

## Capacitance Meter

### MODEL 11020

#### Key Features :

- Test frequencies: 100Hz, 120Hz, and 1kHz
- Basic accuracy: 0.1%
- High measurement speed:  
5ms in 1kHz,  
15ms in 100Hz/120Hz
- Large LCD display  
(240 x 64 dot-matrix)
- Wide measurement range:  
0.1pF~4.000F
- Standard Handler interface
- Comparator and Pass/Fail alarming  
bee per function
- Setups backup function



## CAPACITANCE METER

The Chroma 11020 Capacitance Meter is a high-speed precision Capacitance Meter. Provides 100Hz, 120Hz, and 1kHz test frequencies. Measurement time is only 5 milliseconds in 1kHz, and less than 15 milliseconds in 100Hz and 120Hz test frequencies. Combine with 0.1% basic accuracy and standard Handler interface, enable the Chroma 11020 can be used on high speed production line for various capacitors.

#### 100Hz, 120Hz and 1KHz test frequencies

100Hz and 120 Hz test frequencies are generally used in capacitance measurement of electrolytic capacitors which are used as power line voltage rectifiers. 1KHz is generally used in capacitance measurement of ceramic and film capacitors.

#### 5ms measurement in 1KHz

For high speed capacitance check in the ceramic capacitor automatic production line and package machines, the Chroma 11020 uses digital sampling technology to perform a 5ms high speed measurement with high accuracy .

#### 15ms measurement in 100Hz/ 120Hz

Wave period of low frequency as 100Hz is long as 10ms. This causes longer measurement time for general LCR meter or capacitance meter. The Chroma 11020 uses high speed digital sampling technology to shorten sampling time to 1 period, to perform an excellent measurement speed in low

frequency capacitance measurement. This is great help in electrolytic capacitor automatic production.

#### Large capacitance measurement

Capacitance larger than 100mF is extremely difficult in capacitance measurement because of extremely low impedance in 100Hz/120Hz. The Chroma 11020 keeps excellent measurement accuracy in low impedance measurement for large capacitance measurement.

#### 0.01 pF measurement resolution

General LCR meter or capacitance checker provides 0.1pF measurement resolution only. The Chroma 11020 provides 0.01pF measurement resolution, which is proper to be used in low capacitance ceramic , mica, PS capacitors out-going capacitance check.

#### HI/GO/LO Comparator

The Chroma 11020 has comparator function to judge HI/GO/LO of capacitance measured result, and to judge GO/NG of D factor. And an alarming beeper for total GO/NG judge.

#### Trigger Delay Time

For large capacitance measurement in automatic production, a RC (meter output resistance and unknown capacitance ) delay time for test signal transient is necessary. The Chroma 11020 provides trigger delay time for it, and is convenience for automatic equipment timing adjustment.



# Chroma



## Specification

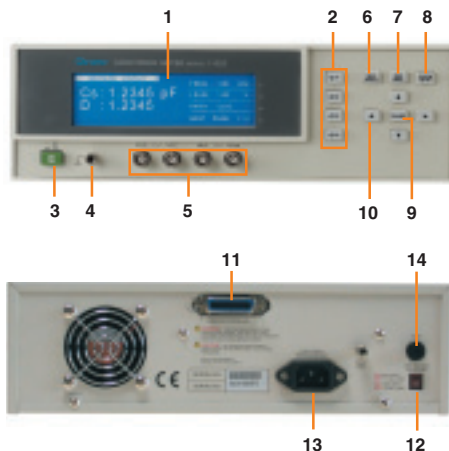
<b>Model</b>	<b>11020</b>
<b>Test Parameter</b>	C (Capacitance), D (Dissipation factor)
<b>Test Signals</b>	
Test Level	1V(10% + 3mV)
Test Frequency	100Hz, 120Hz, 1kHz
Output Impedance	Varies as range resistors
<b>Measurement Range</b>	
C (Capacitance)	0.1pF~3.999F(100Hz, 120Hz), 0.01pF~399.9mF(1kHz)
<b>Basic Accuracy (Note1)</b>	±0.1%
<b>Measurement Speed (Fast) (Note2)</b>	
C measurement, Frequency >=1kHz	5mS
C measurement, Frequency=100Hz,120Hz	15mS
D factor measurement	2mS
<b>Trigger</b>	Internal, External
<b>Equivalent Circuit Mode</b>	Series, Parallel
<b>Interface &amp; Input/Output</b>	
Interface	HANDLER (24pin)
Output Signal	HI/GO/LO judge
Comparator	Upper/Lower limits (%)
<b>Display</b>	240x64 dot-matrix LCD display
<b>Correction Function</b>	Zeroing
<b>Averaging</b>	1, 2, 4, 8, 16, 32, 64
<b>Memory</b>	1 instrument setups
<b>General</b>	
Operation Environment	Temperature: 10 °C ~ 40 °C, Humidity : < 90 % RH
Power Consumption	65VA max.
Power Requirements	90Vac ~ 125Vac or 190Vac ~ 250Vac, 48Hz ~ 62Hz
Weight	Approx. 5.4kg

All specifications are subject to change without notice.

**Note 1:** The specification of accuracy is under the following conditions: 1) Warm up time: >10 min. 2) Environment temperature at 23±5°C OPEN/SHORT offset modification completed

**Note 2:** Measurement time includes all of the time for UUT measurement, calculation and primary/secondary parameters identification

## Panel Description



1. LCD Display
2. Function Keys
3. Power Switch
4. Ground Terminal
5. Unknown Test Terminals
6. MEAS DISPLAY Key
7. MAIN INDEX Key
8. SYSTEM SETUP Key
9. TRIGGER Key
10. Cursor Keys
11. Handler Interface
12. Power Voltage Selector
13. AC Line Input
14. Fuse

## Ordering Information

<b>11020</b>	Capacitance Meter
<b>A110211</b>	Component Test Fixture
<b>A110212</b>	Component Remote Test Fixture
<b>A110104</b>	SMD Test Cable #17
<b>A133004</b>	SMD Test Box
<b>A110234</b>	High Frequency Test Cable

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