



# Allegro™



High-speed testing and sorting of ultra-compact, high-cap and general multilayer ceramic capacitors.

## Ultra High-Speed Processing

Allegro performs high-throughput production-level electrical testing of multi-layer ceramic capacitors (MLCC) at productivity rates of up to 20,000 chips per minute (1.2M chips per hour), with exceptionally low cost of ownership.

## Improved Motion, Tooling and Handling

Allegro utilizes ESI's patented rotary handling technology to simultaneously perform multiple tests on chips. This continuous automation speeds throughput and minimizes the potential for damaging the chip as a result of the testing process.

## Addresses the Full Range of Capacitance; High-Cap and Ultra-Compact MLCCs

### Ultra Compact

- 01005(M0402) & 0201(M0603)

### Standard Size

- 0402

### High Cap (up to 600V)

- Supports up to 8 active stations
- Software-selectable voltage polarity for flexible IR Testing
- Stress Test Option

### General

- 0402(1005), 0603(1608)

## Patented ESI Contact Technology

- ESI Patented Roller Contacts
- Pulse-Actuated Contacts
  - Minimize termination marking
  - Maintain contact integrity



# System Specifications

## Throughput

Up to 20,000 parts per minute  
(1.2M parts per hour)

## Chip Sizes

0201 (0603 metric)  
0402 (1005 metric)  
0603 (1608 metric)

## Applied Tests

Up to 25 stations are available to perform the following tests:

- Capacitance & DF (120Hz, 1KHz, 1MHz)
- IR Pre-Charge
- IR Pre-Soak
- IR/Current Measurement

## Instrumentation

Capacitance & DF:

Agilent 4981 (2 units per CD Station)

Flash and IR:

- ESI Source and Measure Units
- Models 620 and 720
- Applied test voltage: 1 – 600V
- Charge current: 1mA – 250mA
- Measured current: 1pA – 2mA
- 18mA current range is optional

## Test Contact

Upper Contacts:

- Roller contact with computer-programmable constant force settings
- Optional PAC Function available

Lower Contacts

- Beryllium copper, Silver, or Tungsten

## Sort Bins

9 bins:

- 5 cap tolerance bins
- 3 reject bins
- 1 retest bin

## System Control

- Multi-Core Processor
- Touch screen operator interface
- System status light tower
- Internally mounted printer (option)
- Network control (option)

## Service Requirements

Main Power:

200-230 VAC, 50/60 Hz, 20A, Single-Phase

Vacuum Pump (option):

200-230 VAC, 50/60 Hz, 20A, Three-Phase

Pressurized Air:

80psi (550 kPa), 5 cfm (0.15 m3/min)

Vacuum:

- Free air displacement - 15 cfm (2 torr)
- Vacuum Pump (option): 30 cfm

Temperature and Humidity Range:

15°-35°C and 50%-80%

## Dimensions & Weight

- Height: 75" (1.90 m)
- Width: 51" (1.30 m)
- Depth: 56" (1.42 m)
- Net Weight: 2000 lb. (910 kg)
- Shipping Weight: 2700 lb. (1225 kg)



Ask an Expert! For facilities guidelines, requirements or more information, please contact your local ESI representative or visit [www.esi.com](http://www.esi.com).

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