

Main menu: 240x340

Main Menu:

Press 'M' to measure:

Resistivity [ohm]:
##value##

Sheet Resistance [ohm/sq]:
##value##

Estimated doping concentration:
##value##

Wafer Size:
##selected size##

<- be able to highlight other values
to (enter/select) to info screen

<- highlight select to go to
change wafer size screen

Wafer Select:

Wafer Select:

1" Diameter Round Wafer

2" Diameter Round Wafer

3" Diameter Round Wafer

4" Diameter Round Wafer

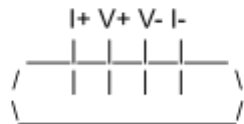
5" Diameter Round Wafer

<- color invert selected
wafer dimension (press
enter/select to select size
and exit screen

Resistivity info screen

Resistivity:

The wafer's resistivity is determined by passing a known current through the outer probes of a four-point probe setup and measuring the voltage difference between the inner probes.



Press <enter> to exit

Sheet Resistance info screen

Sheet Resistance:

The sheet resistance of a wafer can be determined using its resistivity with the following equation: $\rho = R * t * 2\pi * s * a * V/I$. In this formula, ρ represents the resistivity, t is the wafer thickness, V is the measured voltage, I is the supplied current, and a and s are correction factors accounting for wafer geometry.

Press <enter> to exit

Estimated Doping Concentration:

Estimated Doping concentration:

The doping concentration can be estimated from the sheet resistance using the formula:

$N = 1 / (q * \mu * R_s)$, where μ is the charge carrier mobility and R_s is the sheet resistance. This method is particularly useful for verifying doping levels following doping processes.

Press <enter> to exit