EMP-6100

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Display method: 3LCD
LCD panel: 0.8-inch HTPS TFT LCD panels
Pixels: 1024 x 768 x 3 panels
Light source: 230 W UHE
Color reproduction: 16.77 million colors
Brightness: 3500 lm (high brightness mode)
2700 lm (low brightness mode)
External dimensions:
465 (W) x 340 (D) x 146 (H) mm
(not including protruding parts)
Power consumption: 330 W (when in use)
Weight: approx. 7.0 kg

Product Features

The EMP-6100 dust-proof projector was designed to be installed in harsh environments that would cause normal projectors to suffer frequent breakdowns. This includes places where people are constantly coming and going, where doors and windows are frequently opened and closed, and regions with a lot of dust, sand, and smoke.
Projectors that use a lamp to project an image have a cooling fan that constantly draws in cool air and then expels warm air to counteract the increase in internal temperature caused by the lamp. Epson attached a large electrostatic filter capable of absorbing fine particles, similar to the kind used in the engine room of automobiles, to the air inlet of the EMP-6100. This filter, along with a completely air-tight structure except for the air inlet and exhaust, keeps the inside of the projector clean by preventing dust and tobacco smoke (tar) from getting inside the projector and then reducing the brightness of the lamp and harming the performance of the LCD panels.
When the filter absorbs so much dust that it becomes clogged, an internal air flow sensor detects the reduced flow and uses an LED indicator or an on-screen notice to inform the user that the filter needs to be replaced or cleaned. Ease of maintenance was also a consideration when designing the filter, which can be replaced single-handedly while the projector is mounted on the ceiling.
The projector was designed to operate in temperatures ranging from 0 to 40 ° C, making it usable in most parts of the world.

Birth of the Product and Background

Two years before commercialization of the EMP-6100, Epson began noticing that a significant number of projectors in Chinese elementary and middle schools were breaking down. China had been using projectors in its school classrooms for several years, but large amounts of dust and sand were causing the projectors to break down in just a few years. In addition to the yellow sand that blows across China all year long, building and house construction sites kick up a lot of dust that then gets inside projectors, where it accumulates and causes problems. As a pioneer of the projector business, Epson quickly decided to address the issues facing its customers by rapidly designing a durable product that could resist sand and dust, and thereby increase the presence of its projectors in the promising Chinese market.
The development of a dust-proof projector was further driven by the increasing use of projectors for various purposes in many other countries and regions, as well. Even in developed economies such as the U.S. and Europe, dust-proof projectors were needed in high-use environments, for example ceiling-mounted projectors at universities and restaurants and amusement facilities with high concentrations of tobacco smoke.

Reception and Market Impact

After the launch of the EMP-6100, more and more users began to recognize the need for sufficient dust protection when installing a projector outdoors or in a dusty room. This, in turn, made dust resistance a new selling point for projectors and drove other companies to also launch products with anti-dust features.
Epson's lineup of dust-proof projectors, which was launched with just two models, is now being expanded to meet specific customer needs based on the size and brightness of the places in which the projectors will be used. Now, anti-dust features come standard on most of Epson's major products sold in China and are a driving force in the growth in sales of Epson projectors.