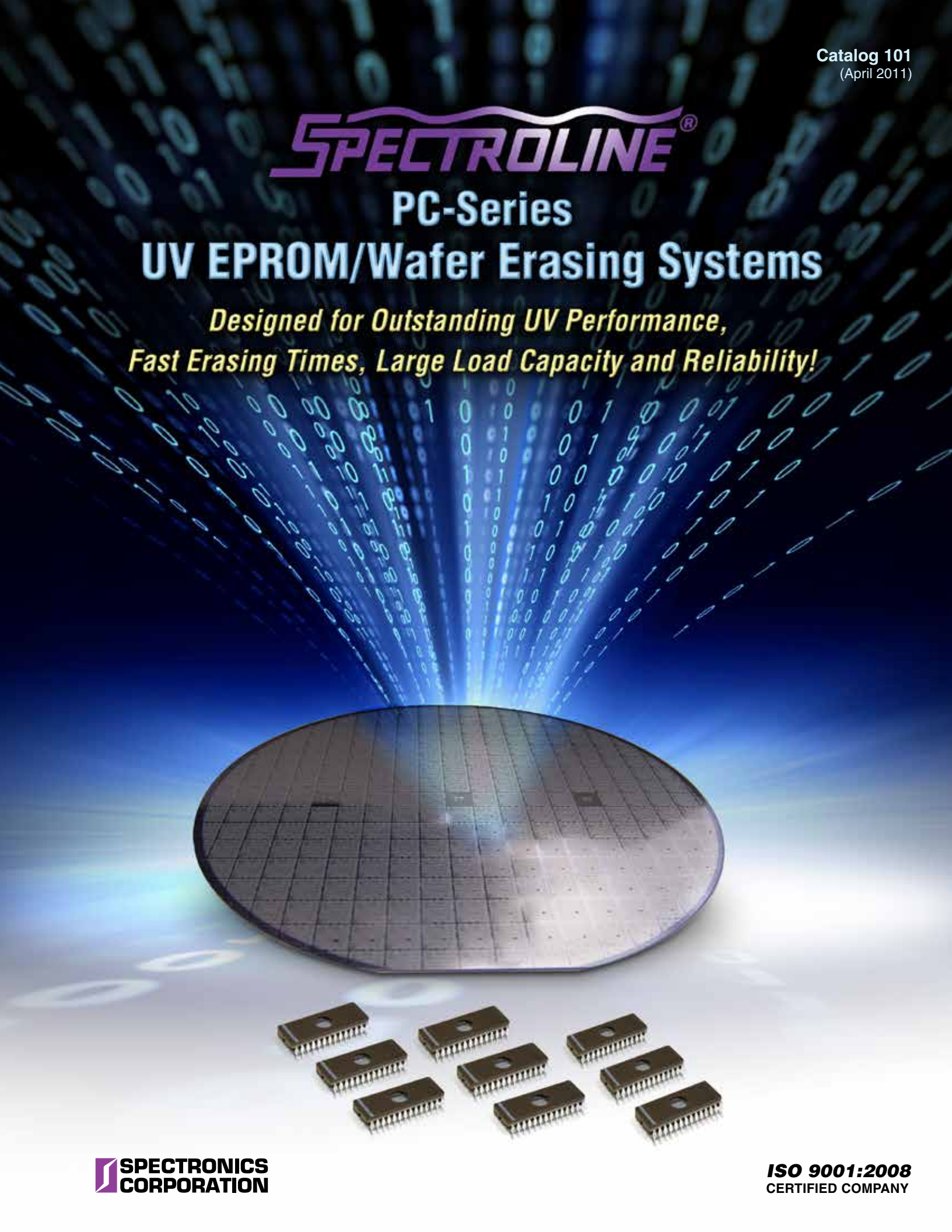
Catalog 101
(April 2011)

SPECTROLINE®

PC-Series
UV EPROM/Wafer Erasing Systems

Designed for Outstanding UV Performance,
Fast Erasing Times, Large Load Capacity and Reliability!



SPECTRONICS CORPORATION

ISO 9001:2008
CERTIFIED COMPANY

PC-Series UV EPROM/Wafer Erasing Systems

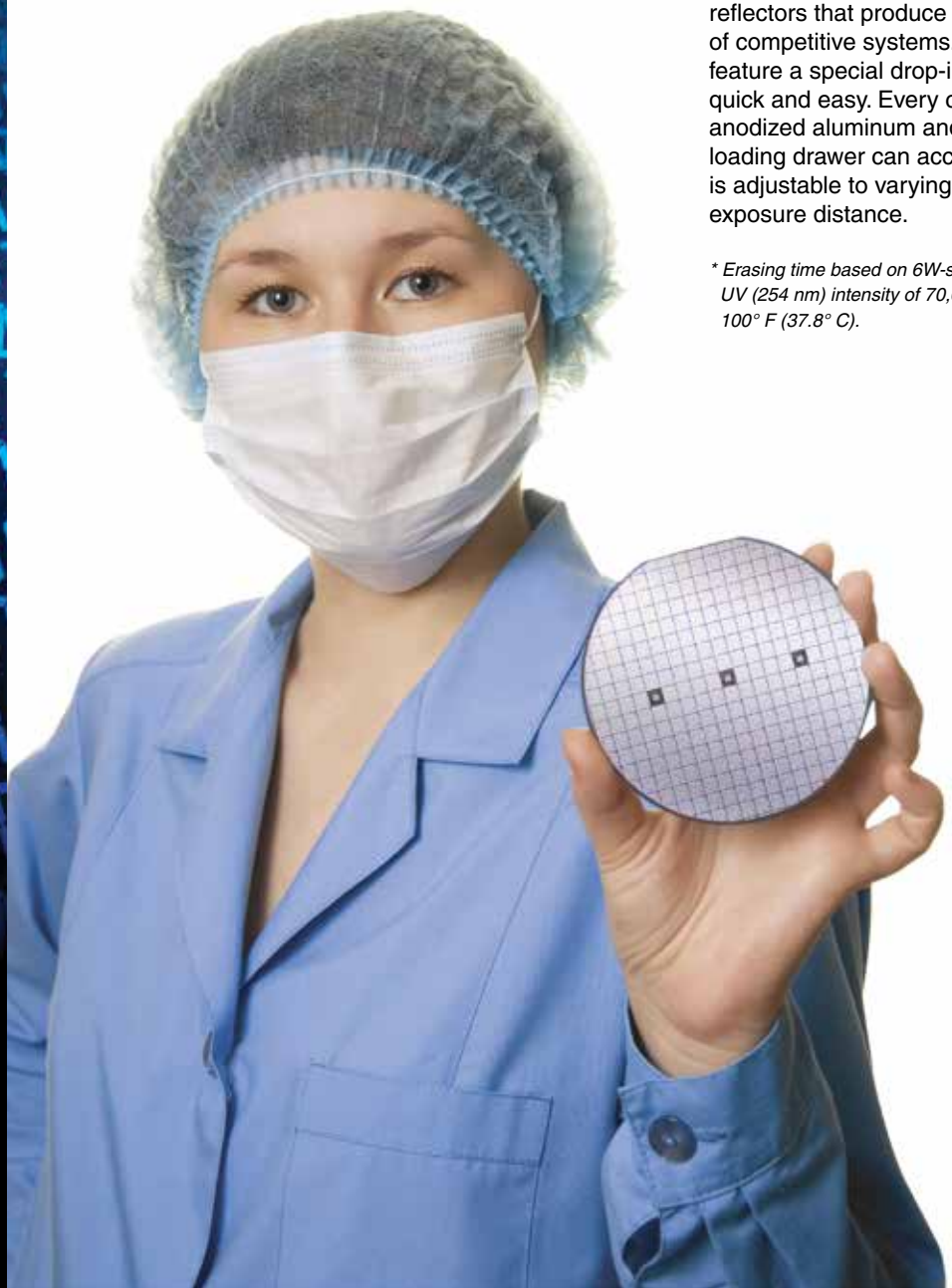
High UV intensities, large load capacities and fast erasing times!

UV EPROM/wafer erasers enable fast and easy erasure of programmed memories. By exposing EPROMs and wafers to high intensity short-wave ultraviolet (254 nm) radiation, the chips are “cleared” of all old data and are ready for reuse. Spectroline® offers the widest selection of high-performance erasing systems available. Our units feature the latest technological innovations to ensure the highest UV intensities, fastest erasing times, unmatched safety and reliability.

Spectroline® PC-Series UV EPROM/wafer erasing systems are designed to meet high-volume production requirements. Depending on the cabinet, erasing capacities range from 84 to 336 24-pin EPROMs, as well as varying sizes and quantities of wafers, metric cards, PC boards and open-faced stocking tubes. Our ten large-capacity units are specially engineered to provide outstanding UV irradiance uniformity to ensure fast and complete erasure of programmed memory from every EPROM, chip or wafer — *in as little a 90 seconds!* *

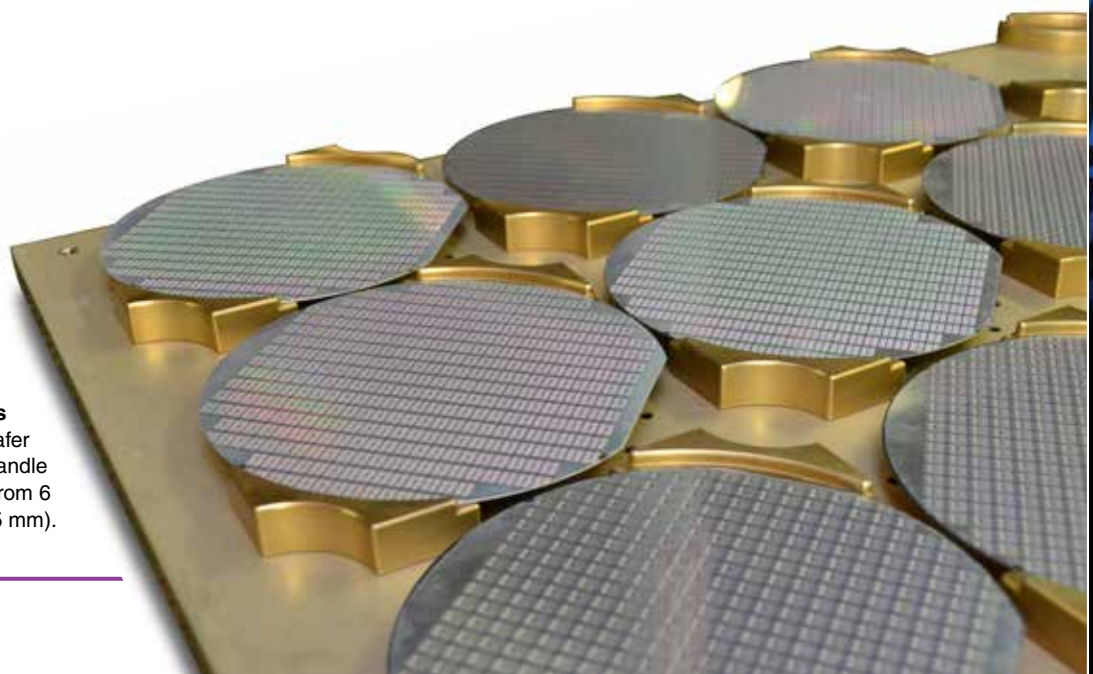
The PC-Series features high UV intensity, short-wave (254 nm), ozone-free, low-pressure mercury quartz vapor grid lamp assemblies mounted on specular aluminum reflectors that produce up to four times the throughput of competitive systems. These modular grid assemblies feature a special drop-in design that makes replacement quick and easy. Every cabinet is constructed of rugged, anodized aluminum and stainless steel. The cabinet loading drawer can accept a removable tray insert that is adjustable to varying heights to maintain optimum UV exposure distance.

** Erasing time based on 6W-sec/cm² EPROMs at nominal short-wave UV (254 nm) intensity of 70,000 µW/cm² at cabinet temperature of 100° F (37.8° C).*



Erasing time as fast as 90 seconds!

Contents



Adjustable tray inserts (shown with optional wafer fixtures), designed to handle wafers ranging in size from 6 to 12 inches (152 – 305 mm). See pages 6 and 9.

The PC-1100A, PC-2200A, PC-3300A and PC-4420A erasing cabinets are compact, portable, heavy-duty units designed for high-volume chip erasure! High UV intensity! Fast erasing times! Large load capacities!

All four models feature high-intensity, short-wave UV (254 nm), ozone-free, low-pressure mercury vapor, modular quartz grid lamp assemblies mounted on specular aluminum reflectors. The cabinets have large loading drawers with erasing capacities ranging from 84 to 336 EPROMs. Units also accommodate PC boards, metric cards and silicon wafers up to 8 inch (203 mm). In addition, the PC-3300A and PC-4420A cabinets accept open-faced stocking tubes. All of these units provide outstanding UV irradiance uniformity to ensure quick and complete erasure of programmed memory from every EPROM, chip or wafer. The PC-1100A, PC-2200A and PC-3300A can each produce erasing times as fast as 5.4 minutes*, while the PC-4420A can complete an erasing cycle in just 4 minutes!**

*Erasing time based on 6W-sec/cm^2 EPROM at nominal initial short-wave UV intensity of 30,000 µW/cm^2 at cabinet temperature of 100° F (37.8° C)
**Erasing time based on 6W-sec/cm^2 EPROM at nominal initial short-wave UV intensity of 46,000 µW/cm^2 at cabinet temperature of 100° F (37.8° C)

Innovative Features:

- ***Electronic timer*** — Minimizes operator error and provides automatic shut-off at the end of the erasing cycle. Pre-settable up to 60 minutes.
- ***UV-absorbing light indicators*** — Alert user when the corresponding grid lamps are operating
- ***Safety interlock*** — Will not allow unit to operate unless the loading drawer is fully closed. Protects the user from accidental exposure to hazardous short-wave UV (254 nm) radiation
- ***Powerful internal cooling fans*** — Control cabinet temperature to ensure optimum UV intensity, maintain uniform output and provide efficient erasing conditions. Helps prolong the life of the grid lamps.
- ***Removable tray insert*** with built-in conductive foam pad is provided with the PC-1100A, PC-2200A and PC-3300A units for quick loading and unloading and to protect the devices from electrostatic damage. The tray insert is height adjustable to maintain the optimum UV exposure distance. A choice of 6 in (152 mm) or 8 in (203 mm) tray inserts is available for the PC-4420A cabinet.

Large Capacity Erasing Cabinets

PC-1100A

- One low-pressure mercury vapor quartz grid lamp assembly
- Nominal initial short-wave UV intensity of 30,000 µW/cm^2
- Load capacity of 84 individual, 24-pin EPROMs

PC-2200A

- Two low-pressure mercury vapor quartz grid lamp assemblies
- Nominal initial short-wave UV intensity of 30,000 µW/cm^2
- Load capacity of 168 individual, 24-pin EPROMs

PC-3300A

- Three low-pressure mercury vapor quartz grid lamp assemblies
- Nominal initial short-wave UV intensity of 30,000 µW/cm^2
- Load capacity of 252 individual, 24-pin EPROMs

PC-4420A

- Four low-pressure mercury vapor quartz grid lamp assemblies
- Nominal initial short-wave UV intensity of 46,000 µW/cm^2
- Load capacity of 336 individual, 24-pin EPROMs

See Page 8 for Specifications Chart

The PC-8820B, PC-8820B-LT, PC-8820C-LT, PC-9920A, PC-9920A-LT and PC-10020-LT systems are the next generation of UV EPROM/wafer erasers! Superior UV intensity! Faster erasing times! Larger load capacities!

Specially designed to meet the critical production requirements of high-density EPROMs and wafers, these "super-capacity" units incorporate the latest technological advances in the industry to ensure the highest UV intensities, fastest erasing times and improved safety. Each system is engineered for maximum irradiance uniformity, boasting a nominal initial UV intensity output of 70,000 µW/cm^2 — producing the quickest and most complete erasure of programmed memory. ***They provide erasing cycle times as fast as 90 seconds!***

PC-8820B

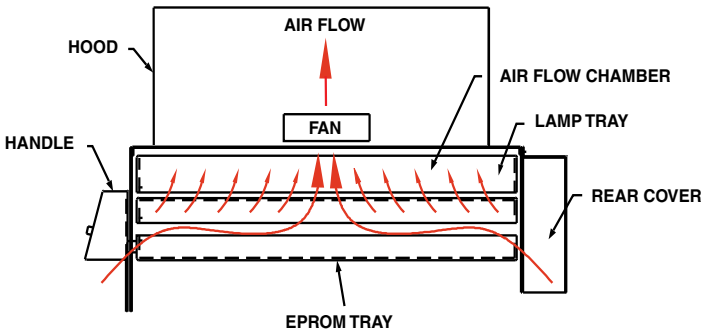
These units include the same features as our other PC-Series erasing systems plus these additional innovations:

- ***Advanced UV lamp design*** — Ultra-high intensity short-wave UV (254 nm), low-pressure mercury vapor quartz grid lamp assemblies meet the highest design and performance specifications
- ***Increased operating intensity*** — At least 60% greater throughput than competitive systems
- ***Exclusive quick load/unload tray*** — Facilitates safe handling, ensures proper positioning and allows pre-loading of EPROMs, PC boards, metric cards and wafers
- ***Digital timer*** — Pre-settable by user to minimize operator error and provides automatic shut-off at the end of the erasing cycle. May be set for hours, minutes or seconds.
- ***Improved internal cooling system*** — Provides outstanding airflow path and maximum uniform UV output — dramatically extending the life of the grid lamps
- ***Two-piece, modular cabinet design*** — Rugged, anodized aluminum and stainless steel construction. Ensures better productivity, safer handling and simplifies storage and maintenance.
- ***Temperature gauge*** — Shows when unit has acclimatized to its surroundings and reached operating temperature
- ***Special hood attachment*** — Provides improved air exhaust and added shielding from UV exposure
- ***Manual fan speed control*** — Allows fan speed adjustment in upper unit to stabilize temperature according to room environment

Extra-Large Drawer Load Capacity!

Larger drawer dimensions maximize load capacity of individual EPROMs, wafers and PC boards. Accommodates a variety of loading formats.

- Extra deep to permit loading of PC boards and metric cards
- Extra wide to accept open-faced stocking tubes for mass chip erasing without unloading
- Heavy-duty slides allow drawer to open fully for greater access to loading area
- Accommodates PC boards, metric cards and silicon wafers ranging from 6 to 12 inches (152 – 305 mm)



Superior air path flow design!

Adjustable tray inserts, with or without wafer fixtures, designed to handle wafers ranging in size from 6 to 12 inches (152 – 305 mm) are available as an option (sold separately). Custom features are also available on most units by special order. ***Spectronics Corporation can design and manufacture a system to meet your specific production and budget requirements.***

Extra-Large Capacity Erasing Systems

Switch/control panel cover

PC-8820B-LT and PC-8820C-LT

- Eight low-pressure mercury vapor quartz grid lamp assemblies
- Nominal initial short-wave UV intensity of 70,000 µW/cm² *
- Extra-large load capacity of 15 – 6 in (152 mm) wafers

The PC-8820C-LT comes with these additional user-friendly custom features:

- ***Internal security latch*** — Ensures that drawer stays closed and locked throughout system operation
- ***Rocker switch "Start" button*** — Fast and easy user control of grid lamps, alarm and drawer "lock/unlock" modes
- ***Control panel cover*** — ¼ in (6.4 mm) thick, engineered acrylic protects switch/control panel from damage and dirt
- ***Cycle sounding alarm*** — Alerts operator when each normal erasing cycle is completed
- ***Lamp fault alarm*** — Sounds if one or more grid lamps fails

PC-9920A-LT

- Nine low-pressure mercury vapor quartz grid lamp assemblies
- Nominal initial short-wave UV intensity of 70,000 µW/cm² *
- Extra-large load capacity of 24 – 6 in (152 mm) wafers

PC-10020-LT

- Ten low-pressure mercury vapor quartz grid lamp assemblies
- Nominal initial short-wave UV intensity of 70,000 µW/cm² *
- Extra-large load capacity of 28 – 6 in (152 mm) wafers

Light tower (LT)

Red/yellow/green signals indicate mode status at every stage of system operation.

Comes standard with PC-8820B-LT, PC-8820C-LT, PC-9920A-LT and PC-10020-LT systems.

* UV intensity measured with Spectroline® XR-1000 AccuMAX™ Series digital radiometer with XS-254 short-wave UV sensor detector

See Page 9 for Specifications Chart

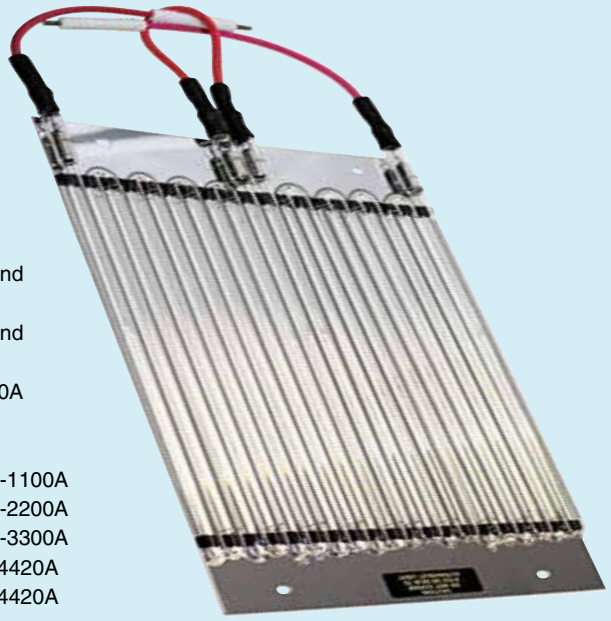
Specifications

	Large Capacity Models			
	PC-1100A	**PC-2200A**	**PC-3300A**	**PC-4420A**
UV Light Source	One low-pressure mercury vapor quartz grid lamp assembly	Two low-pressure mercury vapor quartz grid lamp assemblies	Three low-pressure mercury vapor quartz grid lamp assemblies	Four low-pressure mercury vapor quartz grid lamp assemblies
Nominal Initial UV Intensity †	30,000 µW/cm² at cabinet temperature of 100° F (37.8° C)			46,000 µW/cm² at cabinet temperature of 100° F (37.8° C)
Erasing Time	5.4 minutes based on 6W-sec/cm² EPROMs 9.0 minutes based on 10W-sec/cm² EPROMs 13.5 minutes based on 15W-sec/cm² EPROMs			4.0 minutes based on 6W-sec/cm² EPROMs 6.7 minutes based on 10W-sec/ cm² EPROMs 10.0 minutes based on 15W-sec/ cm² EPROMs
Load Capacities **(24-pin) EPROMs** **6 in (152 mm) Wafers** **8 in (203 mm) Wafers**	 84 – –	 168 – –	 252 – –	 336 5 4
DIMENSIONS				
Overall Housing (L x W x H)	12.25 x 18 x 8.4 in (31.1 x 45.7 x 21.3 cm)	20.25 x 18 x 8.4 in (51.4 x 45.7 x 21.3 cm)	28.25 x 18 x 8.4 in (71.8 x 45.7 x 21.3 cm)	36.25 x 16.25 x 11 in (92.0 x 41.3 x 27.9 cm)
Inside Drawer (L x W x H)	12 x 8.4 x 1.4 in (30.5 x 21.3 x 3.5 cm)	16.4 x 12 x 1.4 in (41.6 x 30.5 x 3.5 cm)	24.4 x 12 x 1.4 in (61.9 x 30.5 x 3.5 cm)	32.4 x 8 x 1.4 in (82.2 x 20.3 x 3.5 cm)
Grid Assembly (L x W)	8 x 8 in (20.3 x 20.3 cm)			8 x 9.5 in (20.3 x 24.1 cm)
Erasing Area (L x W)	8 x 8 in (20.3 x 20.3 cm)	16 x 8 in (40.6 x 20.3 cm)	24 x 8 in (61.0 x 20.3 cm)	32 x 9.5 in (81.3 x 24.1 cm)
Net Weight	26 lb (11.8 kg)	37 lb (16.8 kg)	52 lb (23.6 kg)	140 lb (63.5 kg)
Power Requirements	120V/60Hz, 230V/50Hz			

† UV intensity measured with Spectroline® XR-1000 AccuMAX™ Series digital radiometer with XS-254 short-wave UV sensor detector

Replacement Parts & Accessories

EC-0138 ..... Digital timer for PC-4420A (230V/50Hz)
EC-0139 ..... Digital timer for PC-4420A (120V/60Hz)
EC-0172 ..... Electronic timer for PC-1100A, PC-2200A and PC-3300A (120V/60Hz)
EC-0173 ..... Electronic timer for PC-1100A, PC-2200A and PC-3300A (230V/50Hz)
G750NO2 ..... Grid lamp assembly for PC-1100A, PC-2200A and PC-3300A
G895NO ..... Grid lamp assembly for PC-4420A
I-1100 ..... Tray insert with conductive foam pad for PC-1100A
I-2200 ..... Tray insert with conductive foam pad for PC-2200A
I-3300 ..... Tray insert with conductive foam pad for PC-3300A
I-4420-6X ..... Tray insert for 6 in (152 mm) wafers for PC-4420A
I-4420-8X ..... Tray insert for 8 in (203 mm) wafers for PC-4420A



G895NO Grid Lamp Assembly

Specifications

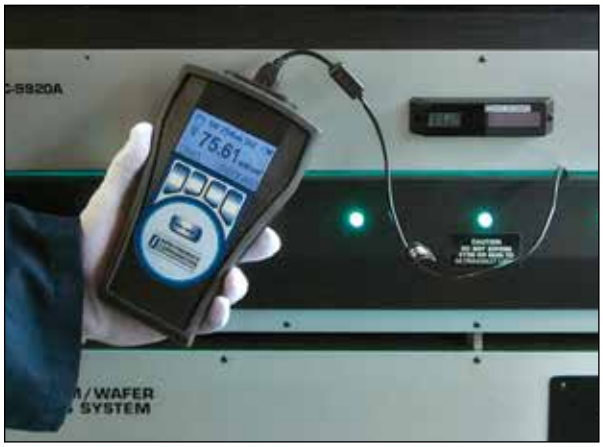
	Extra-Large Capacity Models		
	PC-8820B PC-8820B-LT PC-8820C-LT	**PC-9920A PC-9920A-LT**	**PC-10020-LT**
UV Light Source	Eight low-pressure mercury vapor quartz grid lamp assemblies	Nine low-pressure mercury vapor quartz grid lamp assemblies	Ten low-pressure mercury vapor quartz grid lamp assemblies
Nominal Initial UV Intensity at: **220V/60Hz** **230V/50Hz**	70,000 µW/cm² at cabinet temperature of 100° F (37.8° C)† 65,000 µW/cm² at cabinet temperature of 100° F (37.8° C)†		
Erasing Time *	1.5 minutes (90 seconds) based on 6W-sec/cm² EPROMs 2.5 minutes based on 10W-sec/cm² EPROMs 3.6 minutes based on 15W-sec/cm² EPROMs		
Load Capacities **6 in (152 mm) Wafers** **8 in (203 mm) Wafers** **12 in (305 mm) Wafers**	 15 8 3	 24 12 6	 28 15 6
DIMENSIONS			
Upper Housing (L x W x H)	36 x 33.25 x 9 in (91.4 x 84.5 x 22.9 cm)	40.5 x 36.5 x 9 in (102.9 x 92.7 x 22.9 cm)	46.4 x 35 x 9 in (117.9 x 88.9 x 22.9 cm)
Lower Housing (L x W x H)	36 x 33.25 x 9 in (91.4 x 84.5 x 22.9 cm)	36 x 32 x 9 in (91.4 x 81.3 x 22.9 cm)	
Hood (L x W x H)	31.25 x 10.5 x 15 in (79.4 x 26.7 x 38.1 cm)	32 x 10.5 x 15 in (81.3 x 26.7 x 38.1 cm)	37.25 x 10.5 x 15.5 in (94.6 x 26.7 x 39.4 cm)
Inside Drawer (L x W x H)	32.4 x 26.8 x 1.4 in (82.3 x 67.9 x 3.6 cm)	36.8 x 28 x 1.8 in (93.3 x 71.1 x 4.4 cm)	42 x 28 x 1.8 in (106.7 x 71.1 x 4.4 cm)
Grid Assembly (L x W)	4 x 22 in (10.2 x 55.9 cm)	4 x 25 in (10.2 x 63.5 cm)	4 x 25 in (10.2 x 63.5 cm) | 4.125 x 25 in †† (10.5 x 63.5 cm)
Erasing Area (L x W)	32 x 22 in (81.3 x 55.9 cm)	36 x 25 in (91.4 x 63.5 cm)	42 x 25 in (106.7 x 63.5 cm)
Net Weight	275 lb (125 kg)	380 lb (172 kg)	420 lb (191 kg)
Power Requirements	220V/60Hz, 230V/50Hz		

† UV intensity measured with Spectroline® XR-1000 AccuMAX™ Series digital radiometer with XS-254 short-wave UV sensor detector
†† Available with either configuration
* Erasure times based on nominal short-wave UV intensity of 70,000 µW/cm² at cabinet temperature of 100° F (37.8° C)

Replacement Parts & Accessories

EC-0235 ..... Digital timer for PC-8820B, PC-8820B-LT, PC-8820C-LT, PC-9920A, PC-9920A-LT and PC-10020-LT
G985NO-B..... Grid lamp assembly for PC-8820B, PC-8820B-LT and PC-8820C-LT
G995NO ..... Grid lamp assembly for PC-9920A, PC-9920A-LT and PC-10020-LT
G1005NO ..... Grid lamp assembly for PC-10020-LT
I-8820-6X..... Tray insert for 6 in (152 mm) wafers for PC-8820B, PC-8820B-LT and PC-8820C-LT
I-8820-6X/WF ..... Tray insert with wafer fixture for 6 in (152 mm) wafers for PC-8820B, PC-8820B-LT and PC-8820C-LT
I-8820-8X..... Tray insert for 8 in (203 mm) wafers for PC-8820B, PC-8820B-LT and PC-8820C-LT
I-8820-8X/WF ..... Tray insert with wafer fixture for 8 in (203 mm) wafers for PC-8820B, PC-8820B-LT and PC-8820C-LT
I-8820-12X..... Tray insert for 12 in (305 mm) wafers for PC-8820B, PC-8820B-LT and PC-8820C-LT
I-8820-12X/WF ..... Tray insert with wafer fixture for 12 in (305 mm) wafers for PC-8820B, PC-8820B-LT and PC-8820C-LT
I-9920-6X..... Tray insert for 6 in (152 mm) wafers for PC-9920A and PC-9920A-LT
I-9920-6X/WF ..... Tray insert with wafer fixture for 6 in (152 mm) wafers for PC-9920A and PC-9920A-LT
I-9920-8X..... Tray insert for 8 in (203 mm) wafers for PC-9920A and PC-9920A-LT
I-9920-8X/WF ..... Tray insert with wafer fixture for 8 in (203 mm) wafers for PC-9920A and PC-9920A-LT
I-9920-12X..... Tray insert for 12 in (305 mm) wafers for PC-9920A and PC-9920A-LT
I-9920-12X/WF ..... Tray insert with wafer fixture for 12 in (305 mm) wafers for PC-9920A and PC-9920A-LT
I-10020-6X..... Tray insert for 6 in (152 mm) wafers for PC-10020-LT
I-10020-6X/WF ..... Tray insert with wafer fixture for 6 in (152 mm) wafers for PC-10020-LT
I-10020-8X..... Tray insert for 8 in (203 mm) wafers for PC-10020-LT
I-10020-8X/WF ..... Tray insert with wafer fixture for 8 in (203 mm) wafers for PC-10020-LT
I-10020-12X..... Tray insert for 12 in (305 mm) wafers for PC-10020-LT
I-10020-12X/WF ..... Tray insert with wafer fixture for 12 in (305 mm) wafers for 10020-LT

Digital Radiometer
XR-1000 AccuMAX™ Series Meter



The UV intensity of PC-Series grid lamps should be measured by testing periodically with a Spectroline® XR-1000 AccuMAX™ Series radiometer and XS-254 short-wave UV sensor detector.

The XR-1000 is designed for maximum versatility and offers a variety of features for measuring both ultraviolet and visible light sources. When equipped with an interchangeable UV sensor detector, the meter will precisely measure the short-wave UV (254 nm) output of UV EPROM erasers. It's also ideal for fast and easy erasing time calculations and monitoring the useful life of UV light sources.

XS-254
short-wave UV (254 nm)
sensor detector

The XR-1000 AccuMAX™ features:

- An advanced microprocessor-controlled readout unit, specially calibrated to complement a full line of interchangeable sensor detectors
- Software-driven functions that provide multifaceted light level readings
- Five user-customized settings and three main operational modes (absolute data/normal, autozeroing and integration) with hold, peak and back functions
- Excellent linearity and cosine response
- Choice of direct or USB cable connection between sensor detector and readout unit
- Automatic shutoff and other user-defined power saving features

Replacement Parts & Accessories

XCB-100..... WATER-RESISTANT USB CABLE with adapter for XR-1000 meter

XRB-100..... RUBBER BOOT for readout unit

Protective Eye and Face Wear

Our UV EPROM/wafer erasing systems are carefully engineered for safe and effective operation, and include unmatched safeguards to prevent accidental exposure to hazardous short-wave ultraviolet radiation. However, since some UV exposure is unavoidable, it's strongly recommended that the eyes, face and skin always be shielded during use. Spectroline® eye and face wear is specially made to absorb UV light and protect users from any harmful effects.

UVS-30 UV-absorbing spectacles — Provides eye protection from exposure to sporadic, low-intensity UV light sources. Durable and well-proportioned frames fit easily over regular eyeglasses for long-wearing safety and comfort.

UVG-50 UV-absorbing goggles — Provides eye protection from extended exposure to high-intensity UV sources. Features air vents and adjustable head strap for long-wear and comfort. Flexible design allows them to fit easily over regular eyeglasses.

UVF-80 UV-absorbing face shield — Provides complete eye and face coverage for protection from extended exposure to high-intensity UV sources. Shield is adjustable to fit all size users and has a visor that can be pivoted off the face.

Spectronics Corporation is the world's leading manufacturer of ultraviolet equipment and fluorescent materials. Spectronics supplies over 1,000 different products for the semiconductor, electronics, nondestructive testing, laboratory, biotechnology, industrial, forensics, financial, automotive, HVAC/R and other markets.

Spectronics' modern, 100,000 square-foot manufacturing facility and office headquarters is located in Westbury, New York. Nearly 200 personnel are involved in all phases of research and development, manufacturing, sales, marketing, customer service,and logistical and technical support.

SPECTRONICS CORPORATION

More than five decades since its inception, the goal of Spectronics is still the same — to produce effective, top-quality products with the utmost dedication to customer satisfaction.

Warranty

All equipment is warranted against defects in manufacture. Spectronics Corporation's obligation under this warranty is limited to repairing or replacing, at the option of Spectronics Corporation, any part(s) of the product which, if properly installed, used and maintained, proves upon factory examination to have been defective in materials or workmanship within 12 months from the date of delivery.

This warranty does not apply to any component that deteriorates under normal use or has a normal life inherently shorter than the warranty stated. For example, grid lamps are warranted for 90 days. In addition, Spectronics Corporation does not warrant any instrument that has been subjected to misuse, negligence or accident, or has been repaired or altered by anyone other than Spectronics Corporation.

This warranty is in place of all other warranties of quality. There are no other warranties either oral, written, express, implied or statutory. IMPLIED WARRANTIES OF FITNESS FOR PURPOSE AND MERCHANTABILITY ARE EXCLUDED. This warranty and your remedies thereunder are solely as stated in this form. In no event shall Spectronics Corporation be liable for special, indirect, incidental or consequential damages, nor for any damages arising out of delay in shipment or production.

Product Specifications

Spectronics Corporation reserves the right to alter product specifications without notice. Spectronics is under no obligation to make similar changes in its products previously produced.

CUSTOMER SERVICE

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- Order Information
- Technical Assistance
- Authorized Distributors

Product literature, instructions and a full staff of trained customer service representatives and technical service engineers are available for support. Additional product information is available on our website.

Call Toll-Free:1-800-274-8888
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Website: www.spectroline.com

SPECTRONICS CORPORATION
956 Brush Hollow Road, P.O. Box 483
Westbury, New York 11590
800-274-8888 • 516-333-4840
Fax: 800-491-6868 • 516-333-4859
www.spectroline.com

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