

# OV-508

## 50" XGA 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
- Sense<sup>6</sup> 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-508 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 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<sup>6</sup> automatically matches the brightness of full white, full black and 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<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 video wall content remains unchanged at all times. No special screen calibration patterns are needed.

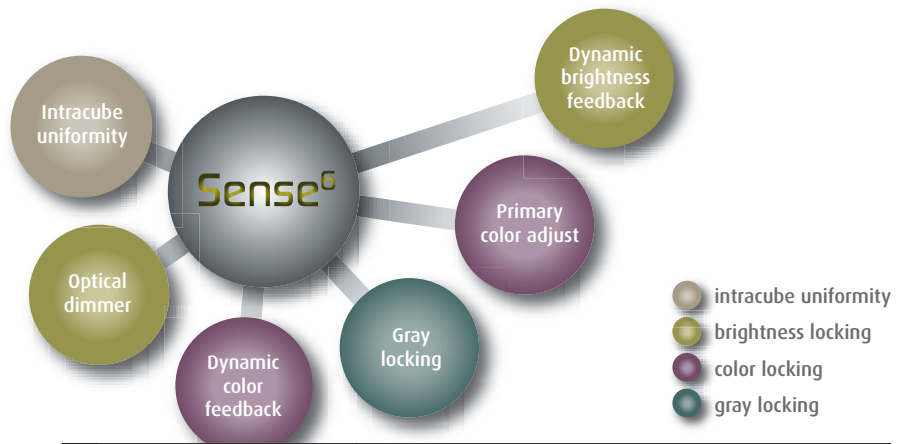


| 50" OV-508 |                             | HVA                                     | HVM       | HVX        |
|------------|-----------------------------|-----------------------------------------|-----------|------------|
|            | Power                       | Luminance (cd/m <sup>2</sup>   fTL) (¹) |           |            |
|            | 120 W                       | 290   85                                | 575   169 | 1425   419 |
|            | 132 W                       | 320   94                                | 635   187 | 1570   462 |
|            | 180 W                       | 435   128                               | 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                   |           |            |

(¹) @ 6500 K, values are approx 50% @ 3200 K

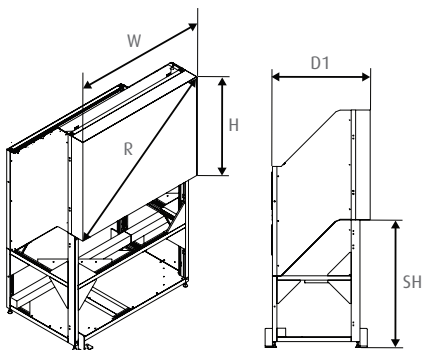
(²) @ 25°C, 50% RH

| Screens | 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°         |



$\Delta E^*$  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.

| Sense <sup>6</sup> (Optional)                           |                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Color shift between projection modules over time</b> | Shift in $\Delta E^*$ over time < 3 (with color lock)                                                                                                                                                                                                                    |
| <b>On-screen brightness uniformity</b>                  | Very high brightness and color uniformity                                                                                                                                                                                                                                |
| ANSI 9 brightness min.                                  | 97%                                                                                                                                                                                                                                                                      |
| ANSI 13 brightness typ.                                 | 95%                                                                                                                                                                                                                                                                      |
| <b>Projector color/brightness uniformity</b>            |                                                                                                                                                                                                                                                                          |
| $\Delta E^*$ intercube typ.                             | < 6                                                                                                                                                                                                                                                                      |
| $\Delta E^*$ intracube typ.                             | < 3                                                                                                                                                                                                                                                                      |
| <b>Brightness locking</b>                               | 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                                                                                                                                                       |
| <b>Color locking</b>                                    | 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 |
| <b>Gray locking</b>                                     | Makes gray levels equal across projection modules                                                                                                                                                                                                                        |



| OV-508                      |                                          |
|-----------------------------|------------------------------------------|
| <b>Width W</b>              | 1000 mm   39.4"                          |
| <b>Height H</b>             | 750 mm   29.5"                           |
| <b>Diagonal R</b>           | 50" nominal                              |
| <b>Full depth D1</b>        | 664.5 mm   26.2"                         |
| <b>Aspect ratio</b>         | 4:3                                      |
| <b>Standard height SH</b>   | 875, 1000, 1200 mm   34.5", 39.4", 47.2" |
| <b>Min screen height SH</b> | 455 mm   17.9"                           |
| <b>Weight/module</b>        | 65 kg   143.3 lbs                        |

# Technical specifications OV-508

|                      |                                                   |                                                                                                              |           |           |
|----------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------|-----------|
| Display capabilities | <b>Resolution</b>                                 | XGA 1024 x 768 TruePixel                                                                                     |           |           |
|                      | <b>Absolute resolution</b>                        | 26 dpi                                                                                                       |           |           |
|                      | <b>Luminous flux @ 6500 K @ 132W</b>              | 875                                                                                                          |           |           |
|                      | <b>Dynamic contrast</b>                           | 4800:1                                                                                                       |           |           |
|                      | <b>Color</b>                                      | 100% EBU                                                                                                     |           |           |
|                      | <b>White point</b>                                | 6500 K, natural lighting (¹)                                                                                 |           |           |
|                      | <b>DMD chip</b>                                   | 0.7" LVDS ±12° DarkChip3, BrilliantColor™                                                                    |           |           |
|                      | <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                                                                                         |           |           |
| Imaging device       | <b>Image retention</b>                            | No image retention or burn-in                                                                                |           |           |
|                      | <b>Lamps</b>                                      | Choice between 120 W, 132 W and 180 W                                                                        |           |           |
|                      | <b>Lamp life (²)</b>                              | 120 W                                                                                                        | 132 W     | 180 W     |
|                      |                                                   | 10,000 hrs                                                                                                   | 6,000 hrs | 6,000 hrs |
|                      | <b>Lamp redundancy</b>                            | Cold standby or hot standby with redundant power supply<br>Automatic lamp switch 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 readjusts video wall to equal performance                           |           |           |
|                      | <b>Switching time</b>                             | < 1.5 seconds                                                                                                |           |           |
|                      | <b>I-lamp</b>                                     | Intelligent lamp carries a.o. lamp life information & spectrum                                               |           |           |
|                      | <b>Color wheel, rotation speed &amp; lifetime</b> | Color wheel cartridge with MTTR < 5 minutes                                                                  |           |           |
| Color wheel          |                                                   | 3x speed for better image representation                                                                     |           |           |
|                      |                                                   | Air bearing with rating of 50,000 hours                                                                      |           |           |

|                |                                             |                                                                                                         |        |        |
|----------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------|--------|--------|
| Power          | <b>AC input voltage</b>                     | 100-240 VAC, 60-50 Hz                                                                                   |        |        |
|                | <b>Power (W)</b>                            | 120 W                                                                                                   | 132 W  | 180 W  |
|                | Cold standby                                | < 250                                                                                                   | < 275  | < 335  |
|                | Hot standby                                 | < 390                                                                                                   | < 430  | < 550  |
|                | <b>Heat dissipation (BTU/h)</b>             | 120 W                                                                                                   | 132 W  | 180 W  |
|                | Cold standby                                | < 850                                                                                                   | < 900  | < 1145 |
|                | Hot standby                                 | < 1325                                                                                                  | < 1375 | < 1875 |
|                | <b>Signal input/output</b>                  | 1 x DVI-D in/out, 1 x Dual-link DVI-D in/out                                                            |        |        |
|                | <b>Pixel clock</b>                          | 162 MHz   270 MHz (³)                                                                                   |        |        |
|                | <b>Input frequency</b>                      | Multi sync 30-75 Hz                                                                                     |        |        |
| Signal         | <b>Genlock range</b>                        | Genlock in 49-61 Hz range                                                                               |        |        |
|                | <b>Supported input resolutions</b>          | VGA, SVGA, XGA, SXGA, SXGA+, UXGA, 1080p, dual XGA, triple XGA (³), quad XGA (³), dual SXGA+(³)         |        |        |
|                | <b>Cropping</b>                             | Possible                                                                                                |        |        |
|                | <b>Scaling (optional)</b>                   | Up- and down scaling                                                                                    |        |        |
|                | <b>Barco Wall Control Manager</b>           | Graphical representation of video wall on operator PC                                                   |        |        |
|                |                                             | Integrates separate projection modules into a single display, allowing a.o. Sense⁶                      |        |        |
|                |                                             | 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                                                                            |        |        |
| Communications |                                             | Multiple access levels                                                                                  |        |        |
|                | <b>Direct ethernet access</b>               | Projection modules settings and control through standard ethernet browser                               |        |        |
|                |                                             | Easy and fast firmware upgrade over ethernet                                                            |        |        |
|                | <b>Autodiagnosics</b>                       | Projector self test                                                                                     |        |        |
|                | <b>Integration to third party equipment</b> | 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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