Knowledge of LED panel lights, you have to take a look

Abstract:

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Someone once predicted that the future lights will not have a specific shape, and the lights in the future will become a part of the building, which you cannot easily recognize at a glance. And panel lights, some people say, it is a major performance of lighting at this stage.

Application area

LED panel lights are widely used in offices, schools, hospitals, shopping malls, homes and other places due to their characteristics of good uniformity of illumination, higher display index, uniform and soft light, and comfort. Best product.

Product structure

The structure of the LED panel light mainly includes components such as a frame, a diffusion plate, a light guide plate, a lamp bead, a driving power source, and an aluminum substrate.

1. Frame: frame strength affects durability

The frame is an important part of the panel light, and the high-intensity frame makes the panel light more durable. The side frames of LED panel lights use different materials, and their heat dissipation performance is also different. According to statistics, the current frame materials of panel lights are mainly aluminum alloy, steel, PC, A6063, aluminum plastic, steel and other materials.

2. Diffusion plate: different materials have different transmittance

The function of the diffuser plate is to evenly diffuse the light from the light guide plate, and it can also play a role of blurring the dots. The materials used are mainly acrylic, PC, PS, etc.

It is understood that the acrylic light transmittance is 92%, the PC is 88%, and the PS is about 80%. The acrylic light transmittance is higher than that of PC, and the cost is low, and its anti-aging performance is weak. PC materials are expensive. But strong anti-aging performance.

3. Light guide plate: the plate has a great influence on light efficiency

The function of the light guide plate is to refract light parallel to the direction of the light transmission plate to be perpendicular to the direction of the light transmission plate, and light reflected from the light guide plate to the back of the panel lamp is reflected by the reflective paper. In this process, it is necessary to reduce the light attenuation as much as possible. Generally speaking, the light efficiency of the light guide plate depends largely on the design of the dots, followed by the choice of the plate.

4. Power supply: High efficiency in constant current power supply mode

LED lights have two driving power modes, one is constant current power, this mode has high efficiency, PF value is as high as 0.95, and cost-effective; the other is constant voltage with constant current power, stable performance, but low efficiency and high cost.

Product Categories

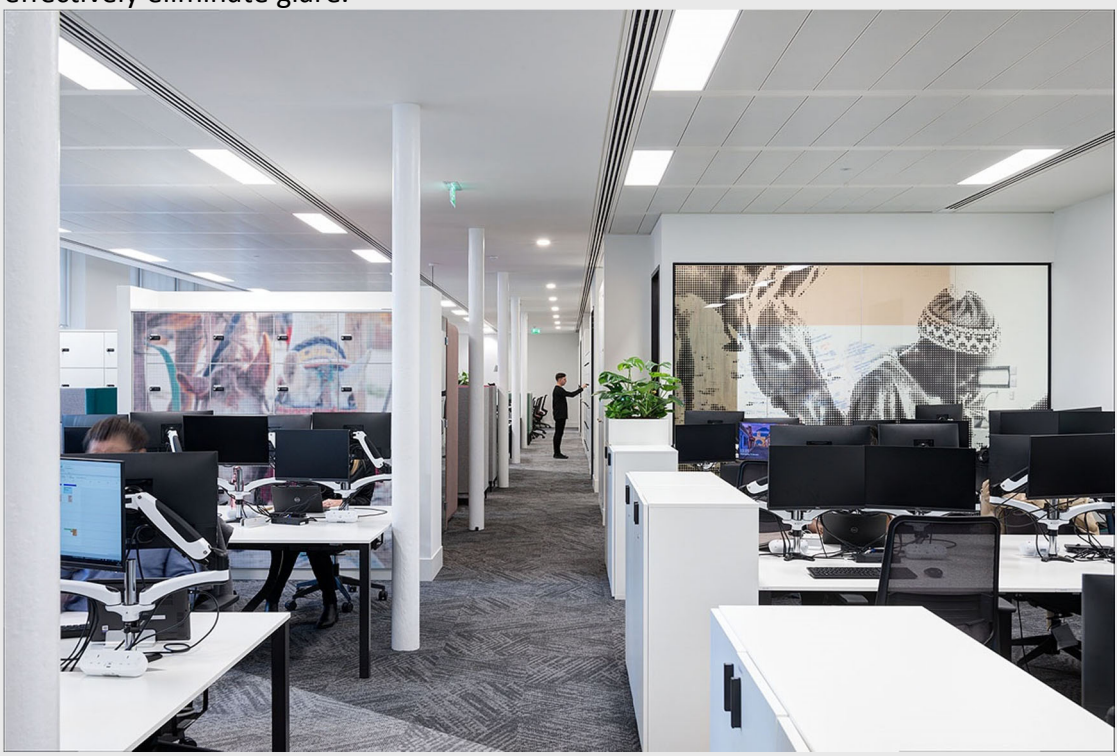
There are two types of LED panel lights: direct light and side light.

Side light panel light has the advantages of light weight, thin body, convenient installation and transportation, etc. The disadvantage is that it is easy to unevenly emit light. The advantages of straight light panel light are sufficient brightness and cost control. The disadvantage is that glare is inevitable and there are dark areas. It is heavy and relatively inconvenient to transport and install.

The price of side-emitting LED panel lights is more expensive than that of direct-lighting, because the technology of side-emitting LED panel lights is relatively complicated, which is determined by the structure of side-emitting products. And the process must be complicated, which makes it difficult to control the product yield and product uniformity.

Product advantages

LED panel luminaires have a very soft way of emitting light. At present, the side light is commonly used. The light emitted from the surface of the lamp body is very uniform, so that the light emitted is not dazzling at all. Used in various fields, it can effectively eliminate glare.



Above, the LED panel light has the characteristics of good uniformity of illumination, higher display, uniform and soft light, and comfort. It has gradually become the best product to replace the traditional grid lamp panel in the LED era. It will be used in schools and other indoor lighting fields. Space for development will grow.