Will 3-D printers follow the route of color laser printers, faxes, large-format printers, and copiers? When those engineering office essentials first hit the market, they cost thousands and few could afford them. Now they are everywhere. Could the same thing happen with 3-D printers used to make solid prototypes directly from CAD models?

Two companies, 3D Systems Corp. of Rock Hill, S.C., and Desktop Factory Inc. of Pasadena, Calif., are betting on it.

3D Systems plans to release its new V-Flash desktop modeler for $9,900 this summer. Looking a little like a 2-foot-high laser printer, V-Flash is small enough to fit on any desktop that can accommodate its 100 pounds. It will have a maximum build volume of 7 x 9 x 8 inches.

While the company isn’t divulging details about the machine’s “cutting-edge proprietary” technology that it calls Film Transfer Imaging, president Abe Reichental said V-Flash will combine plug-and-play setup with the ability to make high-quality solid models within hours.

Desktop Factory’s low-cost 3-D printer is smaller (with a build volume of 5 x 5 x 5 inches), lighter, and cheaper. According to CEO Cathy Lewis, the company plans to market it at $7,499, but will offer school discounts down to $5,000. It uses an inexpensive halogen light to heat glass-and-aluminum-reinforced nylon powders to be picked up by a drum, which applies the layer to the work area where it is annealed to form a solid part. Desktop Factory plans to launch the product during the summer.

Reichental believes that V-Flash’s price will be low enough to sell to hobbyists as well as to designers, engineers, and students. Jon Cobb, vice president and general manager of 3-D printing for Stratasys Inc. in Eden Prairie, Minn., believes that lower prices will expand the market.

Five years ago, Cobb’s company was the first to break the $30,000 barrier. Stratasys now makes five models priced between $18,900 and $32,900. They vary in terms of build volume, speed, modeling materials, and degree of automation.

“Certain segments of the market are looking for lower prices, as well as reliability and ease of use,” Cobb said. “About 30 percent of our worldwide sales go into the educational marketplace, including colleges, high schools, and even junior high schools. Last year, we sold 200 machines to high schools to use in CAD courses.”

Cobb believes most companies will opt for faster machines that automate the removal of supports from workpieces. “The vast majority of our sales are to designers who use them in their office,” he said. “They may want to test different design variables quickly. They’re really looking for throughput and don’t want their engineers or designers wasting time by removing supports manually.”

For true hobbyists, the Fab@Home project (www.fabathome.org) promises even cheaper rapid prototyping. The group, which grew out of Cornell University’s Computational Synthesis Lab, has developed a build-it-yourself 3-D printer that hobbyists and students can build for $2,500 from standardized parts. People have used it to make everything from watchbands to silicone squeeze bulbs.