



## Brief Introduction

DIT-950 and DIT-951 High Precision IR Tester is an intelligent measurement instrument that is used for rapid measurements on IR properties of electronic parts and components, dielectric materials, equipments, cables, etc. Large LCD and user friendly menu provide you easier operation.

This instrument is especially designed for capacitor IR test and can achieve rapid measurements through following methods:

1. Selectable internal input impedance: If the current is greater than 10nA, only 10kΩ input impedance can be used; if the current is below 10nA, you can choose 10kΩ or 1MΩ impedance to test.

2. With the built-in dual voltage output, it can charge large capacitors. By dual voltage output, it is able to output a pre-charge voltage up to 500V, 200mA. In voltage follow mode, pre-charge voltage follow with the test voltage output and can be finely adjusted. Above features ensure the perfect charge of capacitive materials.

3. DT-951 can output a voltage of 1000V, 100mA to fully charge the capacitive material.

In addition, user can program the sequence measurement steps (up to 18 steps) on. For instance, charge, wait, test, and discharge steps can be programmed. Each step can last up to 100s.

The instruments have a unique contact detection function. For capacitive material such as capacitors and cables, contact detection function can detect the contact of components under test. Moreover, this detection function will not increase any test time.

They are equipped with interfaces of RS232, USB DEVICE, SCANNING and Handler. Handler interface provide convenience for automatic test system; SCANNING interface is useful for mass measurement of components. User can use a scanner to speed measurement of components.

## Features

- 320×240 dot-matrix LCD
- Powerful charging function
- High speed measurement:100meas/sec
- High measurement accuracy:±2% (< 1TΩ )
- Contact detection function for capacitive components
- Measurement range: DIT-950 : 10kΩ to 50TΩ  
DIT-951 : 10kΩ to 100TΩ
- Ultra-low leakage current test: minimum current is 10pA, accuracy: 2% ±2pA
- Measurement voltage: DIT-950 : 10V – 500V, dual-output  
DIT-951 :10V–1000V,single-output
- Dual outputs (precharge voltage output and test voltage output) can be set.
- The precharge voltage output can be set to follow the test voltage output and can be finely adjusted on test voltage. Also the precharge voltage can be set to work in independent mode.
- When the test current is less than 10nA, the internal input impedance can be selected between 10kΩ and 1MΩ to ensure rapid and accurate test.
- DIT-950 charge current:2mA , 25mA, 200mA selectable DIT-951 charge current:2mA , 25mA , 100mA selectable
- 7 current ranges, manual or auto range mode
- 4-bin comparison function
- Programmable sequence test mode
- R-T and I-T Curve test and display mode
- Auto store setup parameters
- Screen hardcopy to be saved as BMP file to a U disk
- Automatically upgrade firmware by a U disk
- Selectable Chinese and English operation interfaces
- Achieve automatic test system by Handler interface
- Achieve remote control by RS232C and USB Device interface
- Support scanning interface for mass tests

## Specifications

Model	DIT-950	DIT-951
Resistance test		
Range	10 kΩ to 50TΩ	10 kΩ to 100TΩ
Accuracy	Test current > 100pA: 2% Test current ≤ 100 pA: 2% ± Vtest/2pA	
Current test		
range	Range 1 :100uA – 1mA ; Internal Input impedance 10 kΩ	
	Range 2 :10uA – 100uA ; Internal Input impedance 10 kΩ	
	Range 3 :1uA – 10uA ; Internal Input impedance 10 kΩ	
	Range 4 :100nA – 1uA ; Internal Input impedance 10 kΩ	
	Range 5 :10nA – 100nA ; Internal Input impedance 10 kΩ	
	Range 6 :1nA – 10nA ; Internal Input impedance 10 kΩ or 1MΩ (selectable)	
	Range 7 :10pA – 1nA ; Internal Input impedance 10 kΩ or 1MΩ (selectable)	
Accuracy	2% ± 2pA	
Measurement voltage		
Range	10 to 500V, 1V resolution	10 to 1000V,1V resolution
Accuracy	2% of readout, or ± 1V	
Source resistance	200Ω	
Current limit	2,25,or 200mA	2, 25 , or 100mA
Voltage Output	Manually turn on or off on front panel, or controlled by built-in timer, or by remote control.	
Timing	Programmable charge time: 0 to 1000s	
Measurement delay	0 to 1000s programmable	
Discharge resistance	2kΩ	
Discharge time	t = 0.03 x Cx (in μF), when Vtest falls to 1% of the test level.	

Measurement speed	
Trig mode	Single measurement: < 100ms(exclude charge time) Average up to 100 measurements:<100 + (N-1) x 100 ms (exclude charge)
Continuous mode	Direct readout: 100ms – 10000ms depending on average number
Comparator	4 bins:(3 bins for PASS,1 bin for FAIL)
Range mode	Auto, Hold
Average times	1 to100
Memory	20 sets of setup values can be stored.
Standard interface	GPIB, (optional); RS232C; HANDLER interface output; USBDEVICE( USBTMC and USB CDC support); USBHOST; SCANNING

## General Specifications

Operating temperature and humidity	10°C - 40°C, ≤90%RH
Power supply	90 to 130 V AC(60Hz) or 198 to 260V AC(50HZ)
Power consumption	DIT-950 : 250W DIT-951: 150W
Dimensions (W×H×D)	430mm×400mm×130mm
Weight	DIT-950 : 14kg DIT-951 : 10kg