

# Network of Weathering

PRODUCTS & SERVICES

Experience. The Atlas Difference.

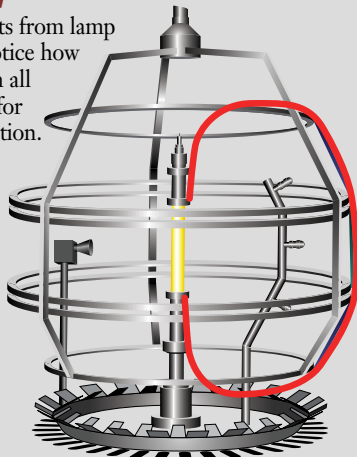


### Control Panel

Touch screen interface allows operator to select from preset test program or enter custom test programs.

### Irradiance Uniformity

Light at various points from lamp at equal intensity. Notice how the lobe lines up with all three specimen tiers for an even light distribution.



## The Ci Series Weather-Ometers

### Digital Control for Reliable Accelerated Weathering Testing

The Ci Series represents a significant advancement in applying digital and optical technologies in a laboratory weathering instrument. Controlled Irradiance (Ci) Xenon Arc Systems deliver constant levels of irradiance and the most precise temperature and humidity control in the industry, helping to establish new standards of performance for correlation, accuracy, reproducibility and repeatability.

### Unmatched Repeatability and Reproducibility

Innovations in airflow, irradiance control and control systems dramatically reduce variability in test parameters, providing new levels of uniformity for temperature, humidity and light exposure.

### Reliable Replication of Full Spectrum Sunlight

The Ci Series uses the most advanced water-cooled xenon arc lamps to deliver constant amounts of radiant exposure test after test. Easily interchangeable glass filters tailor the xenon light spectrum to match sunlight conditions in a sample's end use environment.

### User-Friendly Operating Convenience

Intuitive TFT LCD touch screen increases functionality that makes the Ci Series easy to program, monitor and calibrate. Irradiance, temperature, humidity and sprays can be set to any level and duration for user defined custom test cycles.

### Faster, Easier Servicing Reduces Downtime

Full front access to controls and test chamber, user-serviceable components, diagnostic screens, automatic lamp calibration and improved component life significantly reduce maintenance time and cost, improving long-term reliability.

### Meets Global Weathering and Lightfastness Test Requirements

The Ci Series meets a wide variety of international standards, as well as numerous manufacturer-specific test methods for the determination of material durability.



## Ci Series Features and Benefits

- Rotating rack maximizes exposure uniformity over all specimens
- Narrow band (340 nm or 420 nm), broad band (300–400 nm) irradiance control with optional monitoring or illuminance control (LUX) at 400–750 nm at a second wavelength to meet global test requirements
- Controlled irradiance up to 2-sun levels for higher acceleration based on your test requirements
- ASTM Black Panel Thermometer or ISO/DIN Black Standard Thermometer controls and monitors temperature at specimen level to ensure test repeatability from one test to the next
- Simultaneous, automatic control of both chamber temperature and Black Panel Temperature closely simulates your material's end-use temperature conditions test after test
- Optional S<sup>3</sup>T feature provides real-time measurement of sample temperatures while on exposure
- VibraSonic™ humidity control accurately replicates user selectable humidity levels to meet stringent global test requirements
- Smart Damper™ tightly controls test chamber temperature, BPT and humidity levels and compensates for changes in ambient laboratory conditions for more accurate and repeatable tests
- Smart Light Monitor™ verifies that the correct light capsule is installed
- Xenon lamp cooling system dramatically reduces amount of cooling water used

## The Power and Capacity to Meet Your Needs

### Ci5000 Weather-Ometer®

Our largest capacity, most powerful accelerated weathering instrument. Features a 12000 W water-cooled xenon arc lamp and a total exposure area of 11000 cm<sup>2</sup>. The best exposure area per cost ratio in the industry.

### Ci4000 Weather-Ometer

Capable of meeting global test specifications in a mid-size, accelerated weathering instrument. Features a 6500 W water-cooled xenon arc lamp and a total exposure area of 6500 cm<sup>2</sup>.

### Ci3000+ Weather-Ometer and Fade-Ometer®

Affordable xenon arc weathering testing with all the benefits of the Ci Series in an economical, compact instrument. The Weather-Ometer tests for material weatherability, while the Fade-Ometer accurately tests textiles for lightfastness. Both feature a 4500 W water-cooled xenon arc lamp and a total exposure area of 2188 cm<sup>2</sup>. Available 2-tier rack option nearly doubles sample capacity.

## Common Applications

Automotive Coatings,  
Fabrics and Plastics



Packaging

Paints, Coatings  
and Pigments



Photovoltaics

Plastics



Textiles,  
including Industrial  
and Geotextiles



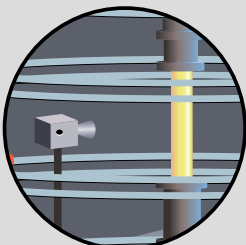
Window Profiles



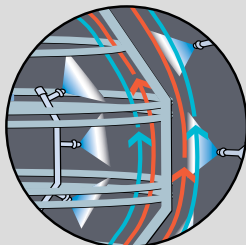


Ci5000 Interior Chamber

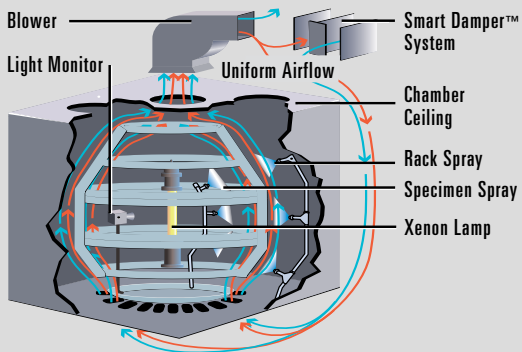
RD-3T Holder



Light Monitor



Specimen and Rack Spray



## Standards

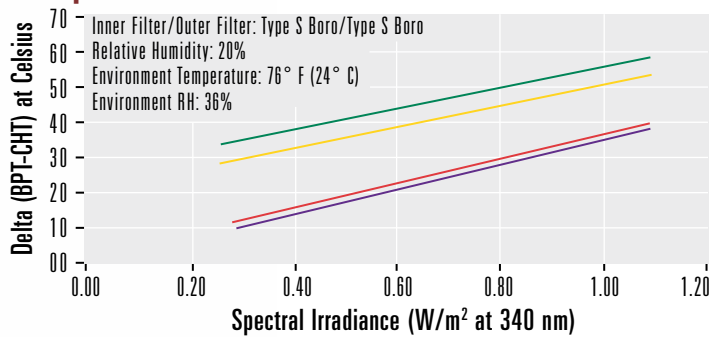
The Ci Series meets or exceeds the following industry standards:

AATCC	TM 16*	TM 16E-1998*	TM 169●▲■
ASTM	D2565* D6695* E1596* G151* G155*	The Ci Series meets all material standards that reference ASTM G151 and G155	
Ford	FLTM B0 116-01●▲		
GME	60292*		
GB/T	1865●▲■ 8427* 13492●▲■ 16422.2●▲■		
GMW	3414 TM* 14162*		
ISO	105-B02* 105-B04●▲■ 105-B06* 3917●▲■ 4892-1●▲■ 4892-2●▲■ 11341●▲■ 12040*		
JASO	M 346*		
Marks & Spencer	C9■▼ C9A■▼		
MIL STD	810 G (Method 505.5)●▲■		
Peugeot/Citroen	D27 1389*		
Renault	D47 1431▼		
SAE	J1885●▲ J1960●▲ J2412●▲■ J2527●▲■		
VDA	621-429●▲ 621-430●▲ 75202*		
VW	PV 1303* PV 1306▲ PV 3929* PV 3930●▲■		

- Ci5000
- ▲ Ci4000
- Ci3000+
- ▼ Ci3000+ Fade-Ometer
- \* All Ci Equipment

This is a sample of global standards that can be met by the Ci Series. For more information on additional or specific standards, contact your local Atlas® representative. Standards are subject to change without notice. This might lead to the inclusion or exclusion of certain instruments.

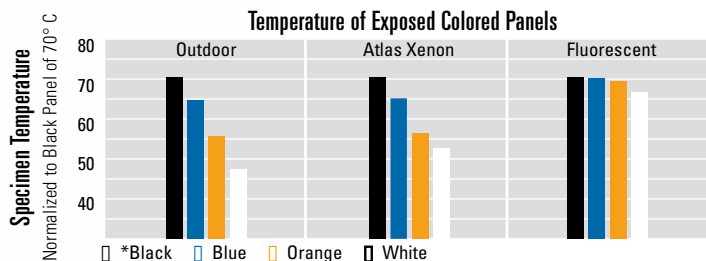
## Temperature Control Performance



- Min. Delta BPT/CHT @ 60° C
- ▲ Min. Delta BPT/CHT @ 45° C
- Max. Delta BPT/CHT @ 45° C
- ▼ Max. Delta BPT/CHT @ 60° C

Operable ranges of humidity control at various Black Panel Temperatures (under normal laboratory conditions) at normal irradiance levels. Data representative of a Ci4000. Other performance envelope data may vary. Contact your local sales representative for data on other instruments.

## Atlas Xenon vs. Fluorescent vs. Outdoor Exposure



Note: Black Panel Temperature in the fluorescent device is achieved only by heating the chamber air (no IR). Thus, all specimens are heated equally without regard to color.



## Ci Series Weather-Ometer® Features

	5000	4000	3000+	3000+ Fade-Ometer®
Positive alignment, quick disconnect xenon lamp system	12000 W	6500 W	4500 W	4500 W
Specimen rack capacity	11000 cm <sup>2</sup>	6500 cm <sup>2</sup>	2188 cm <sup>2</sup>	2188 cm <sup>2</sup>
2-tier rack capacity			3422 cm <sup>2</sup>	3422 cm <sup>2</sup>
Automatic irradiance control at narrow band (340 nm or 420 nm), broad band (300-400 nm) or illuminance control/LUX (400-750 nm)	●	●	●	●
TFT full color 12" touch screen control panel display of all test parameters	●	●	●	●
Automatic, on rack Black Panel Temperature control	●	●	●	●
Automatic chamber temperature control	●	●	●	●
Automatic blower speed control	●	●	●	●
Automatic test time countdown in kJ/m <sup>2</sup>	●	●	●	●
Xenon lamp cooling system	●	●	●	●
Water purity meter	●	●	●	●
Smart Damper™	●	●	●	●
Calibration xenon reference lamp	●	●	●	●
VibraSonic™ humidification system	●	●	●	●
Automatic humidity control	●	●	●	●
Direct readout of relative humidity (%RH)	●	●	●	●
Touch screen diagnostic message display	●	●	●	●
Main power disconnect switch	●	●	●	●
Meets CE, UL, CSA, ISO and EN compliance	●	●	●	●
S <sup>3</sup> T - Specific Specimen Surface Temperature System	■	■	N/A	N/A
Instrument footprint (including access area) in centimeters	212 x 293	180 x 272	146 x 256	146 x 256
Chamber air refrigeration	■	■	N/A	N/A
Lamp cooling refrigeration	■	■	■	■
LiquiAir™ xenon lamp cooling system	■	■	■	■
2-tier rack	▲	▲	■	■
Data acquisition software package with serial/USB interface	■	■	■	■
Dual Black Panel/Black Standard Temperature measurement	■	■	■	■
Multiple rack mounted temperature sensors	■	■	■	■
Monitoring of second wavelength	■	■	■	■
XenoCal irradiance calibration device	■	■	■	■

● Standard   ■ Optional   ▲ Custom Design

Specific Utility Requirements and Specifications for each instrument can be found on page 27, SPD graphs on pages 9-10, Filter Combinations on page 6 and Specimen Holders on pages 31.

 **IMTEC**

 **ATLAS**  
MATERIAL TESTING SOLUTIONS

