EB-450Wi (BrightLink 450Wi in some regions) 2010.1

Projection system: 3LCD, 3-chip optical engine
LC panels: 0.59-inch polysilicon TFT liquid crystal panels
Native resolution (pixels): 1280 x 800 (WXGA)
Light source: 230W UHE lamp
Color reproduction: 16.77 million colors
Brightness: 2,500 lumens
Dimensions (W x D x H): 481 x 369 x 115 mm
Power consumption: 363 W (Normal mode)
Weight: 5.8 kg (without fixture)
Interactive functions: Integrated (image sensor)

Product Features

The most impressive features of the EB-450Wi are its ultra-short throw lens and integrated interactive functions. When anchored to a wall with a special mounting fixture, the projector throws an image from almost directly above the screen. It only needs 36.7 cm from the projector to the screen to produce the maximum image size of 96 inches. With the projector nestled so close to the wall, persons standing in front of the screen neither cast shadows on the projected image nor are subjected to as much lamp glare as they would be if the image were projected from farther in front of the screen.
Interactive functions are built into the projector and not into a board, allowing the EB-450Wi to turn almost any surface into an interactive screen. No expensive interactive whiteboard is required. With the Easy Interactive Tools application software and the interactive pens that come with the projector, you can control a PC from a projected image, or write words and draw pictures directly onto the screen and then save them to the PC.
This projector's basic specifications give it more than ample power, whether for the classroom or the boardroom. The 2,500 lumens of brightness means there's no need to draw the curtains or turn off the lights. And the built-in 10-watt speaker delivers audio for lessons and presentations.

Story Behind the Creation

Epson hit upon the idea of integrating interactive functions into the projector as a way to reduce system costs and promote sales.
Beginning in the early 2000s, European and American institutions of higher learning, and even many primary and secondary schools, began introducing PCs, projectors, networks, and other information and communications technology into the classroom to enrich the educational experience and increase efficiency. This trend has since spread globally, and the equipment has since evolved.
Teachers loved projectors because information presented on a large screen helped students focus and aided understanding. Projectors were considered so effective that some countries made their purchase a matter of government educational policy. When paired with an interactive whiteboard, projectors had even greater utility because they allowed users to manipulate projected information directly on a screen. The problem was that building an interactive environment was prohibitively expensive, since schools had to purchase both interactive whiteboards and projectors. Epson solved this problem by providing the interactive features on the projector, thus eliminating the need for a separate interactive whiteboard and enabling the use of an existing blackboard, whiteboard, or wall. This solution, in the form of the EB-450Wi, touched off a stampede of interactive projectors into the classroom.

Reception and Market Impact

The emergence of the EB-450Wi interactive projector gave educators a wider variety of options when it came to building an interactive environment in the classroom. Their much-praised features provided traction for their spread in educational institutions. The ultra-short throw distance meant that presenters neither cast shadows on the screen nor were bothered by lamp glare. The ability to achieve interactivity without a special whiteboard meant that interactive systems occupied less space and were more affordable. In addition, the EB-450Wi provides high-quality images, quickly and accurately detects the location of the interactive pens, and speedily renders input. These features have not gone unnoticed by the corporate world, where enterprises are now starting to use the interactive projectors for business meetings and presentations.
The success and popularity of the EB-450Wi brought the interactive projector concept to the attention of both consumers and other manufacturers, many of whom then came out with their own interactive short-throw and ultra-short throw products. Epson owns a more than 50% share of the interactive projector market and has dramatically increased the presence of the Epson brand in education.
The EB-450Wi also led to changes in the structure of the market by nudging projector manufacturers into the interactive whiteboard market.
The concepts first introduced in the ultra-short-throw EB-450Wi live on in Epson's still-evolving line of interactive projectors. Epson's current ultra-short throw projectors do not have to be permanently installed on a wall but can be placed on a desktop or used to project images onto a tabletop. The interactive functions also continue to evolve, with, for example, a function that allows multiple persons to write on an image at the same time, and a PC-less electronic blackboard function that allows users to write on a projected image from a document imager without connecting a PC.

(Written in July 2012)