OV-515

50″ SXGA⁺ DLP™ projection module

Barco's OV-D2 series integrates 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, resulting in 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
• Sense⁶ technology providing consistently excellent video wall uniformity over time

Reliability and lifetime serviceability
• Engineered for ease of maintenance and serviceability
• 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, preventing dust contamination
• Fast Ethernet communication allowing redundant projection access for direct control and configuration
• 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 for easier build up and design

Integrated system
• Barco Wall Control Manager software with central graphical overview of the video wall
• Integrating individual projection modules into a single display

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Features of the OV-515 projection modules

Sense[6]

Sense[6] brings wall uniformity to a next level.

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

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

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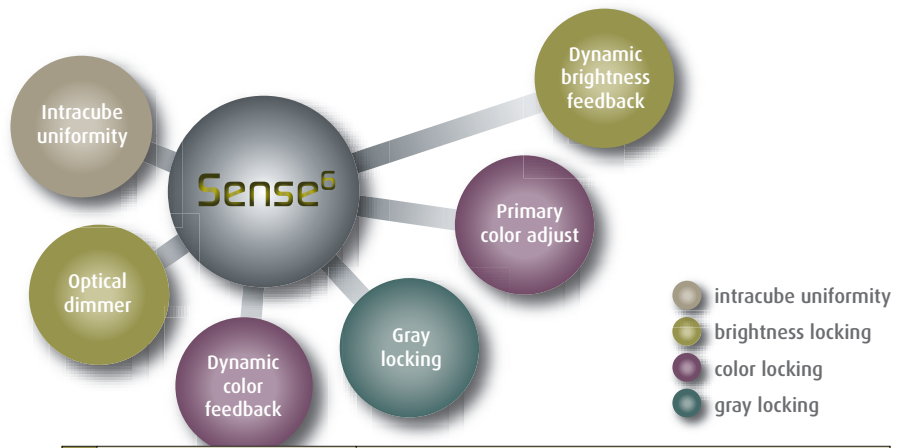

		HVA	HVM	HVX
	Power	**Luminance** (cd/m^2 | ftL) ([1])		
	120 W	325 | 96	650 | 191	1605 | 472
	132 W	355 | 104	715 | 210	1765 | 519
	180 W	485 | 143	n.a.	n.a.
	Seam size screen mullion	0 mm		
	interscreen gap	< 0.8 mm([2]) or 0 mm ZeroGap technology		
	Humidity conditions	Up to 80% non condensing		
	Temperature conditions	10°C-40°C | 50°F-105°F		
	Storing conditions	0°C-40°C | 32°F-105°F		

50" OV-515

([1]) @ 6500 K, values are approx. 50% @ 3200 K
([2]) @ 25°C, 50% RH

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

Screens

Sense⁶ diagram with nodes: Intracube uniformity, Dynamic brightness feedback, Primary color adjust, Optical dimmer, Gray locking, Dynamic color feedback

Legend:
- intracube uniformity
- brightness locking
- color locking
- gray locking

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

Sense⁶	Sense⁶ (Optional)	
	Color shift between projection modules over time	Shift in ΔE* 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	
	ΔE* intercube typ.	< 6
	ΔE* intracube typ.	< 3
	Brightness locking	Makes brightness of all projection modules equal at all times without operator intervention
		High Dynamic Range (HDR) by optical dimming preserves contrast, independent of brightness level or lamp life
		Active dynamic brightness sensor feedback technology measures brightness and serves as input to the optical dimmer
	Color locking	Makes color of all projection modules 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
		Active dynamic color sensor feedback technology collects color information from all projection modules. 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
	Gray locking	Makes gray levels equal across projection modules
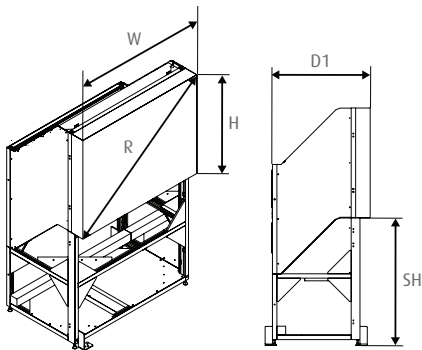
Dimensions	OV-515	
	Width W	1000 mm | 39.4"
	Height H	750 mm | 29.5"
	Diagonal R	50" nominal
	Full depth D1	664.5 mm | 26.2"
	Aspect ratio	4:3
	Standard height SH	875, 1000, 1200 mm | 34.5", 39.4", 47.2"
	Min screen height SH	455 mm | 17.9"
	Weight/module	65 kg | 143 lbs

Technical specifications OV-515

Display capabilities

Resolution	
SXGA+ 1400 x 1050 TruePixel	
Absolute resolution	
36 dpi	
Luminous flux @ 6500 K @ 132W	
1000	
Dynamic contrast	
5100:1	
Color	
100% EBU	
White point	
6500 K, natural lighting ([1])	

Imaging device

DMD chip	
0.95" LVDS ±12° DarkChip3, BrilliantColor™	
Pixel accuracy	
PixelTrue display, shows each pixel true to the input pixels without scaling or smoothing effects	
MTBF of DMD	
typ. 650,000 hours	
Lifetime of DMD	
typ. > 100,000 hours	
Image retention	
No image retention or burn-in	

Lamps

Lamps			
Choice between 120 W, 132 W and 180 W			
Lamp life ([2])	120 W	132 W	180 W
	10,000 hrs	6,000 hrs	6,000 hrs
Lamp redundancy			
Cold standby or hot standby with redundant power supply Automatic lamp switch by autosensing lamp failure			
Lamp replacement			
Defect lamp can be hot-swapped without image loss			
Lamp switch			
Dynamic feedback of brightness and color readjusts video wall to equal performance			
Switching time			
< 1.5 seconds			
I-lamp			
Intelligent lamp carries a.o. lamp life information & spectrum			

Color wheel

Color wheel, rotation speed & lifetime
Color wheel cartridge with MTTR < 5 minutes
3x speed for better image representation
Air bearing with rating of 50,000 hours

Power

AC input voltage			
100-240 VAC, 60-50 Hz			
Power (W)	120 W	132 W	180 W
Cold standby	< 250	< 275	< 335
Hot standby	< 390	< 430	< 550
Heat dissipation (BTU/h)	120 W	132 W	180 W
Cold standby	< 850	< 900	< 1145
Hot standby	< 1325	< 1375	< 1875

Signal

Signal input/output
1 x DVI-D in/out, 1 x Dual-link DVI-D in/out
Pixel clock
162 MHz | 270 MHz ([3])
Input frequency
Multi sync 30-75 Hz
Genlock range
Genlock in 49-61 Hz range
Supported input resolutions
VGA, SVGA, XGA, SXGA, SXGA+, UXGA, 1080p, dual XGA, triple XGA ([3]), quad XGA ([3]), dual SXGA+([3])
Cropping
Possible
Scaling (optional)
Up- and down scaling

Communications

Barco Wall Control Manager
Graphical representation of video wall on operator PC
Integrates separate projection modules into a single display, allowing a.o. Sense[6]
Client – server architecture provides central video 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
Direct ethernet access
Projection module settings and control through standard ethernet browser
Easy and fast firmware upgrade over ethernet
Autodiagnostics
Projector self test
Integration to third party equipment
External video wall control from different devices through SOAP based API

([1]) Special 3200 K option for backdrop • ([2]) Lamp manufacturer specs @ IEC 61947-1 test conditions
([3]) On second input

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DLP TEXAS INSTRUMENTS

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