

## WCT-120 Calibration Set

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Sinton Instruments now offers a full calibration set for the WCT-120 lifetime measurement tool.

A complete factory calibration is done on the WCT-120 before being shipped to customers. However, the periodic qualification of the instrument calibration may be desired to confirm and document that the instrument is operating within ideal specifications.

This calibration set can be used for periodic qualification of the instrument calibration as well as an on-site customer calibration of both the conductance sensor and the illumination sensor (reference cell) of the Sinton Instruments WCT-120 Photoconductance Lifetime Tester.

Previously, for WCT-120 reference cell calibration, users of the instruments would have to send their tool back to Sinton Instruments. This often causes downtime in the use of the tool and unwanted shipping costs. Additionally, customers have had no way to check and monitor the calibration of the reference cell. To address these concerns, a stable lifetime sample is now available for use to calibrate and monitor the calibration of the reference cell of the WCT-120.

The full calibration set for the WCT-120 includes:

- Wafer conductance calibration set
  - Four uniformly doped monocrystalline p-type wafers
  - Measured at Sinton Instruments by four-point-probe
  - Span the measurement range of the WCT-120 instrument (5 – 250 $\Omega$ /sq)
- Illumination sensor calibration wafer (Stable lifetime reference wafer)
  - n-type monocrystalline wafer
  - Stable lifetime (guaranteed for 12 months)

For more information on the calibration of the WCT-120 please refer to:

- *SEMI PV13-0211 Test Method for Contactless Excess-Charge-Carrier Recombination Lifetime Measurement in Silicon Wafers, Ingots, and Bricks Using an Eddy-Current Sensor, 2011.*
- *SEMI AUX026-1012 Research report on interlaboratory study to establish precision statements for SEMI PV13, test method for contactless excess-charge-carrier recombination lifetime measurement in silicon wafers, ingots, and bricks using an eddy-current sensor, 2012.*