

# OV-513

## 50" SXGA DLP™ projection series



Barco's OV-D2 series integrate cutting edge DLP™ technology into 50" video 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 unrivaled DLP™ rear projection system with outstanding picture quality, reliability and ease of use.

### **Superior display quality**

- latest high contrast DLP™ technology
- brightness, contrast, and large viewing angles tailored to the human eye providing maximum readability
- vibrant colors
- Sense<sup>6</sup> technology providing continuous video wall uniformity over time

### **Reliability and lifetime serviceability**

- engineered for ease of maintenance
- durable components with high reliability from lamp to screen
- dual redundant lamp offering 100% reliability
- easy lamp replacement from the rear of the system while system runs
- 100% sealed off optical engine
- fast Ethernet communication allowing fast access and upgrading
- Barco's Lamp-Lease Program allowing to efficiently control operational costs

### **Flexibility**

- designed to form video walls of any size, in a linear or curved setup
- requires minimal installation depth
- innovative modular concept

### **Integrated system**

- central graphical overview of video wall with Barco Control Manager for video walls software
- integrating individual video wall modules into one image

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## Features of the OV-513 projection modules

### Sense<sup>6</sup>

Sense<sup>6</sup> brings wall uniformity to a next level.

Not only does Sense<sup>6</sup> increase color and brightness uniformity in the corners of each single projection module, Barco's innovative Sense<sup>6</sup> technology also keeps all projection modules equal over time and across the entire display wall.

By integrating a patented brightness and color sensor, the display wall's color and brightness is continuously measured and communicated between projection modules. Sense<sup>6</sup> automatically matches the brightness of full white, full black and all gray levels in between, as well as the colors of all display modules. The I-lamp recalibrates the color sensor for long-time stability.

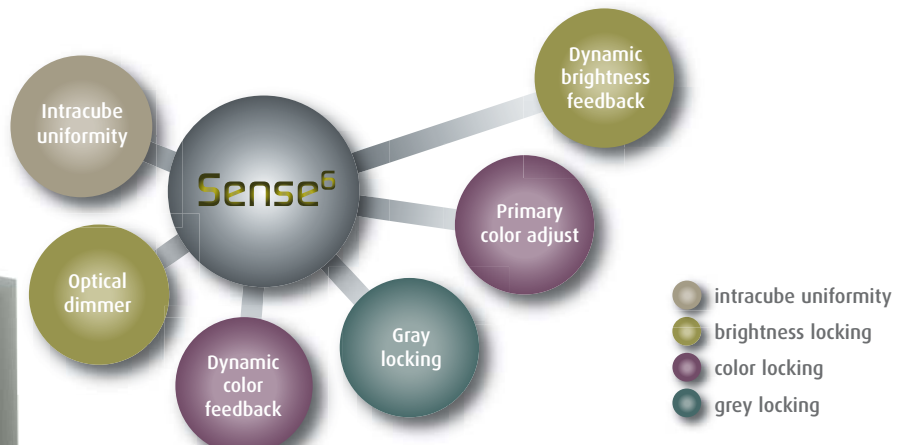
Sense<sup>6</sup> operates unnoticed in the background and requires no operator intervention whatsoever. For instance, Sense<sup>6</sup> will work during automatic lamp change without special operator actions. The intended display wall content remains unchanged at all times. No special screen calibration patterns are needed.



50" OV-513	Luminance (cd/m <sup>2</sup>   ftL)	HVA	HVM	HVX
	120 W	270   79	540   159	1340   394
	132 W	300   88	595   175	1470   432
	Seam Size Screen mullion	0 mm		
	interscreen gap	< 0.8 mm <sup>(1)</sup>		
	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		

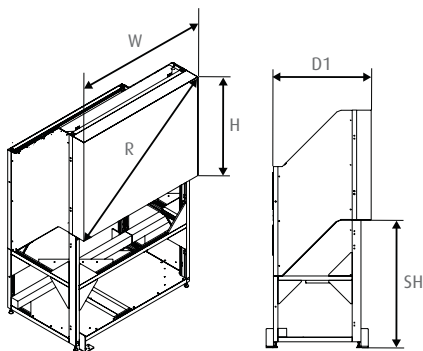
<sup>(1)</sup> @ 25° C, 50% RH

Screens	Screen type	High contrast	Brightness	Full viewing angle	Halfgain angle (h./v.)	1/5 gain angle
	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°



Sense <sup>6</sup> (Optional)	
Color shift between cubes over time	Shift in $\Delta E^*$ over time < 3 (with color lock)
On-screen brightness Uniformity	Very high brightness and color uniformity
ANSI 9 brightness min.	97%
ANSI 13 brightness typ.	95%
Projector color/brightness uniformity	
$\Delta E^*$ intercube typ.	< 6
$\Delta E^*$ intracube typ.	< 3
Brightness locking	Makes brightness of all cubes equal at all times without operator intervention
	High Dynamic Range (HDR) by Optical dimming preserves contrast, independent of brightness level or lamp life
Color locking	Active Dynamic brightness sensor feedback technology measures brightness and serves as input to the optical dimmer
	Makes color of all cubes equal at all times without operator intervention
	Primary Color Adjust is a color algorithm that adjusts color to a common color target in red, green, blue and white
Grey locking	Active Dynamic color sensor feedback technology collects color information from all cubes. The True color sensor measures the complete spectrum rather than just red, green and blue and is based upon the standard spectral function according to CIE 1931 (optional)
	Makes grey levels equal across display cubes

$\Delta E^*$  is a parameter which incorporates color and brightness differences into one unit. Additionally,  $\Delta E^*$  takes into account the adaptation level of the human eye to brightness and color.



Dimensions	
OV-513	
Width W	1000 mm   39.4"
Height H	800 mm   31.5"
Diagonal R	50" nominal
Full depth D1	664.5 mm   26.2"
Aspect ratio	5:4
Standard height	875, 1000, 1200 mm   34.5", 39.4", 47.2"
Min screen height	455 mm   17.9"
Weight	62 kg

# Technical specifications OV-513

Display capabilities	<b>Resolution</b>	SXGA 1024 x 1024 TruePixel		
	<b>Absolute resolution</b>	33 dpi		
	<b>Luminous flux @ 6500 K</b>	875		
	<b>Contrast</b>	1700:1		
	<b>Color</b>	100% EBU		
	<b>White point</b>	6500 K, natural lighting (1)		
	Imaging device	<b>DMD-chip</b>	0.95" LVDS ±12° darkmetal III	
		<b>Pixel accuracy</b>	PixelTrue display, shows each pixel true to the input pixels without scaling or smoothing effects	
		<b>MTBF of DMD</b>	typ. 650,000 hours	
		<b>Life time of DMD</b>	typ. > 100,000 hours	
<b>Image retention</b>		no image retention or burn-in		
Lamps		<b>Lamps</b>	Choice between 120 and 132 W	
		<b>Lamp life (2)</b>	120 W	132 W
		10,000 hrs	6,000 hrs	
	<b>Lamp redundancy</b>	Cold standby or hot standby with redundant powersupply Automatic lampswitch by Autosensing lamp failure		
	<b>Lamp replacement</b>	Defect lamp can be hot-swapped without image loss		
	<b>Lamp switch</b>	Dynamic feedback of brightness and color readjust display wall to equal performance		
	<b>Switching Time</b>	< 1.5 seconds		
	<b>I-lamp</b>	intelligent lamp carries o.a. lamp life information & spectrum		
	Colorwheel	<b>Colorwheel, rotation speed &amp; lifetime</b>	Colorwheel cartridge with MTTR < 5 minutes. Rotationspeed 3x better for image representation. Lifetime airbearing with rating of 50,000 hours	

(1) Special 3200 K option for backdrop

(2) Lamp manufacturer specs @ IEC 61947-1 test conditions

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DLP™ technology by Texas Instruments offers crystal clear images with superior quality. DLP is a trademark of Texas Instruments.



Inputs & outputs	<b>AC input voltage</b>	100-240 VAC, 60-50 Hz		
	<b>Power (W)</b>	120 W	132 W	
	Cold Standby	< 250	< 275	
	Hot Standby	< 390	< 430	
	<b>Heat dissipation (BTU/h)</b>	120 W	132 W	
	Cold Standby	< 850	< 900	
	Hot Standby	< 1325	< 1375	
Signal	<b>Signal input/output</b>	Dual DVI-D in / Dual DVI-D out with loopthrough		
	<b>Pixel clock</b>	165 Mhz		
	<b>Input frequency</b>	Multi sync 30Hz-75Hz		
	<b>Genlock range</b>	Genlock in 49-61 Hz range		
	<b>Supported input resolutions</b>	VGA, SVGA, XGA, SXGA, SXGA+, UXGA, 1080p DVI-D format (with scaler)		
	<b>Cropping</b>	Yes		
	<b>Scaling (optional)</b>	up- and down scaling		
	Communications	<b>Barco control manager</b>	Graphical representation of display wall on operator PC Integrates separate display wall modules into a single display, allowing a.o. Sense6 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	
		<b>Direct ethernet access</b>	Display wall module settings and control over CAT5 cable through standard ethernet browser. Easy and fast firmware upgrading over ethernet	
		<b>Autodiagnosics</b>	Low level projector self test	
		<b>Integration to third party equipment</b>	External display wall control from different devices through SOAP based API	

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