

Providing a premium experience and unsurpassed image quality

A premium cinema experience requires something new, different and visibly better. The results of Barco's long research in the field of laser-illuminated projectors are now commercially available, providing unsurpassed image quality and consistency for the largest PLF screens - but also for medium size auditoriums and even for more intimate premium venues. In every case, Barco's laser solutions deliver the best image quality and consistency over the widest range of applications and content.

Barco's flagship, DP4K-L family of laser projectors are designed to provide a premium, DCI compliant cinematic experience, at brightness levels ranging from 6,000 to 56,000 lumens. All of the models - the 60L, 45L, 30L and 22L - deliver unsurpassed color, saturation, brightness uniformity, sharpness and contrast - in 2D and 3D. Barco's development team has succeeded in combining all the operational and cost benefits you would expect from a laser projector with image quality improvements that will deliver a premium experience on a wide range of screen sizes, all day, every day - without ever changing another lamp.

Why the Barco laser is different

Barco's precision laser engines provide the building blocks of premium image quality

- Extremely **long light source lifetime** with minimal brightness roll-off
- High **spatial brightness** Red, Green and Blue (RGB) laser beams that are perfectly shaped for optimum efficiency and superb image quality
- Highly **saturated** RGB laser primaries that support current P3 and can support wider color gamuts in the future
- **Switchable, dual RGB primary sets** (6P), for integrated "color 3D" called "Barco Laser3D"

How the DP4K-L product family is different

The DP4K-L family is designed to be simple but flexible, to cover a wide range of premium cinema applications. All aspects of the system were optimized for cinema with the twin imperatives of making the picture differentiated and compelling for the audience and making operations, simple, flexible and hassle free for exhibitors.

The most important attribute of the DP4K-L family is that all its models share the capability to provide stunningly beautiful images predictably and consistently, paying off the major benefits of long-life, laser illumination. These projectors dial in exactly the right laser color and white-point that the content requires and locks it in over 30,000 hours of lamp-free operation.

BARCO

Visibly yours

And then, if full brightness 3D is required, simply call up the macro and flood the screen with immersive, 3D images that stay bright all day, every day. Gone are the days of dim 3D – now everyone can enjoy bright 3D images, anywhere, anytime! Back to 2D for trailers? Switchable brightness levels with color points locked.

The DP4K-L family comes equipped with Barco’s incredibly versatile Alchemy Integrated Media Cinema Processor (ICMP). This system provides all the inputs and controls for a wide variety of cinematic and alternative content, providing a future-proof platform to optimize the image quality of all kinds of content, including *full 4K 3D* for future blockbusters and amazing *60 fps 4K* for fast action sports, racing and gaming.

Barco’s innovative laser light path and engine provide consistent and controllable light up to an amazing 56,000 lumens and locks it where it needs to be. The precision, single projector optics, ensure crisp, sharp, high contrast 4K images that don’t wonder or change color or brightness over time.

Now let’s go a bit deeper and review some of the image quality improvements the DP4K-L can bring to your premium venue.

And the end result?

Any of these elements of image quality could, by themselves, produce a noticeably superior image. However, the DP4K-L family of performance laser projectors combines them all to create a truly superior experience. Extremely high brightness and great stereo contrast make for immersive, compelling 3D. Ultra-high frame rate 4K delivers unbelievable car chases, sports and action. High contrast and sharp 4K, combined with saturated laser colors deliver cinematic drama and realism not possible with lamp-based projection.

Barco’s DP4K-L family of laser projectors provides the full range of image quality improvements and delivers them consistently, day after day - with no flicker, wobble, waver, change or roll-off.

DP4K-L better than DCI image quality

Elements of image quality	Barco DP4K-L	Typical theater
Spatial resolution	Full 4K - 2D and 3D	2K
Average 2D output	up to 56,000	25,000
Brightness uniformity	93+	75
4K on/off contrast	2,500:1	1,500:1
Color space (gamut)	DCI P3, Rec 709, WCG*	DCI P3
Frame rate	4K @24-30 - 2K@24 60, 100-120	2K@24, 48
6P 3D stereo contrast	1,000:1	200:1

* Note that there is no DCI specification yet for WCG. Near Rec. 2020 is possible.

+ Note that there is no DCI specification for color saturation; Laser illumination naturally produces more saturated colors,