

OL series

LED rear-projection video walls



BARCO

Visibly yours

LED rear-projection video walls

Barco presents LED ...

A new solution from the LED experts

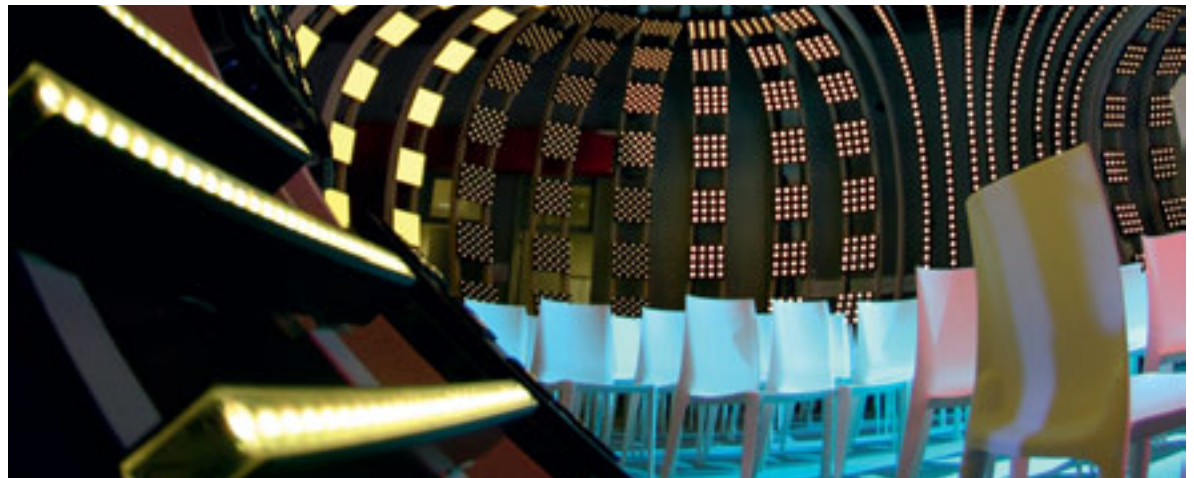
LED-lit rear-projection technology has opened the door for a significant performance increase in terms of image quality, maintainability and cost of ownership. Barco's OL series of rear-projection video walls with LED-based illumination combine the typical benefits of LED-lit systems, such as low maintenance and saturated colors, with unique technologies that make LED-based video walls truly ready for use in 24/7 applications.

Barco's LED video wall was developed based on a long heritage of LED expertise as Barco has been manufacturing LED signage since the nineties. Today, Barco processes more than 2 million LEDs every week. As no other company, Barco knows LED and its typical characteristics. And uniquely, Barco has been able to develop a LED-lit rear-projection system that is a perfect fit for a wide range of control room applications.



100% Barco design

Taking full responsibility of the entire development, Barco has succeeded in creating a first-class product series that is truly ready for 24/7 use. Barco's OL rugged design has been thoroughly tested in house, and is sure to provide a future-proof and risk-free investment for your control room.



... and goes beyond.

Advanced technology completing the picture

But LED is only the tip of the iceberg. In development since 2006, Barco's OL video walls have arrived on the market as the most mature and robust LED-lit rear-projection systems so far. By considerably improving on the existing LED state of the art, Barco has succeeded to significantly optimize image quality, ease of use and cost of ownership. The result is an integrated control room visualization solution that provides ...



... the coolest engine

- Doubled video wall lifetime compared to other LED-based systems thanks to advanced liquid cooling technology for LED
- More than 5 years worry-free operation in 24/7 mode
- A wide range of interesting new features, such as HD resolution, LED redundancy, fully motorized adjustments for very easy maintenance and installs



... the warmest colors

- 24/7 color and brightness uniformity thanks to Barco's unique Sense⁶ technology utilizing a full spectrum spectrometer.

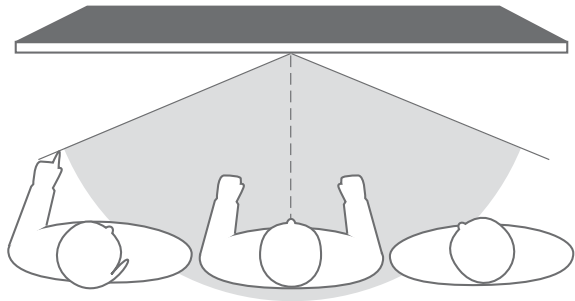


... the smallest footprint

- Reduced video wall cube depth by 33%
- A truly green product throughout the entire video wall design
- Reduced installation time and cost thanks to smart design
- Front access option eliminating the need for rear maintenance

The comfort of professional visualization

Visualization technology should put operator comfort first. That is why Barco's OL video walls have been designed with special attention to human viewing and operating comfort. The OL video walls' display performance has been optimized to offer the highest comfort to the eye and to efficiently prevent eye strain.





Scalable and seamless canvas

Barco's OL series projection modules can be stacked to a video wall of practically infinite size. The absence of borders or bezels makes the video wall truly seamless.

The resolution of choice

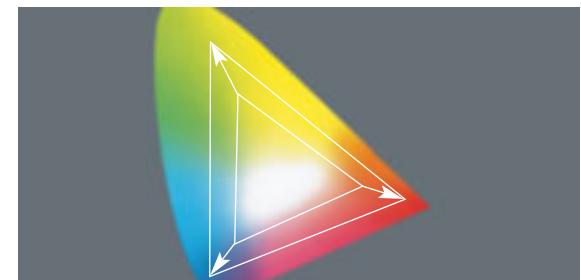
16:9 is increasingly becoming the aspect ratio of choice for today's and tomorrow's video wall content. PC, laptop, video sources as well as new display monitors are all converging towards 16:9 format. Barco's choice for full HD is therefore a safe and future-proof one.

Excellent off-axis viewing

Barco's OL series uses FXS screen technology to deliver excellent performance for off-axis viewing.

Low latency, fast operation

Barco's OL series has been designed for the lowest possible impact on system latency. The delay between receiving the content and displaying it can be reduced to less than 20 ms (1 frame).

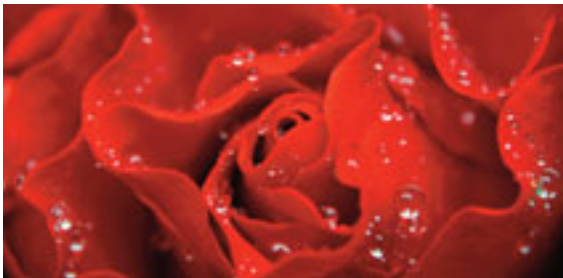


Excellent optics:

- Excellent luminance
- Wide color gamut, saturated reds & yellows
- High color accuracy
- High on-screen contrast
- No mirror-like reflections
- No color break-up
- Wide viewing angle
- EBU color space option

A sense of perfection

Barco's OL video wall series come with Sense⁶, a unique sensor technology that provides brightness and color stability over time and across the entire video wall screen. An integrated spectrometer continuously measures brightness and color characteristics of the full visual spectrum. Sense⁶'s algorithms monitor the outputs of these spectrometers in real time and then dynamically and automatically adjust all the projectors of the video wall to generate an image that is most suited for viewing by the human eye.



Uniform brightness and colors across the projection module

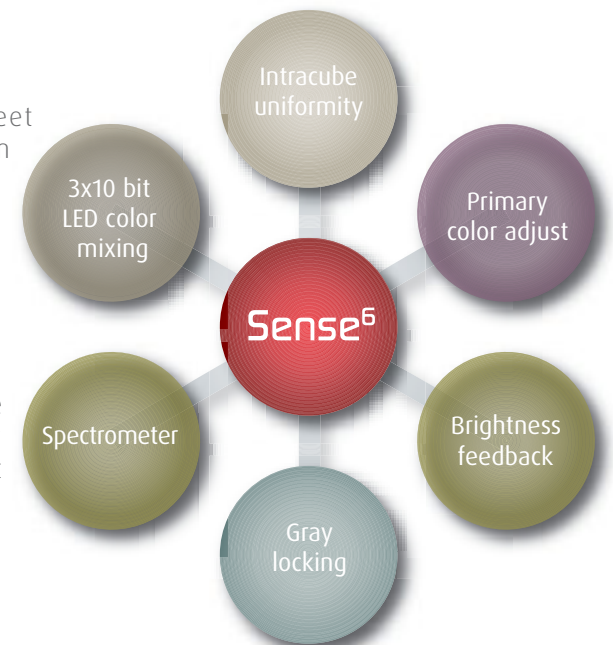
The OL projection modules are designed to meet exceptionally high brightness and color uniformity from center to edge, as well as in the corners within a single cube.

Uniform brightness and colors across the entire video wall

The Sense⁶ calibration algorithm performs real-time tracking of the brightness and colors of each projector module that is part of the video wall, to ensure that the complete video wall is uniform at all times.

3x 10 bit LED color mixing

The brightness of each individual LED can be controlled with 3x 10-bit precision. Reducing brightness also means reducing power consumption.



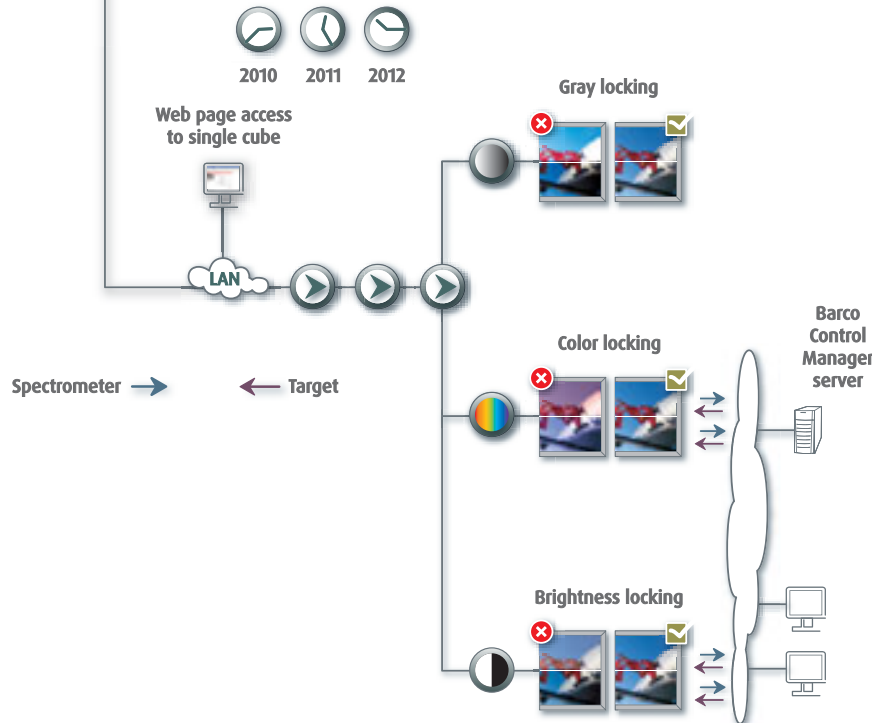
Intracube uniformity



Intercube uniformity



Uniformity over time



Sense⁶ benefits:

- Excellent uniformity: uniform brightness, color, contrast and mid-tones for all cubes
- Spectrometer based: measuring the output of the video wall rather than a specific optical component of the projector system
- A real-time system: continuous measurement and compensation
- 100% availability of video wall content: no interference with the on-screen content

Worry-free viewing

LED illumination offers an extraordinarily long lifetime. In addition, Barco has refined the LED-lit projection system to save even more on maintenance costs by adding real-time and automatically self compensating features. The result is a truly intervention-free system.



Long-lifetime LED technology

The LED illumination, based on solid-state light emitting diodes, has a long lifetime and a predictable behavior. LEDs with sufficient cooling typically offer a lifetime of more than five years with 24/7 operation.



Built-in 6x redundancy, higher reliability

The illumination unit of each OL projection module consists of six independent LEDs per color. If one of them fails due to any reason, the other five will continue to work. As a result, your vital image information is never lost.



Redundant inputs

2x redundant Dual-Link inputs guarantee that inputs will always be available to ensure fail-safe operations.



Intervention-free calibration

Thanks to the embedded Sense⁶ sensor technology, Barco's OL video wall systems are truly maintenance-free. As proven with Barco's lamp-based systems, Sense⁶ ensures brightness and color stability over time and across the entire video wall screen. A built-in spectrometer accurately measures the spectrum of each LED. As the LED spectrum changes over time, the spectrometer absolutely guarantees that there is no need for any maintenance interventions or manual adjustments.

High-performance cooling doubles lifetime

High temperatures on the LEDs can affect your video wall's performance: lower light output, color shift and significantly reduced lifetime. Barco's advanced heat management system based on liquid cooling efficiently counteracts these effects. In comparison to heat pipe systems, Barco's liquid cooling system can provide an additional ten degrees of temperature decrease on the LED light source. This effectively doubles its lifetime.

Remote device and health management

Barco's OL series comes with Barco Wall Control Manager for video walls, a software package that continuously supports worry-free operation of your video wall. No more surprises, no unplanned or distracting maintenance interventions. Barco Wall Control Manager for video walls allows you to systematically manage and configure the uniformity and health status of your video wall fleet in an easy way.

Sense⁶ benefits:

- Real-time stabilization and calibration
- No intermediate calibration interventions
- No maintenance or manual adjustments
- Always top image quality

High-performance cooling benefits:

- The coolest engine on the market
- Less heat extends lifetime

Barco Wall Control Manager benefits:

- Flexible input control
- Clear health status
- Extensive reporting
- Direct web access to each projector and to the entire video wall

Saving your valuable space and time

Barco's LED-lit video wall series makes a more compact control room design possible. Thanks to the shallow cube design and front access option, it is possible to significantly save on real estate costs.

Installation hours can really make a difference for your bottom line. Barco's OL series have been specifically designed for ultra-fast set-up, configuration and start-up. The projection module is delivered as a pre-installed and pre-aligned unit. Colors and brightness auto-calibrate. The micro-engine needs no alignment stage, since the imager itself is motorized.



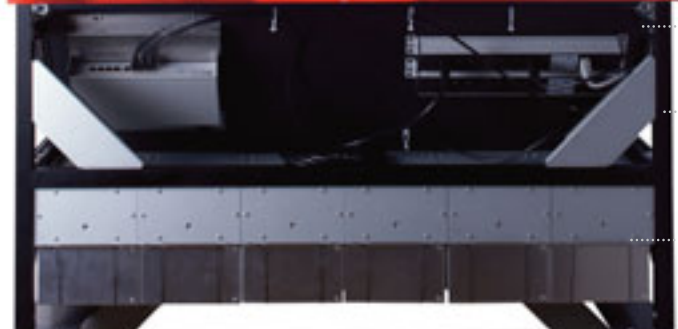
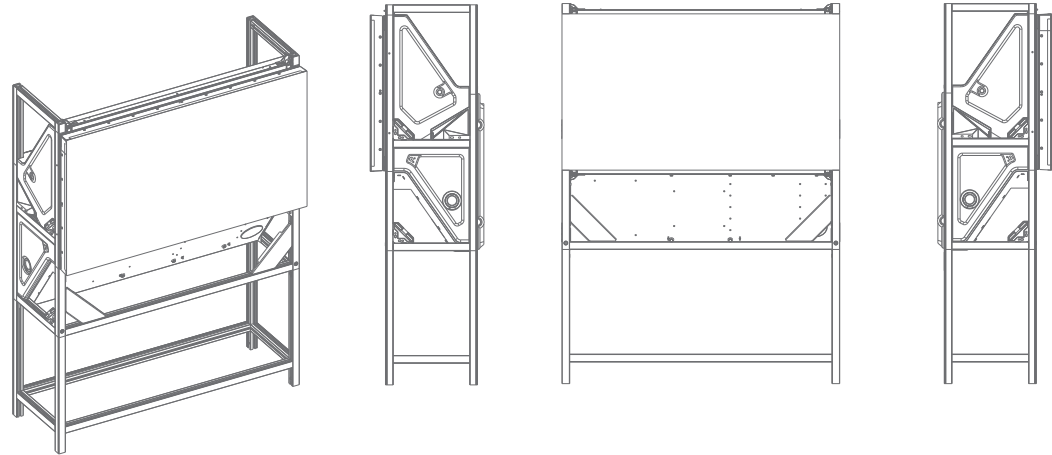
Space-saving cube design

With the OL series, Barco has developed its most space-saving video wall cube by far. The total video wall depth is less than 45 cm (1.5 ft) for a 50-inch cube.

Front-access option

Barco's LED-lit video wall series also offers a stackable front-access option, which removes the need for a rear maintenance access.

Uniform brightness, color, contrast and midtones for all cubes
Factory pre-calibrated colors



Pre-adjusted & pre-installed optical engine

Low-weight structure for easy handling

For highly industrial environments, a special, optional dust filter offers extra security and worry-free operation for 5 years on end

A field-ready package:

- Pre-adjusted optical engine
- Factory pre-calibrated colors
- Shipping with a pre-installed engine
- Low-weight structure for easy handling
- Motorized geometry alignment

Going green, to the full

LED-lit projection technology has allowed for a much more environment-friendly approach, since the illumination unit has less integrated consumable parts. With Barco's OL series of video walls, this green approach is even taken one step further, with less waste and more environment-friendly components throughout the entire video wall design.



No lamps, no mercury

In contrast to lamp-based systems, LEDs contain no mercury, which is harmful to the environment. Thanks to their long lifetime, LEDs do not have to be replaced regularly and hence do not create any waste.

Recyclable materials

The OL video wall enclosure is 100% manufactured with recyclable materials to allow recycling for future use once the product has served its useful life. At the same time, the enclosure material serves as a noise buffer and reduces weight.



No consumables, no waste

In contrast to traditional rear-projection systems with UHP lamps, less moving parts or consumables like a mechanical lamp lift or color filter are needed to project the image with the required amount of light and in the required color.

Light weight, less fuel

The OL series' compact and lightweight design is not only a plus during installation. The low weight will also be a fuel and cost saver during video wall transport.

Less space, less energy

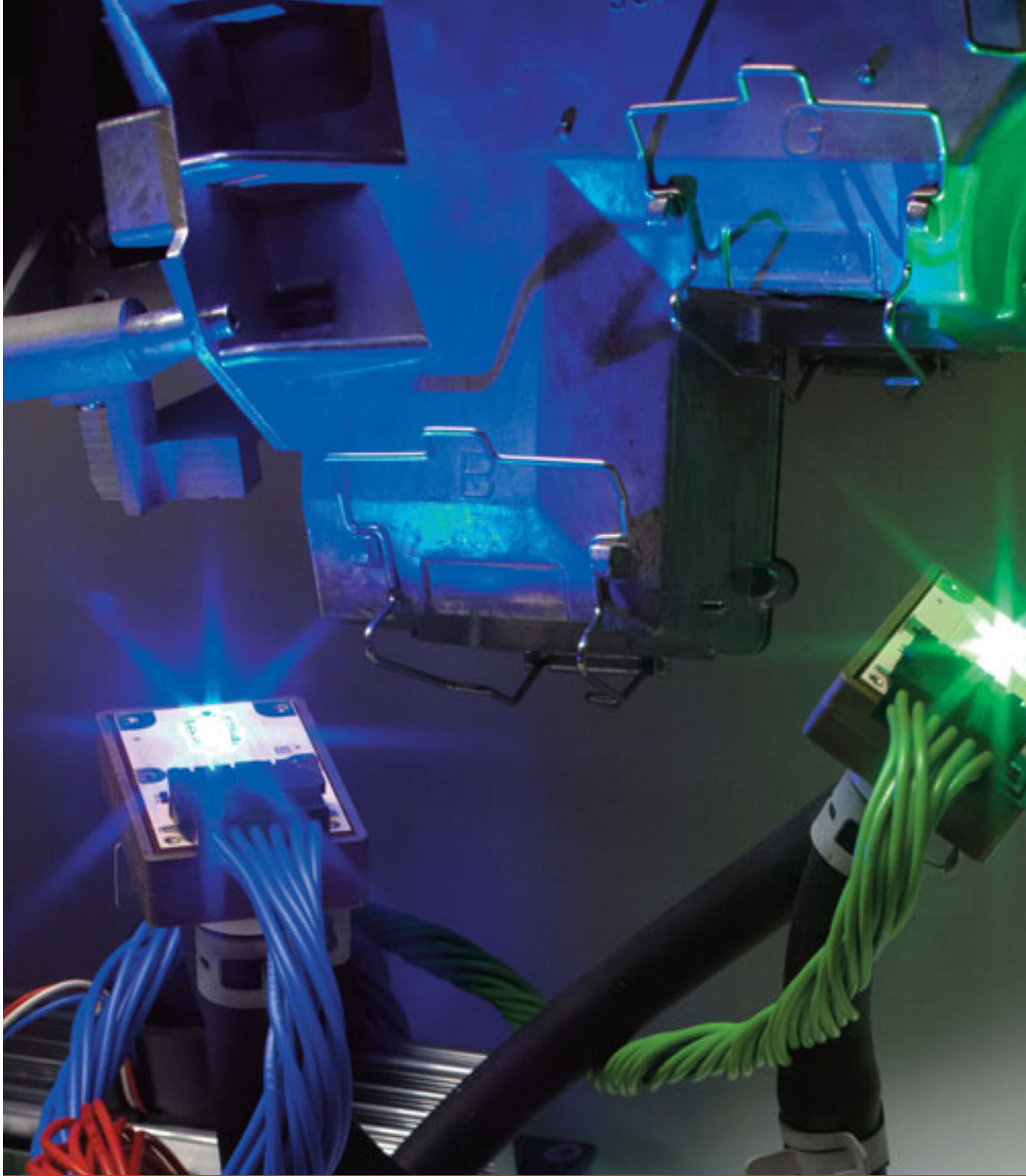
A properly designed control room requires less building infrastructure, which takes up less space and produces less heat than traditional workplaces. Barco's OL video walls require 33% less video wall depth in comparison to competitive systems, which allows control rooms to be organized more compactly.

Less noise, less stress

More and more, control room designers take into account the noise level as an important factor for a stress-less and operator-friendly environment. Thanks to Barco's advanced liquid cooling system, the noise level is significantly reduced.

Green according to Barco:

- No lamps, no mercury
- No consumables, no waste
- Recyclable materials
- Less weight, less fuel
- Less space, less energy
- Noiseless, stress-less





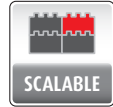
Full HD resolution



HD resolution



Excellent off-axis viewing



Scalable and seamless canvas



3x 10bit optical dimming



Sense⁶ calibration and stabilization technology



Integrated spectrometer



5-year worry-free operation



Liquid cooling system



Long lifetime LED technology



Redundant LED design, redundant inputs



Remote web access to projector module and full video wall



Motorized geometry alignment



Easy installation



Front access option



Compact footprint, space-saving design



Low noise operation



Environment-friendly product

About Barco

Barco designs, manufactures and markets innovative hard- and software visualization solutions for a variety of applications, such as traffic management, surveillance, command and control, broadcasting and telecom networks and utilities and process control.

With Barco's visualization solutions control center operators are offered a real-time collaborative work experience for monitoring, response dispatching and coordination, access and flow control, recording and overall systems control for 24/7 operations. Barco's solutions allow for efficient collaboration, monitoring and on-screen interaction with data sources and sensors. They highlight potential congestion points and help coordinate emergency responses more efficiently.



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