A New Series of LCR Meters to Meet Your Applications

New LCR METER Models IM3523, IM3533, and IM3533-01 are highly cost-effective testers that provide greater performance and better functionality than previous HIOKI models, such as a high basic accuracy of ±0.05%, a wide measurement frequency from 1 mHz (40 Hz for the IM3523) to 200 kHz, high-speed measurement of up to 2 ms, highly reliable measurement using the contact-check function, and measurement of turn ratio and mutual inductance. Select the best model according to your application, from production lines to research and development.
# LCR Meter Series Full Product Lineup

<table>
<thead>
<tr>
<th>Model</th>
<th>Measurement speed (Basic value)</th>
<th>Measurement capabilities/ Frequency range</th>
<th>Applications and measurement object</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCR METER IM3533-01</td>
<td>2ms</td>
<td>DC 1mHz 200kHz</td>
<td>High-end model of the IM3523 and IM3533 with sweep measurement For electrochemistry applications, research and development and production lines of electronic components</td>
</tr>
<tr>
<td>LCR METER IM3533</td>
<td>2ms</td>
<td>DC 1mHz 200kHz</td>
<td>Capable of special measurements of transformers including turn ratio and mutual inductance Particularly useful in production lines and research and development of transformers, coils, etc.</td>
</tr>
<tr>
<td>LCR METER IM3523</td>
<td>2ms</td>
<td>DC 40Hz 200kHz</td>
<td>Extremely cost-effective model suitable for production lines including integration into automated machinery For C-D and ESR measurement of electrolytic capacitors and L-Q and DCR measurement of inductors</td>
</tr>
<tr>
<td>LCR HiTESTER 3535</td>
<td>6ms</td>
<td>DC 4Hz 100kHz 120MHz</td>
<td>High-frequency measurement at 120 MHz Ideal for production lines of ferrite beads and inductors *Requires the 9700-10 Head Amp</td>
</tr>
<tr>
<td>IMPEDANCE ANALYZER IM3570</td>
<td>0.5ms</td>
<td>DC 4Hz 5MHz</td>
<td>LCR meter integrated with impedance analyzer Measure the frequency characteristics of piezo-electric devices, functional polymer capacitors, and power inductors</td>
</tr>
<tr>
<td>IMPEDANCE ANALYZER IM3590</td>
<td>2ms</td>
<td>DC 1mHz 200kHz</td>
<td>LCR meter integrated with impedance analyzer Measure electrochemical components and materials, batteries, and EDLCs</td>
</tr>
<tr>
<td>LCR HiTESTER 3532-50</td>
<td>5ms</td>
<td>DC 42Hz 5MHz</td>
<td>General-purpose LCR meter at 5 MHz Measure electronic components such as capacitors and inductors</td>
</tr>
<tr>
<td>LCR HiTESTER 3511-50</td>
<td>5ms</td>
<td>DC 120Hz 1kHz</td>
<td>Compact LCR meter with single function For production lines of aluminum electrolytic capacitors</td>
</tr>
<tr>
<td>C METER 3506-10</td>
<td>1.5ms</td>
<td>DC 1kHz 1MHz</td>
<td>C meter for low-capacity capacitors Ideal for testing taping machines and sorters</td>
</tr>
<tr>
<td>C HITESTER 3504-40/50/60</td>
<td>2ms</td>
<td>DC 120Hz 1kHz</td>
<td>C meter for large-capacity MLCCs For sorting machines of large-capacity MLCCs (3504-50/60) and taping machines (3504-40)</td>
</tr>
</tbody>
</table>
**LCR METER IM3523**

Ideal for Production Lines and Automated Testing

- ±0.05% accuracy with wide measurement range (DCR testing, 40Hz to 200kHz, 5mV to 5V, 10uA to 50mA)
- Non-stop testing over mixed measurement conditions such as C-D and ESR at 10 times the speed of previous models
- Built-in comparator and BIN functions
- Rapid 2msec test time

**LCR METER IM3533/IM3533-01**

From R&D Applications to Windings, Coil and Transformer Manufacturing

- ±0.05% accuracy with wide measurement range (DC testing, 1mHz to 200kHz, 5mV to 5V, 10uA to 50mA)
- Non-stop testing over mixed measurement conditions such as C-D and ESR at 10 times the speed of previous models
- Built-in low impedance high precision mode effective for testing lowinductance or the ESR of aluminum electrolysis capacitance (10x the measurement speed and dramatic improvements in repeatability and stability over the previous model 3522-50)
- Dedicated modes for measuring transformer winding ratio, mutual inductance and temperature compensated DCR
- Frequency sweep testing (IM3533-01 only)
- 2m/4m cable setting in addition to the standard 0m/1m (IM3533-01 only)
- Built-in comparator and BIN functions
- Rapid 2msec test time

---

**Basic Specifications** (Accuracy guaranteed for 1 year)

**IM3523**

- **Measurement modes**: LCR, Continuously Testing
- **Measurement parameters**: Z, Y, Rp, DCR (DC resistance), X, G, B, Cs, Cp, Ls, Lp, D (tanδ), Q
- **Displayable range**: Z, Y, Rp, D, Rp, X, G, B, Rs, Cp, Ls, Lp, D (tanδ), Q
- **Output impedance**: Normal mode: 100 Ω
- **Display**: Multimode LCD
- **Measurement time**: 2 ms (1kHz, FAST, representative value)
- **Functions**: Comparator, Classification measurement (BIN function), Panel loading/saving, Memory function

**Options**

- **Four-terminal probe**
- **DC bias voltage unit**
- **DC bias current unit**
- **LAN interface**
- **RS-232C interface**
- **SMD test fixture (direct connection type, DC to 5 MHz)**
- **Test fixture (direct connection type, DC to 5 MHz)**
- **Pinch probe (cable length 1m, DC to 5 MHz)**
- **Four-terminal probe (DC to 5 MHz)**
- **GP-IB connection cable (2 m)**

**IM3533/IM3533-01**

- **Measurement modes**: LCR, Transformer testing (N, M, θ), Continuous testing (LCR mode)
- **Measurement parameters**: Z, Y, Rp, D, Rp, X, G, B, Rs, Cp, Ls, Lp, D (tanδ), Q, N, M, ΔL, θ
- **Displayable range**: Z, Y, Rp, D, Rp, X, G, B, Rs, Cp, Ls, Lp, D (tanδ), Q, N, M, ΔL, θ
- **Output impedance**: Normal mode: 100 Ω, Low impedance high accuracy mode: 25 Ω
- **Display**: 5.7-inch color TFT, display can be set to ON/OFF

**Options**

- **Four-terminal probe**
- **DC bias voltage unit**
- **DC bias current unit**
- **LAN interface**
- **RS-232C interface**
- **SMD test fixture (direct connection type, DC to 5 MHz)**
- **Test fixture (direct connection type, DC to 5 MHz)**
- **Pinch probe (cable length 1m, DC to 5 MHz)**

**Note**: This product is not supplied with measurement probes or test fixtures. Please select and purchase the measurement probes or test fixtures appropriate for your application separately. All probes are constructed with a 50Ω coaxial cable. For an RS-232C connection: A crossover cable for interconnection can be used. You can use the RS-232C CABLE 9637 without hardware flow control.
**IMPEEDANCE ANALYZER** IM3570

**Single Device Solution for High Speed Testing and Frequency Sweeping**

- LCR measurement, DCR measurement, sweep measurement, continuous measurement and high-speed testing achieved with one instrument
- High-speed testing, achieving maximum speeds of 1.5ms (1 kHz) and 0.5ms (100kHz) in LCR mode
- High-accuracy measurements, basic accuracy of Z parameter: ± 0.08%
- Perform frequency sweeps, level sweeps, and time interval measurements in analyzer mode

- Frequency Sweeping
- Single Device Solution for High Speed Testing and Frequency Sweeping
- Measurement times: FAST: 5 ms, SLOW: 140 ms (typical values for displaying |Z|)
- DC bias measurement, Comparator, External input/Output (EXT. I/O), GP-IB or RS-232C interface (option)

**LCR HiTESTER 3532-50**

- High speed measurement of 5 ms
- Higher frequency range: 42 Hz to 5 MHz
- Fourteen parameters measured (High resolution and high accuracy)
- Interactive touch panel operation
- Wide setting range for measurement voltage and current

- Measurement ranges: 10 Ω to 100 MHz, 10 ranges
- Extent of Measurement Impedance: Z, R, X, B, C, G, L, D (tan), and Q
- Source frequency: 50 Hz to 5 MHz
- Measurement signal level: 10 mV to 1 V rms (up to 1 MHz), 10 μV to 10 mV rms (1 MHz to 5 MHz), 10 μV to 10 mV rms (up to 1 MHz), 50 μV to 1 V rms (1 MHz to 5 MHz), 50 μV to 1 V rms (up to 1 MHz), 50 μV to 1 V rms (1 MHz to 5 MHz), 50 μV to 1 V rms (up to 1 MHz)
- Output resistance: 50 Ω
- Display: LCD with backlight display, 9999 |Z|, 9999 φ, 9999 |Z|, 9999 φ, 9999 |Z|, 9999 φ, 9999 |Z|, 9999 φ

**OPTIONS**

- FOUR-TERMINAL PROBE (DC to 100 kHz) 9140
- PINCHER PROBE (DC to 5 MHz) 9143
- TEST FIXTURE (cable connection type, DC to 5 MHz) 9261
- TEST FIXTURE (direct connection type, DC to 5 MHz) 9262
- DC BIAS VOLTAGE UNIT (± 50 V DC, ± 100 mA DC) 9268
- DC BIAS VOLTAGE UNIT (± 100 V DC, ± 200 mA DC) 9269
- DC BIAS VOLTAGE UNIT (± 200 V DC, ± 1 A DC) 9270
- DC BIAS CURRENT UNIT (± 2 A DC max.) 9271
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max.) 9272
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 100 mA DC max.) 9273
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 200 mA DC max.) 9274
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 500 mA DC max.) 9275
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 1 A DC max., ± 100 mA DC max.) 9276
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 200 mA DC max., ± 200 mA DC max.) 9277
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 500 mA DC max., ± 500 mA DC max.) 9278
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 1 A DC max., ± 1 A DC max., ± 1 A DC max.) 9279
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 200 mA DC max., ± 200 mA DC max., ± 200 mA DC max.) 9280
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 500 mA DC max., ± 500 mA DC max., ± 500 mA DC max.) 9281
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 1 A DC max., ± 1 A DC max., ± 1 A DC max., ± 1 A DC max.) 9282
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 200 mA DC max., ± 200 mA DC max., ± 200 mA DC max., ± 200 mA DC max.) 9283
- DC BIAS CURRENT UNIT (± 2 A DC max., ± 50 V DC max., ± 500 mA DC max., ± 500 mA DC max., ± 500 mA DC max., ± 500 mA DC max.) 9284

**ACCESSORIES**

- CONNECTION CORD (for 9268/9269; BNC to BNC, 1.5 m) 9165
- CONNECTION CORD (for 9268/9269; BNC to clip, 1.5 m) 9166
- GP-IB CONNECTION CABLE (2 m) 9121-01
- GP-IB INTERFACE 9151-01
- RS-232C INTERFACE 9152-01
- AC ADAPTER (for the 9442, for 200–240 V power lines) 9442-02
- CONNECTION CABLE (for the 3532-50 9442) 9446
- RECORDING PAPER (25 m, 10 rolls / set, for the 9442) 1199

---

**Note:** This product is not supplied with measurement probes or test fixtures. Please select and purchase the measurement probe or test fixture options appropriate for your application separately. For an RS-232C connection, a crossover cable for interconnection can be used. You can use the RS-232C cable 9638 without hardware flow control.
CHEMICAL IMPEDANCE ANALYZER

理想用于测量电化学阻抗

- 高速测量：5ms (1 kHz) 或 13ms (120 Hz)
- 内置高速比较器
- 测量频率：1kHz/120Hz 可选

**基本规格**
- 测量参数：Z、|Z|、θ、C、L、D、Q、R
- 测量方法：源：开路终端电压 50mV，500mV，1Vrms (AC) 直流：电压 AC
- 源频率：120 Hz 至 1 kHz
- 测量范围：Z：10 mΩ 至 200.00 MΩ (取决于条件) ；θ：0° 至 +90.00°, -90.00° 至 0°；C：0.94 Ω 至 9999 μF；L：1.60 μH 至 200.00 μH, D：0.0001 至 1.9999, Q：0.85 至 9999
- 基本精度：|Z|：±0.05% rdg.；θ：±0.05°
- 测量时间：快速：5 毫秒，慢速：300 毫秒 (1 kHz)；慢速：13 毫秒，慢速：480 毫秒 (120 Hz)
- 显示：99999 全位数字，LED
- 比较器功能：范围：上、下限，绝对值，输出：3 个级别 (Hi, Lo, Lo), 开路-闭路, 隔离
- 外部打印机：9842 (使用与 9443-02/9444)
- 电源：100 至 240 V AC (可选类型)，50/60Hz
- 尺寸和重量：210 mm(8.27 in) W × 100 mm(3.94 in) H × 168 mm(6.61 in) D，2.5 kg (5.5 lb)
- 附件：遥控命令 x1，电源线 x1，备用 x1

**选项**
- 4 路端子探头 (DC 至 100 kHz) 9143-10
- PINCHER PROBE (1 m, DC 至 5 MHz) 9268-10
- DC 偏置电压单元 9266-10
- TEST FIXTURE (直接连接类型，DC 至 5 MHz) 9269
- DC 偏置电流单元 (± 200 μA) 9265
- CONNECTOR CORD (for 9268/9269; BNC to BNC, 1.5 m) 9165
- SMD 测试夹具 (DC 至 200 MHz) 9677
- SMD 测试夹具 (DC 至 120 MHz) 9699
- TEST FIXTURE (直接连接类型，DC 至 5 MHz) 9263
- PINCHER PROBE (DC 至 5 MHz) 9143-10
- 四端子探头 (DC 至 200 kHz) 9140-10
- TEST FIXTURE (DC 至 120 MHz) 9699
- GP-IB 连接线 (2 m) 9151-02
- EXT I/O 手持器
- USB 通信
- USB 内存
- 数字比较器：类型：快速/中速/慢速/慢速 2
- 测量精度：±0.05% rdg.；θ：±0.05°
- 测量频率：1 kHz 至 200 kHz (1 kHz 至 10 Hz 步长)
- 输出精度：正常模式：V 模式/ CV 模式：5 mV 至 5 Vrms，1 mVrms 步长；CC 模式：10 μA 至 50 mA rms，10 μA rms 步长
- 低电压精度：V 模式：5 mV 至 2.5 Vrms，1 mVrms 步长
- CC 模式：10 μA 至 100 mA rms，10 μA rms 步长
- 显著：5.7 英寸彩色 TFT，显示可以设置 ON/OFF
- 测量显示：Z，Y，θ，C，L，D，Q，R
- 显示范围：Z，Y，θ，C，L，D，Q
- 测量信号：V：±0.00000 (999999999)；Q：±0.00000 (999999999)
- T：±0.00000 (999999999)
- 函数：比较器，分类测量 (BIN 功能)，FAST/ MED/ SLOW/ SLOW2
- 接口：EXT I/O (handler)，USB 通信，USB 内存
- 输出：5-7 毫米小舌 FTP，显示可以设置 ON/OFF
- 电源：100 至 240 V AC, 50/60 Hz，50 VA max.
- 尺寸和重量：330 mm (12.99 in) W × 119 mm (4.69 in) H × 168 mm (6.61 in) D，3.1 kg (6.8 lb)
- 附件：电源线 x1，使用说明书和示例软件 [通信控制管理，精度计算，屏幕捕捉功能] x1

**注意**：测试探头不适用于本说明书。选择适合的测试探头或测试探头选项，适用于您的应用。对于 RS-232C 连接：您可以使用 RS-232C 缆线 9607 而无需硬件流控制。
The IM9000 can automatically select the equivalent circuit model from the five typical models to minimize the differences between the measured values and the ideal frequency characteristics derived from the analysis results.

An acceptance/rejection decision can be made for the L, C, and R elements comprising a part and the resonance sharpness (mechanical quality coefficient).

A detailed decision can be made on the elements using the resonance of a piezoelectric element or inductor.

Note: The Equivalent circuit analysis firmware IM9000 is an optional function for the Impedance analyzer IM3570. The IM9000 is not included in the standard package. If you want to use the IM9000 function, specify the option upon purchase.

Customers who have purchased the Impedance analyzer IM3570 can add the Equivalent circuit analysis firmware IM9000 function. Please contact your local HIOKI representative.

The Equivalent Circuit Analysis Firmware IM9000 Provides an Optional Function to Perform a Variety of Equivalent Circuit Analysis and Display Graphs

- Five equivalent circuit analysis (Auto/Fixed) patterns
- Acceptance/rejection decision for equivalent circuit elements
- Analysis results simulation
- Cole-Cole plot and admittance circle display

Cole-Cole plot and admittance circle graphs that previously needed a PC to be displayed can now be shown on the IM3570 screen.
# Features

- **Simple: Automatic Selection of Equivalent Circuit Model**
  The **IM9000** can automatically select the equivalent circuit model from the five typical models to minimize the differences between the measured values and the ideal frequency characteristics derived from the analysis results.

- **Detailed: Acceptance/Rejection Decision for Elements Comprising Part**
  An acceptance/rejection decision can be made for the L, C, and R elements comprising a part and the resonance sharpness (mechanical quality coefficient). A detailed decision can be made on the elements using the resonance of a piezoelectric element or inductor.

---

# Equivalent Circuit Analysis Firmware IM9000 Specifications

## Equivalent Circuit Model and Measurement Items

### Three-element model

<table>
<thead>
<tr>
<th>Model</th>
<th>Circuit Model</th>
<th>Measurement Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>L1, C1, R1</td>
<td>L1 (Inductance), C1 (Capacitance), R1 (Resistance)</td>
</tr>
<tr>
<td>B</td>
<td>C1, L1, R1</td>
<td>L1 (Inductance), C1 (Capacitance), R1 (Resistance)</td>
</tr>
<tr>
<td>C</td>
<td>L1, C1, R1</td>
<td>L1 (Inductance), C1 (Capacitance), R1 (Resistance)</td>
</tr>
<tr>
<td>D</td>
<td>L1, C1, R1</td>
<td>L1 (Inductance), C1 (Capacitance), R1 (Resistance)</td>
</tr>
</tbody>
</table>

### Four-element model

<table>
<thead>
<tr>
<th>Model</th>
<th>Circuit Model</th>
<th>Measurement Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>L1, C1, R1, C0</td>
<td>L1 (Inductance), C1 (Capacitance), R1 (Resistance), C0 (Parallel capacitance)</td>
</tr>
</tbody>
</table>

### Measurement items (Three-element model)

- Capacitor: Impact of the leakage resistance is large
- Resistance: Resistance is large and impact of the floating capacitance is large

### Measurement items (Four-element model)

- L1 (Inductance)
- C1 (Capacitance)
- R1 (Resistance)
- C0 (Parallel capacitance)
- Qm (Resonance sharpness or mechanical quality coefficient)
- fr (Resonance frequency)
- fa (Anti-resonance frequency)
- fs (Series resonance frequency)
- fp (Parallel resonance frequency)
- fm (Maximum admittance frequency)
- fn (Minimum admittance frequency)
- f1 (Maximum susceptance frequency)
- f2 (Minimum susceptance frequency)

### Other functions

**Circuit model selection**
- AUTO (automatic selection) / HOLD (fixed)

**Estimation execution**
- AUTO (estimation is executed after frequency sweep ends) / MANUAL (estimation is executed by the user)

**Sweep range using estimation**
- Normal sweep: Analysis is performed in the sweep range from the analysis start frequency to the analysis end frequency
- Segment sweep: Analysis is performed in the sweep range of the set segment number

**Simulation**
- Enables displaying and comparing the ideal frequency characteristics graph derived from the analysis results or the values specified by the user

---

**Comparator**
- Runs a comparator on the analysis results and outputs the decision results to LCD, EXT, I/O, R1, L1, C1, C0, Qm, HI/IN/L0, absolute value setting

**Display position of estimation results**
- Select the display position from upper, lower, left or right

**X-Y display**
- Cole-Cole plot:
  - Set Rs to the first measurement item, X to the third measurement item, reverse the polarity of the third measurement item, and set correction coefficient A = 1 for scaling correction
  - Admittance circle display:
    - Set G to the first measurement item and B to the third measurement item
**Probes and Test Fixtures for Lead Components**

**Four-Terminal Probe L2000**
- Cable length: 1 m (2.8 ft)
- DC to 5 MHz
- Impedance characteristics: 50 Ω, 4-terminal pair configuration
- Measurable conductor diameter: ø0.3 mm (0.01 in) to 5 mm (0.20 in)

**Four-Terminal Probe 9140-10**
- DC Bias Voltage Unit: 40 Hz to 20 MHz
- DC Bias Current Unit: 42 Hz to 100 kHz

**Test Fixture 9261-10**
- Cable length: 1 m (3.28 ft)
- DC to 200 kHz
- 50 Ω

**Test Fixture 9262-10**
- DC Bias Voltage Unit: 42 Hz to 5 MHz
- DC Bias Current Unit: 42 Hz to 5 MHz

**Test Fixture 9263**
- DC Bias Voltage Unit: 42 Hz to 200 kHz
- DC Bias Current Unit: 42 Hz to 100 kHz

**SMD Test Fixture 9677**
- DC Bias Voltage Unit: 42 Hz to 120 MHz
- DC Bias Current Unit: 42 Hz to 120 MHz

**SMD Test Fixture 9699**
- DC Bias Voltage Unit: 42 Hz to 120 MHz

**Pinch Probes 9143-10**
- DC Bias Voltage Unit: 42 Hz to 5 MHz
- DC Bias Current Unit: 42 Hz to 5 MHz

**SMD Test Fixture 9699**
- DC Bias Voltage Unit: 42 Hz to 120 MHz

**FOUR-TERMINAL PROBE 9143**
- DC Bias Voltage Unit: 42 Hz to 5 MHz
- DC Bias Current Unit: 42 Hz to 5 MHz

**DC Bias Unit**

**DC Bias Voltage Unit 9268-10**
- Direct connection type
- DC to 200 kHz
- 50 Ω

**DC Bias Current Unit 9269-10**
- Direct connection type
- DC to 200 kHz
- 50 Ω

**SMD Test Fixture 9699**
- Direct connection type
- DC to 120 MHz

---

**Test Fixtures for SMD**

**SMD Test Fixture 9263**
- Direct connection type
- DC to 5 MHz
- Test sample dimensions: 1.0 mm (0.04 in) to 4.0 mm (0.16 in)

**SMD Test Fixture 9677**
- Direct connection type
- For measuring SMDs with electrodes on the side, DC to 120 MHz
- Test sample dimensions: 1.5 mm (0.06 in) to 5 mm (0.20 in)

**SMD Test Fixture 9699**
- Direct connection type
- For measuring SMDs with electrodes on the bottom, DC to 120 MHz
- Test sample dimensions: 0.3 mm (0.01 in) to 1.5 mm (0.06 in)

---

**Options**

**HIOKI LCR Fixtures and Probes**

<table>
<thead>
<tr>
<th>3506-10</th>
<th>3504S</th>
<th>3511-50</th>
<th>3532-50</th>
<th>3535</th>
<th>IM3523</th>
<th>IM3533</th>
<th>IM3533-01</th>
<th>IM3570</th>
<th>IM3590</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>C</td>
<td>LCR</td>
<td>LCR</td>
<td>LCR</td>
<td>LCR</td>
<td>LCR</td>
<td>LCR</td>
<td>LCR</td>
<td>LCR</td>
</tr>
<tr>
<td>9143</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9140</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9261-10</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9263</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9264</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9268</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9268-01</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9269</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9500-10</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

*Note: Company names and Product names appearing in this catalog are trademarks or registered trademarks of various companies.*

---

**HIOKI (Shanghai) Sales & Trading Co., Ltd.:**
TEL: +86-21-65900380 FAX: +86-21-65910380
DISTRIBUTED BY

---

All information correct as of Nov. 22, 2013. All specifications are subject to change without notice.