OLite Series

Multifunctional indoor/outdoor SMD LED display

OLite is Barco’s family of LED displays which are suitable for both indoor and outdoor applications.

Built specifically for the demanding rental and staging market, OLite is the first LED tile designed for both creative as well as classic IMAG (Image Magnification) applications. Each tile can be easily split up into small individual modules enabling creative display designs of any size and shape.

The combination of indoor/outdoor usage as well as conventional/creative displays makes OLite the most versatile LED display system on the market. The versatility enables you to achieve unprecedented return on investment as OLite can be used in a wide range of applications and settings both indoor and outdoor.

OLite is now available in two versions. The OLite 510, with its 10mm resolution, is more suitable for rental partners who have more indoor biased jobs. The new OLite 612, with its increased brightness (6000NITs) and radical new shader design which delivers vastly improved contrast levels, is a better option for rental partners whose jobs are somewhat more outdoor biased.

The use of SMD technology enables wide viewing angles and superb uniformity at very short viewing distances. Add to this the high brightness, high resolution and superior color depth and uniformity (15 bit processing), IP65 rating and you will see that OLite represents a quantum leap forward in LED display technology!

1 OLite 510 tile consists of 64 OLite 510 modules
1 OLite 612 tile consists of 48 OLite 612 modules
Break the mold

Redefine the imaging landscape, challenge conventions and be bold! Don’t let yesterday’s technology limit you: use the modularity of OLite to unleash your creativity.

The OLite is supplied as a ready to use LED tile. However, each tile breaks down into discrete modules. These modules are connected to a common control unit, also mounted inside the tile structure, by means of four cable strings, each providing power and signal to 16 modules (for OLite 510) or 12 modules (for OLite 612).

The modules can also be used outside of the tile structure. This concept has proven to be very attractive to show designers who are looking to move beyond the use of video as pure image magnification (IMAG). The modularity of the OLite system allows designers to integrate LED screen technology in set designs, to create screens of any shape and size, to let the video flow over surfaces and truly harmonize with the overall visual concept.

The new OLite 612 incorporates a revolutionary new shader design which vastly improves the contrast levels.

The shader, with its radically new geometric design combined with specially selected dark black, matt materials minimizes the amount of light reflecting back toward the audience. This results in much deeper black levels especially in broad daylight. The lense, which has been optically darkened to hide the white of the LED, further improves the all-important black levels.

When combined with the high brightness output level of 6000 NITs (calibrated), the OLite 612 now delivers vastly improved contrast levels.

Which OLite product is best for me?

OLite is now available in two versions: the OLite 510 and the OLite 612.

Both products have been developed for use in both indoor and outdoor applications; however each has its own strength. The OLite 510, with its higher resolution and shorter shader is probably a better choice for those rental companies who have a proportionately higher amount of indoor jobs.

The OLite 612, with its increased brightness (6000NITs) and new shader design which delivers much greater black levels and contrast would be a preferred option for rental companies who have proportionately more outdoor work.
Extreme viewing angles; superb color uniformity

Using the latest state-of-the-art high bright SMD technology, optimal viewing conditions are guaranteed for all viewers irrespective of where they are located. Even at viewing angles of 145 degrees horizontal and 95 degrees vertical (80° for OLite 612), viewers will still enjoy a super bright image.

The OLite features advanced 15-bit processing and LED level calibration, which results in even greater color depth and uniformity, allowing the display to show vibrant images with even deeper and more uniform colors across the entire surface of the display. The extra processing power also provides more grey-scales, a critical requirement when displays are used at extreme low brightness levels such as found in broadcast applications.

Ease of set-up

- Flexibility and seamless images
  Barco’s modular concept enables optimal flexibility and truly seamless images each and every time you erect your display.

- Ease of configuration
  Barco’s built-in intelligence allows the system to configure itself regardless of the shape, size or aspect ratio. Video or data content can come from a variety of sources without having to undergo unnecessary scaling.

- Ease of service
  State of the art mechanical design allows ease of servicing of modules while the same built-in “intelligence” enables auto-configuration and hot-swap of tiles without interrupting the performance of the display, guaranteeing minimum downtime to repair the display.

- Heavy duty rental frame
  Large rugged pre-positioning cones ensure ease of set up in any environment. Built-in rugged locking and safety mechanisms also eliminate any need for extra tooling to build up the wall. Stacking up to 12 tiles high and trussing up to 15 tiles high is a key feature of the OLite rental frame.

Extreme reliability

- IP65 certified module enclosures
  Barco’s OLite LED modules are encased in rugged IP65 certified metal enclosures front and back, making them completely dust and weather proof and ideal for repeated use in harsh rental and staging environments.
Powerful processing & user-friendly control

Powerful Image Processing platforms
Barco’s OLite displays are controlled by an advanced image control system which includes Barco’s range of D320 digitizers & LED-PRO and its proprietary Director Toolset software allowing you to display and control your display content at the simple touch of a button.

Barco’s D320 digitizer delivers advanced image processing that allows the display to accept a multitude of data and video sources.

- Four interchangeable input modules per D320 L/PL
- Stackable an infinite number of times, allowing up to 4 sources to be displayed on as many screens as there are digitizers in the stack.
- Capable of being daisy-chained to a maximum of 64 units, allowing 256 sources to be displayed on a single screen.
- Combinations of stacking and daisy-chaining possible.
- Input formats mixed as required, while each source can also be individually scaled.

Scaling/compressing capability of the Barco D320 digitizer and the ‘distributed processing’ concept assure compatibility with all resolutions and aspect ratios. Due to the Lock-mode functionality, no external frame rate conversion is required, thereby eliminating the risk of artifacts.

Barco’s D320 digitizer also allows for various on-screen image manipulations, including chroma-keying, alpha-blending, zooming and more.

LED-PRO
Barco’s new LED-PRO image processor is a high quality scaler designed to interface to Barco displays. It is the ideal solution for single wall (single window) applications and features:
- Easy front panel operation (with full display set-up wizard)
- Universal inputs
- Total active pixels up to 480,000 pixels

Image Transmission
Transport of data stream from the digitizer to the display is via a 5m DVI data cable. For applications needing longer distances, Barco provides the following solutions:

- Compact Link
  A cost-effective, optical-based solution for medium range data transmissions for applications up to 100m. Compact Link can be used in between the digitizer and the LED wall, but also in between multiple LED walls. Two types of Compact Links are available: 50m or 100m.

- FiberLink 2
  Barco’s FiberLink 2 adds fiber-optic technology to your visualization solution for guaranteed quality of the final picture with a reach up to 5,000m (16,404 ft).

Two types of FiberLink 2 systems are available:
- one for shorter distances up to 300m (984 ft), based on a multimode optical fiber
- one for longer distances up to 5,000m (16,404 ft), based on a single mode optical fiber
Advanced installation and control software

Barco’s Director Toolset is an integrated software package which provides you with a user-friendly, intuitive, graphical interface for fast installation, system calibration as well as layout configuration and control of your display.

Built on separate modules, the Director Toolset is now easier and faster to update and manage in the field. Key features include:

Configuration Module
- Improved management system (copy, delete, save etc.)
- Complete projects can be created off-line
- Easy to switch between different set ups (configurations)
- Clear connectivity overview
- Direct access to all devices (LED, Digitizer, Fiber, AEC)
- Mixing console
- Import of XLite Toolset configurations

Operations Module
- Easy copy of setting (Viewport & window)
- Selectable color/window and picture insertion
- Easy set-up/recall of presets via preview/live window
- Undo/redo function

Monitoring Module
- Semi automatic bug reporting tool
- Configuration report generation

IX Module
- Creative design module for OLite modules, MiPIX and MiSPHERE

Tile Position Module
- Selectable positioning method (Auto or manual)
- Improved manual/creative positioning method
- Ability to configure creative wall configurations
- Ability to split up displays in segments (e.g. long tickertapes, multiple walls driven by a single processor)
The total rental solution

The OLite LED tiles form part of Barco’s total rental solution, which includes sturdy flightcases, rugged rental structures and various mounting or set-up devices.

• Rugged rental structures
  The OLite tiles come with rugged rental structures, which allow the tiles to be clicked together simply and quickly to form a seamless display in no time.

• Easy set-up and tear-down
  With its specially engineered truss beams and foot systems, Barco’s LED displays are purpose built for fast, easy set-up and repeated relocations.

• TUV safety certified rental structures and accessories
  All Barco’s rental mechanics comply with the highest TUV standards, providing you complete peace of mind that your installations meet the highest safety standards.

Fully cross-rentable

As part of Barco’s total rental solution, the OLite LED tiles are fully cross-rentable, allowing you to maximise the return on your investment.

• Each tile features Barco’s proprietary True Color Reproduction System and System Color Signature™ technology, which ensure true color rendering of the display from delivery through the entire lifetime of the display.
• This technology also allows you to mix and match tiles of different batches and various run-time ages to obtain a seamless display with a perfect image every single time.
• Each individual LED within each cluster has its color characteristics and brightness robotically measured at Barco’s factory before being installed on an EEPROM on each tile.
• Every time a wall is erected, the information stored in the EEPROM is read by the Director Toolset as its processes and distributes the signal to the display.
• Each individual LED then undergoes individual color and brightness corrections to ensure a uniform image across the entire display.
Countless applications

MTV Asia Video Awards 2006
Tedtronic Pte Ltd
creative application

Eurovision Song Contest 2005
Massteknik Sweden
creative integration into the design of the stage floor and backdrop

Rascal Flatts “Me & My Gang” Tour
I-MAG Video
I-MAG application

Oscars 2005
Creative Technology LA
I-MAG application

MTV Europe Music Awards 2005
XL Video
creative application

Jamiroquai “Dynamite” Tour 2005
XL Video UK
creative application

Cover image: U2 Vertigo European Tour 2005 [XL Video Belgium]
### OLite specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>OLite 510</th>
<th>OLite 612</th>
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<tbody>
<tr>
<td>Pixel pitch</td>
<td>10 mm</td>
<td>12 mm</td>
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<tr>
<td>Brightness (uncalibrated)</td>
<td>6,000 Nit</td>
<td>8,500 Nit</td>
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<td>Brightness (display calibrated at 6,500°K)</td>
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<td>Boost mode</td>
<td>yes</td>
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<td>LED configuration</td>
<td>3-in-1 SMD</td>
<td>3-in-1 SMD</td>
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<tr>
<td>Pixel density</td>
<td>5,632 LEDs per tile (88x64)</td>
<td>3,888 LEDs per tile (72x54)</td>
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<td>Contrast (at 200 lux)</td>
<td>900</td>
<td>1,200</td>
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<tr>
<td>Viewing angle horizontal (no color shift)</td>
<td>&gt; 145°</td>
<td>&gt; 145°</td>
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<td>Viewing angle vertical (no color shift)</td>
<td>&gt; 95°</td>
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<td>Lifetime (Full white - half brightness)</td>
<td>50,000 hours</td>
<td>50,000 hours</td>
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<td>Power consumption</td>
<td>970W/tile (max)</td>
<td>800W/tile (max)</td>
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<td>58 kg (127.9 lbs)</td>
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<td>Processing</td>
<td>15.8 bit per color at 50 Hz</td>
<td>15.8 bit per color at 50 Hz</td>
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<td>Colors</td>
<td>185 trillion</td>
<td>185 trillion</td>
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<td>Refresh rate</td>
<td>800 Hz minimum (PAL/NTSC)</td>
<td>800 Hz minimum (PAL/NTSC)</td>
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<td>Max. truss build up</td>
<td>15 tiles high</td>
<td>15 tiles high</td>
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<td>Max. foot-build up (with stacker)</td>
<td>12 tiles high</td>
<td>12 tiles high</td>
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<td>-20 to 45°C (-4 to 113°F)</td>
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<td>-20 to 60°C (-4 to 140°F)</td>
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<td>S-Video, Composite, YUV, SDI, HDSDI,</td>
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**OLite 510 module & OLite 510 tile**

- 111.6mm (4.39”)
- 83.6mm (3.29”)

**OLite 612 module & OLite 612 tile**

- 111.6mm (4.39”)
- 83.6mm (3.29”)

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The information and data given are typical for the equipment described. However, any individual item is subject to change without any notice. The latest version of this product sheet can be found on www.barco.com.