.5% + 0.03mH	---
1000mH	0.01mH	0.2% + 0.3mH	0.2% + 0.3mH	0.5% + 0.3mH	---	---

LCR Pro1 Plus LED Testing Accuracy Specifications

	Range
Max Test Voltage	2.95V +/- 5%
Typical Test Current	0.5mA
Voltage Accuracy	4% + 20mV

Learn more at: www.lcrresearch.com
 Or email us at: sales@lcrresearch.com