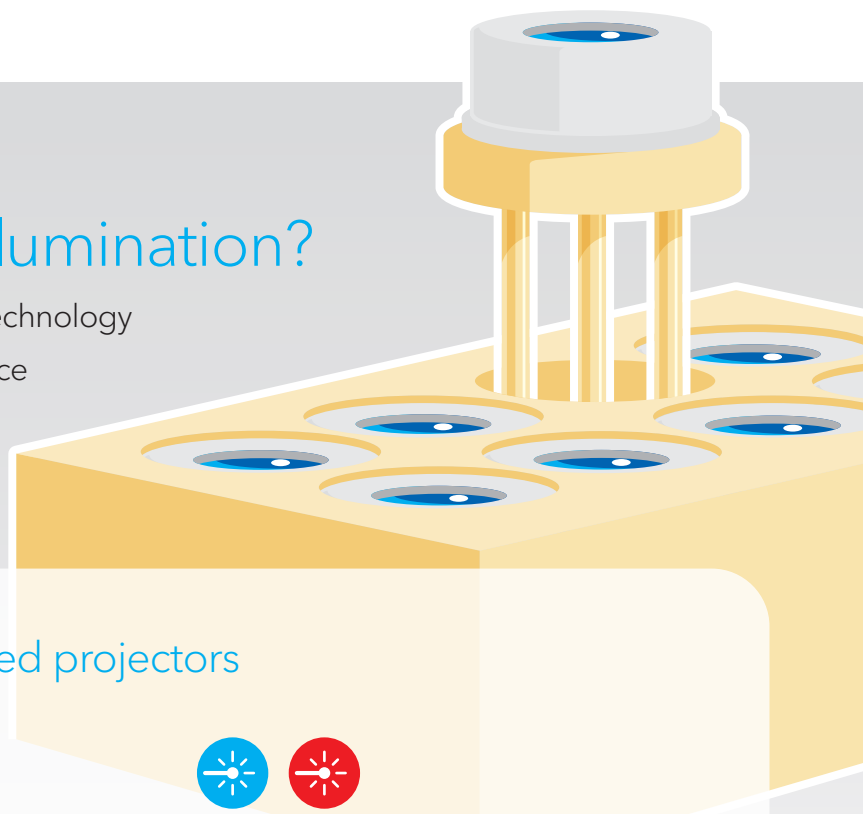


# Anatomy of a laser phosphor projector

**CHRISTIE®**

## What is laser phosphor illumination?

- » A solid-state, lampless projection illumination technology
- » Uses blue laser diodes as the primary light source



### Types of laser phosphor illuminated projectors



**Typical laser phosphor**  
Employs blue laser diodes shining onto a phosphor wheel.

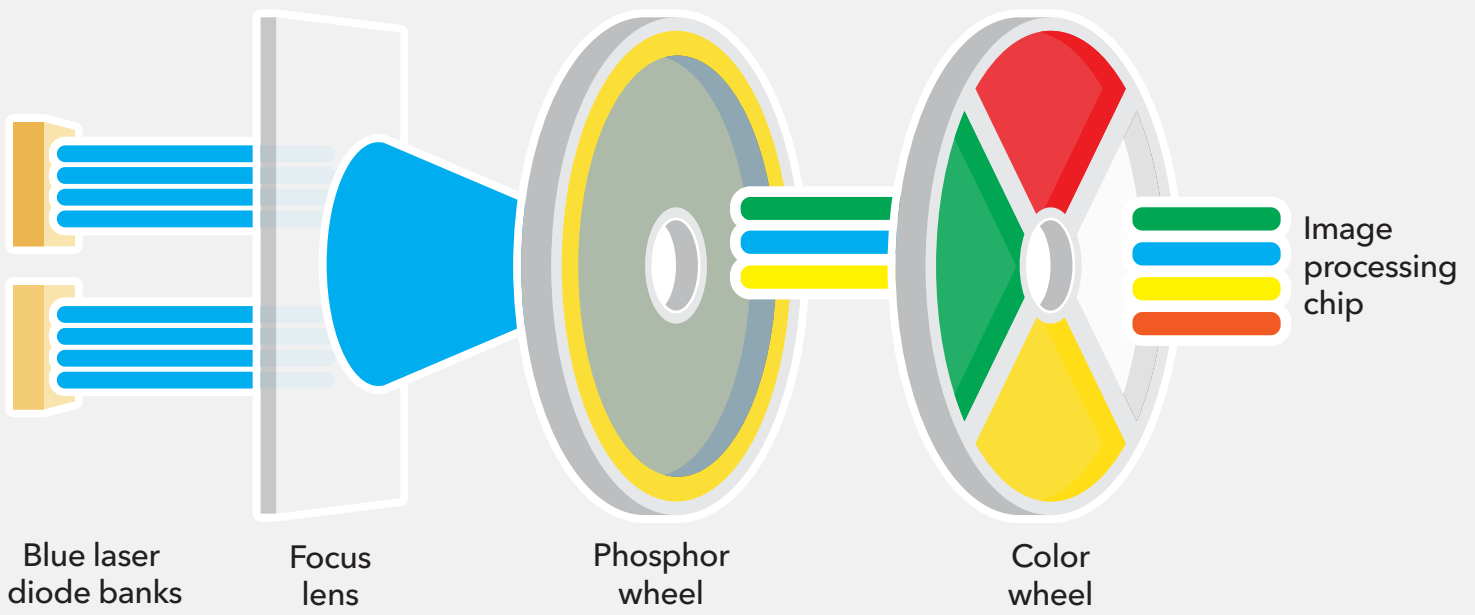


**Laser phosphor hybrid**  
Same as a typical laser phosphor projector but adds a red LED light source to boost the red color component.



**Laser phosphor with red laser**  
Similar to a laser hybrid, but employs a red laser diode instead of an LED to produce better overall saturation and realistic colors. Forms the basis for Christie® BoldColor Technology.

## Typical laser phosphor illumination system



To generate the three primary colors in a 1DLP® laser phosphor projector, the laser diode shines laser light onto a phosphor wheel to create yellow and green light, while blue laser light passes through an opening in the phosphor wheel. The projector then sends the yellow and green light through a color wheel to generate red and green, while the blue laser light passes through a diffusion window.

These red, green, yellow and blue colors are then directed onto an imaging surface, such as a DLP chip which directs the light through a lens and onto the projection screen.

## 10 advantages of laser phosphor



No lamp changes required



Low energy consumption

**20K**

20,000+ hours operational life

**24x7**

24x7 operation



No need for filters (in most designs)



Instant on/off capabilities



Reduces down-time and maintenance



High-brightness, high-contrast and wide color gamut



Reduces costs over time



Choice of entry-level models to premium projectors

## Laser phosphor is ideal for high-use applications

- » Boardrooms
- » Auditoriums
- » Retail locations
- » Classrooms
- » Location-based entertainment venues
- » Houses of Worship

[Click to learn more about Christie's laser phosphor solutions.](#)

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