OXFORD INSTRUMENTS

CMI165

QUICK START USER GUIDE

The CMI165 is a hand-held instrument for high precision measurement of copper thickness. Automatic temperature correction provides accurate measurements at temperatures above and below room ambient.

OPERATION

STARTING UP THE CMI165

Place the gauge on a copper surface or press any button.

MEASURING WITH THE CMI165

Place the gauge on a copper surface and the measured thickness will be displayed. Press the Left button to return to the menu.

USING THE CMI165 CONTROLS

All paths, e.g. *Settings/Display/Backlight/Yes or No*, start from the Main menu.

FEATURE	ACTION
Turn on the CMI165	Press any button or place gauge on copper surface
Turn off the CMI 165	Press and hold the Center button
Turn backlight on or off	Press and hold the Left button or *Settings/Display/Backlight/*
Select a menu item	Scroll to the item pressing the Up or Down buttons and press the Center or Right buttons to select it

Go back to the previous menu	Press the Left button
Change Units	*Settings/Measure/Parameters/Units*
Change a memory location	Select *Memory/Location* Enter a number (1 to 99) pressing the Up/Down buttons to increment or decrement a digit and the Right/Left buttons to go to the next/previous digit. When at farthest right position press Right button to complete the entry.
Change Cu Type	*Settings/Measure/Parameters/Cu Type* Select Cu for electro deposited copper or ECu for electroless copper.
View Statistics	Select *Stats/View* Press the Up/Down buttons to scroll through the list. Press Left button to return to the menu
Clear Statistics	Select *Stats/Clear/Clear Stats*
Clear last reading from statistics	Press and hold the Down button after taking a measurement
Display last reading from statistics	Select Measure from the Main menu
Upload statistics or readings to a PC	Select *Stats/Export/Stats, Data, Histogram or All*; or select *Stats/Upload Rdgs.* See installation CD

SPECIFICATIONS

MATERIALS

- CMI165 Gauge and patented integral probe with temperature compensation (US 7,148,712)
- OICM Certified ½ oz Standard

CALIBRATION

- Auto correct measurement of lines
- Factory Calibrated

MEMORY STRUCTURE

- Locations 01 to 99 available
- Current location shown in the upper left of display
- Stores readings and corresponding statistics, Copper (Cu) Type, Measure Lines, Conductivity Factor (CF) and Offset parameters.

Cu TYPE

- Electrodeposited: 10µin/0.25um – 10mil/254um
- Electroless: 10µin/0.25um – 500µin/12.7um

PROBE TIP

- Replaceable temperature compensating module

MEASURE LINES

- Auto correction for printed circuit board traces
- Width range: 8mil/204um to 3000mil/76,200um

CONDUCTIVITY FACTOR (CF)

- Used when readings differ from known value
- CF=Desired reading/Actual Reading
- Range is 0.5 to 4

OFFSET
- Subtracted from reading
- Range is 0.0 to Cu type max thickness. See Cu Type above

OPERATING MODES

MODE	MENU SETTING	MEASUREMENT
Auto	Auto	Last reading passed to statistics
Continuous	Cont	None taken
Manual	Manual	Last reading passed to statistics when center button is pressed

LOW BATTERY
- Indicated when battery symbol is not shaded
- Replace batteries with two AA types

SAMPLE FOR MEASUREMENT
- Must be clean and free of surface defects

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