



How Is This Technology Different?



SMD (Surface Mounted Device) LEDs are highly versatile and the most common type available. The chip in these LED lights is fused or stuck permanently to a circuit board. This chip can include RGB diodes and it produces a wider beam of light which is spread over a greater area.



COB (Chip on Board) LEDs are slightly more efficient in energy use. Like SMD, COB chips have multiple diodes on the same surface, just at a higher volume. That means the light produced is more uniform, there is no halo, the beam angle of COB is easy to adjust, and there is no glare or hotspots.



SMD LED Advantages

- + More flexible and can be altered to meet a wider variety of applications.
- + Larger illumination angle and can be used to make lights that change colors.
- + High reliability and strong anti-vibration capability for less maintenance.
- + Low solder joint defect rate makes this style faster to produce.
- + Can produce fewer footcandles in task areas, but across a wider area.



COB LED Advantages

- + Better thermal conduction which means chips can be placed closer together.
- + Low production failure and defect rate.
- + Higher amount of lumens generated with less energy for overall better efficiency.
- + The circuit can be customized and the heat dissipation helps to avoid the disadvantages like spotlight, hotspots, and glare.
- + Can produce more footcandles in task areas, but the area of the light is narrower.

Summary

Both designs have their own benefits. You will find SMD lights in bulbs, strip lights, and the notification light on your cell phone. The wide beam angle means these lights are suitable for larger rooms like living rooms, bedrooms, kitchens and bathrooms. Lights using COB configuration can penetrate further which means they perform well in rooms with high ceilings. They are great for outdoor lighting systems and scenarios requiring high intensity like the flash on your camera.