

CMI563®

Advanced surface copper measurement on single, double-sided, or multi-layer PCB

Find out more

These gauges are a great complement to our XRF coatings analyzers. To place your order contact contact@hitachi-hightech.com

MORE INFORMATION

To find out more about the CMI563® or our range of PCB gauges, visit

www.hitachi-hightech.com/hha



MICRORESISTANCE TECHNOLOGY FOR ACCURATE MEASUREMENT OF SURFACE COPPER

The CMI563® provides advanced technology for accurate measurement on copper plating and it ensures that the opposite side of the PCB will not interfere with readings, regardless of laminate thickness. Our CMI563® makes it simple to obtain precise surface copper measurement on laminate, electroless, or electrolytic copper. This gauge is ideally suited for:

- | PCB manufacturing and assembly.
- | Copper surface thickness.

Our CMI563® provides superior performance for copper foil measurement on flexible or rigid, single, double-sided, or multi-layer boards.

SRP-4 PROBE

Included standard with the CMI563® gauge is a tethered SRP-4 probe with user-replaceable tips. This patented probe design consists of four pins securely encased for durability. Its see-through casing allows for easy placement. The tethered cable is ideal for field applications, and it has a small footprint for convenience.

MICRORESISTANCE TECHNOLOGY

Microresistance makes the CMI563® highly accurate for electroless and electrodeposited copper applications, and even works on fine trace measurements. It uses four-point contact to generate an electrical signal. A current is passed between the outer pins, and voltage drop is measured between the inner pins of the sample.

KEY FEATURES:

- | Advanced microresistance technology.
- | Factory calibrated.
- | Highly accurate copper thickness measurement.

**ADVANCED
MICRORESISTANCE
TECHNOLOGY**

SRP-4 USER REPLACABLE PROBE TIPS (PATENT 7,148,712)

- Easily replace a broken probe tip.
- Optional NIST-traceable check standards to match a variety of thickness ranges.
- One replacement probe standard, additional probe tips available (packages of 3).

SPECIFICATIONS

- Accuracy:** $\pm 1\%$ ($\pm 0.1 \mu\text{m}$).
- Precision:** Electroless Cu: 0.2% typical.
Electrodeposited Cu: 0.5% typical.
- Resolution:** mil: 0.01 at > 1 , 0.001 at < 1 .
 μm : 0.1 at > 10 , 0.01 at < 10 , 0.001 at < 1 .
- Fine Line Measure:** Trace width 8 to 250 mil (203–6350 μm).
- Dimensions:** in: 5 7/8 (L) x 3 1/8 (W) x 1 3/16 (D).
cm: 14.9 (L) x 7.94 (W) x 3.02 (D).
- Memory Capacity:** 13,500 readings.
- Weight:** 9 oz (0.26 kg).
- Battery:** 9V Alkaline (65 hrs.).
- LCD Display:** Four-digit, two-digit memory, 1/2" (1.27 cm) character height.
- Statistical Display:** Readings, standard deviation, mean, high/low.

PCB & COPPER COMPARISON CHART

We offer multiple choices for a PCB gauge within the PCB industry to provide you with the best and most cost-effective solution available for your application needs. Please reference the comparison chart below or contact us at contact@hitachi-hightech.com for our expert advice.

| | CMI95M | CMI165 | CMI511 | CMI563 | CMI760 |
|--------------------------|------------------------------|--|----------------------|---|---|
| Technique | Microresistance | Microresistance | Eddy | Microresistance | Microresistance |
| Copper Foil | ● | ● | | ● | ● |
| Copper Laminate | ● | ● | | ● | ● |
| Copper – Surface | | ● | | ● | ● |
| Copper – Fine Line | | ● | | ● | ● |
| Copper Thru-hole | | | ● | | Optional |
| Temperature Compensation | | ● | ● | | ETP Probe |
| Replacement Probe Tip | | ● | | ● | SRP-4 Probe |
| Unit Selection | oz or μm | mil or μm | mil or μm | mil or μm | mil or μm |
| Copper Thickness Range | | | | | |
| μm | 8 indicator lights: 5-140 | Electroless: 0.25-12.7 Electroplated: 2-254 | 2-102 | Electroless: 0.25-12.7 Electroplated: 0.25-152 | Surface: 0.25-254 Thru-hole: 1-102 |
| mil | | Electroless: 0.01-0.5 Electroplated: 0.1-10 | 0.08-4.0 | Electroless: 0.01-0.5 Electroplated: 0.01-6 | Surface: 0.01-10 Thru-hole: 0.08-4 |

Our global network of service hubs offer a full range of technical support to keep you up and running. We are A2LA certified* for coating thickness calibrations and standards which ensures that your CMI563® will be compliant at audit to ISO 17025.

*A2LA accreditation is applicable to work performed by Hitachi High-Tech Analytical Science America, Inc.



If you'd like to learn more about the CMI563® gauge visit www.hitachi-hightech.com/hha or email one of our experts at contact@hitachi-hightech.com to book a demo.

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