

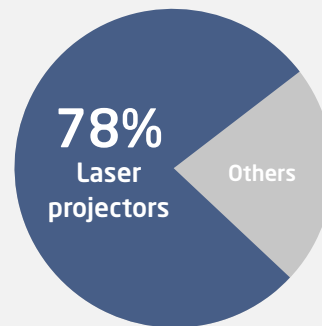
# What is the most effective laser technology to combine high projection performance with operational efficiency?

## RB Laser technology - The brightest choice for the brightest outcomes

Laser as a projection light source technology has quickly begun to replace lamps in large venue projection. The compelling benefits of heavily extended life times, consistent light output over time and high operational reliability combined with significantly lower operational costs has made laser a resounding success. Of the three major high bright laser light source technologies, RB laser combines the best of laser phosphor and RGB laser. RB laser technology delivers super-large images in bright environments whilst offering lower costs, improved operational efficiency and immersive image quality.

**142%  
growth**

Large screen projection is advancing.  
The worldwide number of large venue projectors being installed each year will increase by over 142% by 2021.\*



78% of 6,000-10,000 lumen projectors will be based on laser light source in 2020.\*

### Which key criteria influence the projector technology choice?

There are two key areas to be considered when deciding on the right laser light source technology.

#### Brightness requirement:

The projection brightness requirement depends on three main criteria:



##### Image size

The size of the projected image (measured in m<sup>2</sup>)



##### Ambient light

The ambient light, also determining the black level (measured in lux)

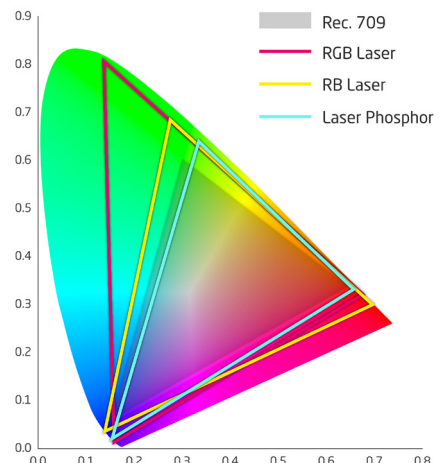


##### Contrast Ratio

The required contrast ratio.  
The standard minimum contrast ratio is 7:1

#### Colour space requirement:

In general, the wider the colour gamut, the more precise and natural the reproduction of the original object.



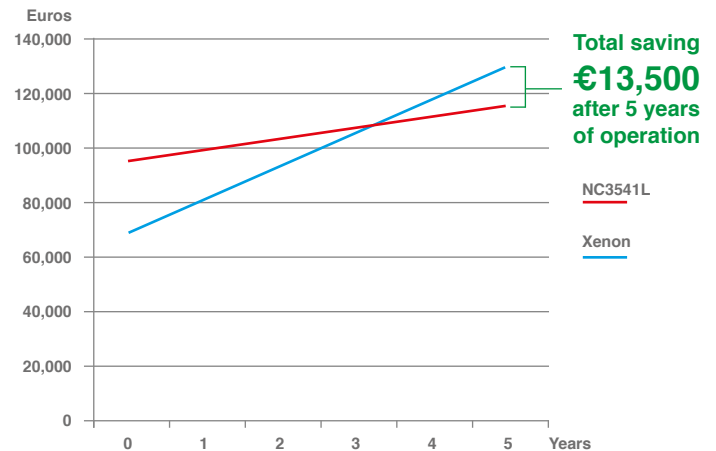
\*Source: FutureSource

## Reduced Total Cost of Ownership

When comparing laser against traditional lamp technology, it is clear that due to substantial savings in operating costs, RB Laser projection offsets its higher initial cost to generate an impressive total saving of €13,500 over five years. This example, based on cinema projection, is equally applicable to other scenarios such as large venue presentation.

Projector type	NC3541L RB Laser	6Kw Xenon projector
Purchase price	€ 95,000	€ 75,000
Annual projector lamp costs	€ 0	€ 6,000
Annual energy costs*	€ 3,900	€ 5,600
Total annual operating costs	€ 3,900	€ 11,600
Annual saving	<b>€ 7,700</b>	










\* Assuming 4,000 hours p.a. and 20 ct/KWh



Furthermore:

- ✓ No cost for lamp exchange and adjustment
- ✓ Very low maintenance efforts
- ✓ Reduced heat generation means less cooling required

## Which technologies are currently available and what is the individual strength?

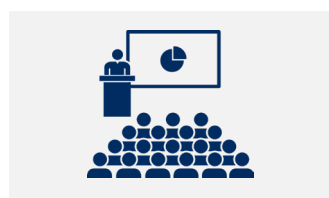
	Laser Phosphor 	RB Laser 	RGB Laser 
<b>Brightness</b>			
<b>Colour</b>			
<b>Cost</b>	€	€ €	€ € € €

Laser Phosphor with brightness levels exceeding 10,000 lumens brightness in the meantime are providing a good image quality for the lowest investment.

RB Laser is the best share between colour and high brightness performance and cost efficiency.

RGB Laser is providing the most advanced colour quality paired with high brightness and the highest cost.

## Projection applications where RB laser represents the best choice



Large Venue Presentation



Cinema Projection



Rental & Staging



Mapping and Façade Projection

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