

ICT0550 Integrated Cell Tester



FLEXIBILITY AND SCALEABILITY

- Test Instrumentation from μA 's to 2000A
- Individual Climate Chambers
- Cell and Current-Specific Pallets
- Work Flow Management and Reporting Software

R&D Lab

R&D Line

QA Lab

Product Details

The ICT0550 integrates test instrumentation, climate chambers and cell holders in a single integrated solution. Together with PEC's LifeTest Software it forms the basis for automating the daily operations in cell testing, resulting in a Turn-Key solution for your R&D labs, QA labs as well as your R&D cell manufacturing lines.

The ICT0550 ecosystem also contains the equipment and tools for the lab operators to prepare the cells with auxiliary sensors and clamping plates. The software will guide the operators through the logistics processes in the test lab, and gives lab managers and supervisors the tools to plan and monitor the test stands.

The ICT0550 holds 3 individually controlled climate chambers. Depending on cell size and current requirements, each chamber can test up to 40 cells at 50A max, or its equivalent in parallel (e.g. 4 x 500A). The test instrumentation is provided by using PEC's CT0550 or ACT0550 test equipment.

The chambers are equipped with all safety features required for non-abusive cell testing and formation procedures.

Highlights

- ✓ Cell type and format Independent hardware
- ✓ Chambers equipped with safety devices, compliant with EUCAR level 6
- ✓ Compatible with PEC's CT0550 and ACT0550 electronics
- ✓ On-the-fly channel configuration from 50A to 1000A
- ✓ Pallet based operation for increased lab efficiency
- ✓ Compatible with PEC's AUX IO instrumentation for extended sensor measurements (temperature, pressure, voltage, digital IO's...)
- ✓ 3 independent climate chambers per ICT0550, freely programmable between -30 and 80 °C
- ✓ Standard pallets available for pouch, prismatic and cylindrical cells
- ✓ Optional: EIS measurement on selected channels

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Technical Specifications

Test Electronics	ACT0550	CT0550
Voltage Range		0 to +5 Vdc
Voltage Measurement accuracy		± 0,03% FSD (Full Scale Deviation)
Current Range	50A (4 auto switched ranges)	50A (2 auto switched ranges)
Paralleling	✓ (up to 2000A)	✓ (up to 1000A)
Current Control Accuracy		± 0,03% FSD (Full Scale Deviation) in each range
Sampling Speed	1 msec	10 msec
Auxiliary In- and Outputs	1x temperature measurement input per channel Others Optional	Optional

Climate Control

Chambers	3
Range	-30 to 80 °C
Internal Volume	330 L (to be confirmed exactly by Engineering)
Heating Speed	2K/min*
Cooling Speed	2K/min*
Allowable Heat Load*	800 Watt @ -20°C 2700 Watt @ 0°C 4400 Watt @ 20°C
Refrigerant	R448A

Safety

Visual & Audible Alarm	✓
EM & Reinforced Door Lock	✓
Gas Detection	✓
Smoke Detection	✓
Gas Extraction	✓
Overpressure Relieve Valve	✓
Fire Extinguishing System	Optional

Dimensions & Weight

Dimensions	2950mm Length x 2700mm Height x 1825mm Width
Weight	max 3500 kg including pallets

Utilities

Input Power	3x185...260 Vac (Δ) + PE 3x320...450 Vac (Y) + N + PE
Max Power Consumption	58,3 kW
Water Cooled	✓
Gas Extraction	✓

* measured in empty climate chamber with no heat load inside chamber



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