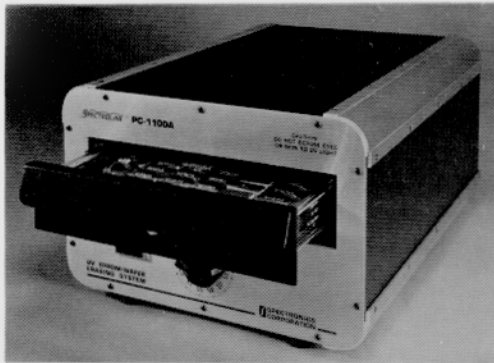


38. UV EPROM erasers speed systems design



New memory technologies have become a universal design element introducing data storage benefits to electronic equipment industries. "Spectroline" is a prime example.

Problem: EPROMs (erasable programmable read-only memories) usually remain a permanent part of PC boards and their removal from boards is both laborious and time-consuming, if at all possible. In typical systems, before a program's software can be perfected, an operator has to "pass" through the system several times. Each "pass" requires a new program, and a memory device that erases and reprograms quickly makes the process that much easier.

Solution: "Spectroline" Ultraviolet EPROM erasers irradiate EPROMs with short wave (254 nm) UV radiation. Their flexibility in prototyping software codes in microprocessor designs is key.

Exposing EPROMs to an ultraviolet, high-intensity light source for a predetermined time erases memories and thereby readies chips for reprogramming. To do so, EPROM users selectively mask the entire PC board, with the exception of the EPROM targeted for erasure. Then the entire board is placed within a Spectroline UV EPROM erasing

cabinet, such as model PC-1100A, and exposed to the radiation produced by the shortwave ultraviolet sources kept safely from view. The PC-1100A UV EPROM eraser cleans up PC boards up to 8 × 13 inches in size, and erases programmed memories in as little as 5½ min. This unit features a high-intensity UV grid lamp system that completely erases programmed memories with a typical peak intensity of 18,500 $\mu\text{W}/\text{cm}^2$. Mounted on a special drop-in specular aluminum reflector, the quartz grid lamp provides maximum uniformity of 254-nm irradiance over an 8- × 9¼-inch erasing area.

The cabinet's loading draw accommodates PC boards as well as silicon wafers, metric cards, or up to 84 individual EPROM chips. Its removable tray insert adjusts to varying heights, ensuring optimum UV exposure. A conductive foam pad attached to the insert protects valuable devices from electrostatic build-up, and a 60-min timer automatically shuts off operation and signals the end of the erasing cycle.

For complex projects in virtually every industry, EPROMS and Spectroline UV EPROM erasers can save months of trial-and-error programming. If necessary, the program can be changed at a later date to accommodate new system features.

Spectronics Corp. manufactures 12 UV EPROM erasers, to meet the requirements and budget of any user.

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