



Chroma 8495 ATS software runs under the user friendly Windows 98/2000/NT/XP operating environment, providing the test engineer a dedicated Electronic Ballast testing system with easy access to Windows resources.

### Optimized Equipment & Test Items

Due to the Electronic Ballast has high voltage & high frequency outputs, high accuracy Power Analyzers are required to measure its output performance and oscilloscopes to meet timing measurement requirements. These testing equipments are relatively expensive, increasing the cost of testing. With the Chroma testing solution, using the Electronic Ballast characteristic special design PCI interface cards & measurement module will significantly reduce the test equipments costs.

Chroma 8495 ATS is equipped with optimized standard test items for Electronic Ballast (the Unit Under Test), the user is only required to define the test conditions and specifications for the standard test items to perform the test.

The optimized test item covers 4 kinds of power supply test requirements. The OUTPUT PERFORMANCES verifies the output characteristics of the UUT. The INPUT CHARACTERISTIC checks the power supply input parameters. TIMING & TRANSIENT tests the timing and transient states during power-on cycle. The PROTECTION TESTS trigger and tests the protection circuit.

### Optimized Test Items

#### OUTPUT PERFORMANCES

1. Heating voltage
2. Start-up voltage
3. Lamp voltage
4. Cathode current
5. Lamp current
6. Heating frequency
7. Lamp frequency
8. Efficiency
9. Output power

#### INPUT CHARACTERISTICS

10. Input voltage
11. Input current
12. Input power
13. Input power Factor
14. Input crest Factor
15. Energy
16. THD
17. IEC61000-3-2 harmonic test

#### TIMING & TRANSIENT

18. Heating time
19. Time to standby

#### PROTECTION TESTS

20. Over voltage protection

## Electronic Ballast ATS Model 8495

### KEY FEATURES

- For lighting electronic ballast testing
- Capable to test Multi-ballast/Multi-output concurrently that improve productivity
- Provide optimized standard test items for the Unit Under Test (Electronic Ballast) to deliver excellent test performance
- Easy-to-use software function specifically designed to meet the production line needs
- Flexible software platform with the following functions
  - User editable test program
  - User editable test report format
  - Test report generator
  - Statistical report
  - User authority control
  - Release control
  - Activity log
  - Support bar code reader
- Windows 98/2000/NT/XP based software
- Offer the best performance/price ratio

Chroma 8495 Electronic Ballast ATS is the test system of choice for lighting electronic ballast testing on the production line. It is able to test Multi-ballast/Multi-output concurrently improving productivity significantly, and capable testing four, 1 or 2 lamps ballasts & two, 3 or 4 lamps ballasts at a time. The hardware devices available for selection include AC/DC Power Supply, Power Meter, PCI interface function card, Ballast Tester and Ballast Fixture Box.

Chroma 8495 ATS was designed specifically with Lighting Electronic Ballast characteristics in mind, with optimized standard test items providing excellent test performance for mass production. The software provides a user friendly interface and intuitive controls suited for the production line.

With the flexibility of the Chroma 8495 ATS architecture, future Electronic Ballast testing requirements can be easily added. Chroma 8495 ATS software comes packaged with report generator, statistical analysis and management functions, allowing the creation of test and statistical reports to meet modern quality control and production requirements. For total control of the production flow, the 8495 ATS can be connected to the Shop-Floor System.

### SPECIFICATIONS-1

#### Accurate and highly reliable hardware devices:

##### System Controller

MODEL	PC/IPC
CPU	Pentium III 600 or faster
SRAM	256KB
DRAM	512MB or higher
Hard drive	8.3GB or higher
CD-ROM	40X or faster
Monitor	15"
Keyboard	101 keys
I/O	Mouse/Print port
System Interface	GPIB/RS-232
System I/O	DIO Card
GPIB board	NI-PCI GPIB Card

##### Power Meter

MODEL	66201	66202
NO. of input module	1	1
Power measurement range	12 ranges	24 ranges
Voltage measurement range	3 ranges	3 ranges
Current measurement range	4 ranges	8 ranges
Front panel display	Yes	Yes
Front panel editable	Yes	Yes
Harmonics measurement	No	Yes
Flicker measurement	No	No
Waveform measurement	No	Yes
Build-in regulation limit	No	No

\* Please refer to respective product catalogs for detail specifications.

##### AC Source

MODEL	6500 series	61500 series	61600 series
Power rating	1200-9000VA	500-18000VA	500-18000VA
Voltage range	0-300V	0-300V	0-300V
Output phase	1 or 3 phase	1 or 3 phase	1 or 3 phase
DC output	No	Yes	Yes
Output measurement	Yes	Yes	Yes
Harmonic measurement	No	Yes	No
Waveform simulation	Yes	Yes	No
Programmable impedance	No	Yes	No
Harmonic synthesis	Yes	Yes	No
Inter-harmonic synthesis	No	Yes	No

\* Please refer to respective product catalogs for detail specifications.

## SPECIFICATIONS-2

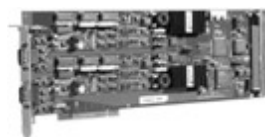
Ballast Measurement Card	84951
<b>Vac measurement</b>	
<b>Vrms measurement (Lamp)</b>	
Range	1000-700V/700-350V/350-150V/150-100V/100-50V/50-25V
Mode	AC only/AC+DC
Resolution	14bits
Accuracy	1%+0.2%F.S.
<b>Vac measurement (Filament)</b>	
Range	30-20V/20-10V/10-5V
Resolution	14bits
Accuracy	1%+0.2%F.S.
<b>Vpk+/Vpk-/Vpp measurement</b>	
Range	3000Vpk
Resolution	14bits
Accuracy	0.5%+0.5%F.S.
<b>Iac measurement</b>	
<b>Irms measurement</b>	
Range	3-2A/2-1A/1-0.5A/0.5-0.25A/0.25-0.125A/0.125-0.06A
Resolution	14bits
Accuracy	1%+0.2%F.S.
<b>Pac measurement</b>	
Range	V range x I range
Resolution	14bits
Accuracy	1%+0.2%F.S.
<b>Frequency measurement</b>	
Range	10k-100kHz
Resolution	1Hz
Accuracy	0.1%reading
Input	Via voltage/current input
<b>Timing measurement</b>	
Trigger input	Externalx1 and Vmeasurement input and I measurement input
<b>Trigger level</b>	
Range	5% ~ 95%F.S.
Resolution	1V for voltage / 0.1A for current
Accuracy	5mS
<b>Timing measure</b>	
Resolution	1mS
Accuracy	5mS
Timing range	16sec
<b>Measurement speed</b>	
	<10mS
<b>Interface</b>	
	PCI
<b>Dimension</b>	
	1 Slot width

Ballast Tester	A849501
No. of channel	8
<b>AC+DC Mode</b>	
<b>Vac measurement (Lamp)</b>	
Range	30Vpk-1500Vpk
Bandwidth	10k-100kHz
Accuracy	0.8%+0.5%F.S.
<b>Vac measurement (Filament)</b>	
Range	1Vpk-50Vpk
Bandwidth	10k-100kHz
Accuracy	1%+0.5%F.S.
<b>AC Only Mode</b>	
<b>Vac measurement (Lamp)</b>	
Range	30Vpk-1500Vpk
Bandwidth	10k-100kHz
Accuracy	0.5%
<b>Vac measurement (Filament)</b>	
Range	1Vpk-50Vpk
Bandwidth	10k-100kHz
Accuracy	0.8%
<b>Iac measurement</b>	
Range	10mApk-5Apk
Bandwidth	10k-100kHz
Accuracy	1.5%

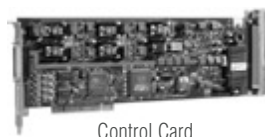
Control Card	84903
<b>BL control</b>	
<b>DC level control</b>	
Program level	0 ~ 10V
Resolution	11 bits
Level Accuracy	0.5 % setting + 0.1 % F.S.
Sourcing current	20mA
<b>PWM control</b>	
Program level	0 ~ 10V
Resolution	7 bits
Accuracy	2 % + 1 % F.S (No Load) / 5.5% +1% F.S. (20mA output)
Sourcing current	20mA
Frequency	20Hz ~ 10kHz / 10kHz ~ 100kHz
Freq. Resolution	1Hz
Freq. Accuracy	0.1% (10kHz) / 1% (100kHz)
Duty	0 % ~ 100 % (10kHz) / 5% ~ 95% (100kHz)
Duty Resolution	1 %
Duty Accuracy	Error Max : 100nS
<b>SMBus control</b>	
DC Output	5V
SM DATA	Bidirectional
SM CLK	Bidirectional
<b>BLI measurement (DC)</b>	
Range	0 ~ 20mA
Resolution	15 bits
Accuracy	0.1% reading + 1% F.S.
<b>Analog output (Enable V and Vsave1, 2)</b>	
<b>Channel</b>	
No. of channel	1 for Enable 2 for Vsave
<b>DC level output</b>	
Program level	0 ~ 10V
Resolution	11 bits
Level Accuracy	0.5 % setting + 0.1 % F.S.
Sourcing current	20mA
<b>Analog I measurement (I<sub>dc</sub>)</b>	
Range	0 ~ 20mA
Resolution	15 bits
Accuracy	0.1% reading + 1% F.S.
<b>Digital I/O</b>	
No. of channel	12 bits For Output 4 bits For Input
Output type	Open collector
<b>Measurement speed</b>	
	< 30mS
<b>Interface</b>	
	PCI
<b>Dimension</b>	
	1 Slot width

## ORDERING INFORMATION

**8495** : Electronic Ballast ATS  
**A849008** : Control Unit  
**84951** : Ballast Measurement Card  
**84903** : Control Card  
**A849501** : Ballast Tester  
**A849502** : Ballast Fixture Box  
**Digital Power Meter** : Refer to Model 66200 Series  
**AC Source** : Refer to Model 6500, 61500, 61600 Series  
**19" Rack**



Ballast Measurement Card



Control Card