

INTRODUCING *NEW* ADVANCED LED DESIGN

Exclusive
Innovation



HD- SMD CP High -Density SMD Continuous Phosphor Innovation that combines stability of SMD technology with the uninterrupted, dot-free lighting of COB

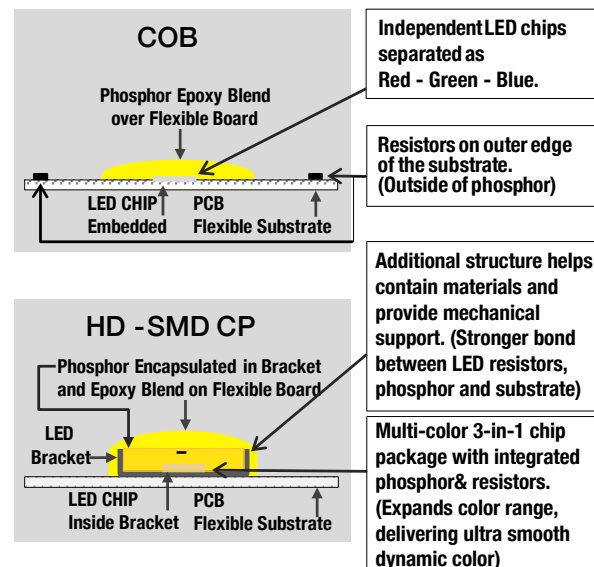
Evolution and comparison of LED lighting technologies. (focusing on their construction and reliability)

COB (Chip - on - Board)

Creates a seamless, continuous light appearance by embedding LED chips in the substrate. Relies on a combination of phosphorus coating and glue for adhesion and protection, which makes it less secure and more vulnerable to damage.

HD-SMD CP (High - Density SMD Continuous Phosphor)

Welds broad coverage of LED chips directly onto the substrate. Encapsulates the phosphorus within and around a housing bracket, resulting in a direct and robust bond. This direct bonding contributes to higher reliability and enhanced adhesion.



KEY DIFFERENCES IN LED TAPE TECHNOLOGY

COB (Chip - on - Board) LED Tape:

Pros: Creates a smooth, linear light output with no visible dots, offering an aesthetically pleasing look.

Cons: While creating the seamless effect, the phosphor and glue coating can be more vulnerable to physical damage, heat, and humidity. The manufacturing process can have variances that impact long-term color consistency.

Traditional SMD (Surface Mount Device) LED Tape:

Pros: The robust bonding of the LED package to the substrate makes it highly durable and reliable. It is also resistant to shock, vibration, and environmental factors. The mature manufacturing process leads to highly consistent color and performance.

Cons: Visible LED chips create a "dotted" appearance, which may not be desirable in all applications. It can have hotspots of light where the light is brighter directly above the LED chip.

HD-SMD CP (High -Density SMD Continuous Phosphor) LED Tape:

The Bridge: This technology combines the best of both worlds. It uses a very high density of SMD LEDs, minimizing the gaps and creating a near-continuous light output. Crucially, it retains the reliability and durability of traditional SMD technology. This allows for a smoother light output, without the fragility of COB.

HD-SMD CP Advantages:

- ❖ Dot-free appearance with excellent light spectrum and uniformity.
- ❖ High reliability and durable LED Package.
- ❖ Improved heat dissipation.
- ❖ Consistent color output over the life of the product.
- ❖ Increased efficacy (15 - 30%) and higher luminosity.

HD-SMD CP technology will be utilized in the Radiance RGB Series LED Tape. **Part # R-24RGB4.4.**

This represents a significant advancement, offering an impressive balance of aesthetics and performance.