

OV-501 & OV-701

Entry level XGA DLP™ projection series



Barco's OV-501 & OV-701 integrate cutting edge DLP™ technology into 50" and 70" display wall systems that are designed and optimized for use in a 24/7 mission critical environment. The Barco designed projection engine provides a set of unique features. The result is an affordable DLP™ rear projection system with outstanding picture quality, reliability and ease of use.

Superior display quality

- Latest high contrast DLP™ technology
- Optimal brightness, contrast, color uniformity
- Large viewing angles
- Optical dimming functionality providing luminance uniformity across all screens, without causing loss of contrast or color depth
- Dynamic Feedback technology maintaining constant luminance over time

Reliability and lifetime serviceability

- Engineered for ease of maintenance
- Dust-free overpressure design
- Access to operation and service adjustments through IR remote control and an On-Screen Display
- Barco's Lamp-Lease Program allows you to efficiently control operational costs

Flexibility

- Designed to build display walls of any size, in a linear or curved setup
- Requiring minimal installation depth
- Innovative modular concept

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Features of the OV-501 & OV-701 projection modules

- Optimized for mission-critical operation
- Engineered for use in 24/7 applications
- Building blocks for fully integrated solution
- Image quality optimization based on ergonomical studies
- Low total cost of ownership
- Single lamp projection



Barco designed a projection module based on an innovative modular approach. The concept of having a separate projection unit and illumination unit is unique and results in an easy to maintain projection cube with superior picture quality. The optical dimmer guarantees equal brightness and contrast across the display wall and keeps the performance of the display constant over time.

Luminance guidelines

- All luminance values are given for on-axis viewing. The 50% luminance value will be present when viewing under the half gain angles (see 'screens table')
- All luminance values are measured at **6500 K** color temperature, normally applied in control rooms for natural lighting conditions
- Luminance at other color temperatures can be communicated upon request

High-precision screen

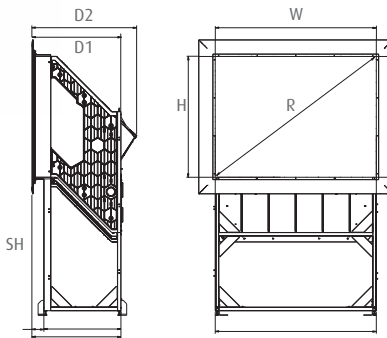
- High-contrast, even in bright ambient light
- Type of screen is selected based on overall environmental conditions and operational requirements
- Excellent visibility under any viewing angle
- Patented screen modules with easy mounting and narrow screen gap
- All screens are double element screens to avoid hotspotting on each display

	Screen type	High contrast	Brightness	Full viewing angle	Halfgain angle (h./v.)	1/5 gain angle
Screens	HVA	Excellent viewing angle	Normal	180°	±35° ±35°	~ ±65° ±65°
	HVM	High viewing angle	Medium	180°	±35° ±27°	~ ±45° ±41°
	HVX	High brightness	High	160°	±35° ±10°	~ ±45° ±17°



Projection unit

- Single-chip DLP™ technology
- XGA (1024x768) resolution
- Modular projection unit
- High contrast
- Ergonomic luminance
- Large color gamut spans the EBU/ SMPTE color triangle
- Easy to adjust
- Easy maintenance
- Removable color wheel cartridge
- Integrated optical dimmer
- Supports dual XGA mode



Illumination unit

- Modular illumination unit
- Removable for repair work
- Can be replaced without geometrical readjustment
- Contains all high power supplies
- Active system to reduce tolerancing on brightness

Multi Input Module (optional)

- Autosyncing
- DVI-I
- RGB on 15 pol sub-D (RGB/Hsync/Vsync)
 - Resolution VGA-UXGA
 - Pixel clock: 12 MHz-140 MHz
 - Horizontal frequency: 12 KHz-100 KHz
- Video: 2x cinch, PAL, NTSC, SECAM
- S-video: mini-Din 4 Pol
- DVI-D out
- Input selection
 - Channel selection by input selection tool
 - Can be set in automatic source switch-over for redundancy of sources
 - Via graphical user interface

	OV-501	OV-701	
Dimensions	Width W	1,000 mm 39.4"	1,400 mm 55.1"
	Height H	750 mm 29.5"	1,050 mm 41.3"
	Diagonal R	50" nominal	70" nominal
	Depth D1	NA	763 mm 30"
	Full depth D2	664.5 mm 26.2"	899 mm 35.4"
	Aspect ratio	4:3	4:3
	Standard height SH	875 - 1,000 - 1,200 mm 34.5" - 39.4" - 47.2"	875 - 1,000 - 1,200 mm 34.5" - 39.4" - 47.2"
	Min screen height	455 mm 17.9"	640 mm 25.2"
	Weight (excl. structures)	62 kg	tbd

Optical dimming with dynamic feedback

A patent pending optical dimming system in combination with a dynamic feedback control loop results in a uniform image across the wall and maintains the brightness over time. This feature allows:

- independent brightness control of each module without loss of contrast or color depth,
- equal brightness, contrast and color depth across the display wall,
- equal luminance of the display wall across time,
- ergonomic dimming of full display wall for day and night operation

	Luminance (cd/m ² fTL)	HVA	HVM	HVX
50" OV-501	XGA 100W	200 59	395 116	980 288
	Seam size	Screen mullion: 0 mm (°) Interscreengap: < 0.8 mm		
	Humidity conditions	Up to 90% non condensing		
	Temperature conditions	0°C-40°C 32°F-105°F		
	Storing conditions	0°C-40°C 32°F-105°F		
70" OV-701	Luminance (cd/m ² fTL)	HVA	HVM	HVX
	XGA 100W	100 29	205 60	500 147
	Seam size	Interscreengap: < 0.2 mm by patented stitch concept		
	Humidity conditions	Up to 90% non condensing (°)		
	Temperature conditions	10°C-40°C 50°F-105°F (°)		
Storing conditions	0°C-40°C 32°F-105°F			

(°) @ 20°C and 50% relative humidity, (°) depending on wall dimension

Technical specifications OV-501 & OV-701

Display capabilities	Resolution	XGA 1024 x 768 TruePixel		
	Absolute resolution	OV-501	OV-701	
		26 dpi	19 dpi	
	Luminous flux @ 6500 K ⁽¹⁾	550		
	Contrast	1300:1		
	Color	100% EBU		
	White point ⁽²⁾	6500 K, natural lighting		
	Brightness uniformity ⁽³⁾	typ. 85%		
	Imaging device	DMD-chip	0.7", DDR, ±12°	
		Pixel accuracy	PixelTrue display, shows each pixel true to the input pixels without scaling or smoothing effects	
MTBF of DMD		typ. 650,000 hours		
Life time of DMD		typ. > 100,000 hours		
Image retention		no image retention or burn-in		
Lamps		Lamps	100 W	
	Lamp life ⁽⁴⁾	10,000 hours		
	Color wheel	Color wheel cartridge with MTTR < 5 minutes		
Color wheel	Rotation speed	3x for better image representation		
	Lifetime	20,000 hours		



for updated product information see "Video wall display" at www.barco.com/controlrooms

Inputs & outputs	AC input voltage	100-240 VAC, 60-50 Hz
	Power (W)	< 190 W
	Heat dissipation (BTU/h)	< 650 BTU/h
Signal	Signal input/output	DVI-D in/DVI-D out with dual XGA support
	Pixel clock	165 MHz
	Genlock range	Genlock in 49-61 Hz range
	Multi Input Module (optional) ⁽⁵⁾	DVI-D, DVI-I, Multi Sync RGB input (VGA upto UXGA), Video Input (PAL, NTSC, SECAM)
	OverView Control Manager	Graphical representation of display wall on operator PC Integrates separate display wall modules into a single display Client - server architecture provides central display wall logic with multiple access from multiple sites Health Status in the blink of an eye and support for trouble shooting Configuration of different settings Wall control by the operator Multiple access levels
Communications	Communication protocol	Via RS-232 and ethernet
	Color calibration	Perfect color calibration through Color Adjustment Tool (CAST)
	Optical dimmer	Optical dimmer with dynamic feedback preserves wall contrast
	Brightness lock	makes brightness of all cubes equal, independent of lamp life

⁽¹⁾ ANSI Lumens,

⁽²⁾ 6500 K, but can be set to other values

⁽³⁾ ANSI points

⁽⁴⁾ lamp manufacturer specs @ IEC 61947-1 test condition

⁽⁵⁾ Only in single XGA mode, sdi input upon request

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Barco is an ISO 9001 registered company. 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.barcocontrolrooms.com. DLP™ technology by Texas Instruments offers crystal clear images with superior quality. DLP is a trademark of Texas Instruments. This brochure contains product pictures of OV-701. Barco's OV-501 video wall has another mechanical structure and is not depicted in this brochure.



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