



## Satellite Insight Modular Laser System 8K 60Hz Specification

*Satellite MLS is a (r)evolution in projection technology.*

*Totally configurable to overcome traditional installation challenges.*

*Simple building blocks for complex applications.*



# Satellite Insight MLS 8K 60Hz

8,500 to 36,000 Lumens | Contrast Ratio: 2,000:1



## Key Features:

### Satellite Insight Head

- 8K Resolution (7680 x 4320)
- Separate Head - compact, lightweight & low noise
- Sealed Optics
- Near Maintenance free
- 3D Capable

### Modular Light Source

- RGB Modular Light source
- Near BT2020 colour space
- Rack mountable • Fully Interlocked
- Interconnection - Satellite Link Cable available in various lengths
- Use 10K, 20K or 30K Modular Light Sources to achieve the desired brightness to a maximum of 36,000 Lumens or share one source to multiple heads.

## Key Specifications:

| <b>Colour System:</b>                  | 3-chip DLP®  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
|--|--|------------------|--|-----------------|---|------|---|--|-------------------------|--|--|----------------|-----|---|-----|------|---|--------------|-------------------|---|--|
| <b>Display Type:</b>                   | 3 x 1.38" DarkChip™ DMD™   |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>DMD Specification:</b>              | 4096 x 2160 pixels native. Fast transit pixels for smooth greyscale and improved contrast.   |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Aspect Ratio:</b>                   | 1.78:1 / 16:9  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Fill Factor</b>                     | 87%  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Video &amp; Graphics processing</b> | <ul style="list-style-type: none"> <li>▪ Up to 60 fps 7680 x 4320 (8k) pixels sequential Quad-Pipe input via DisplayPort input.</li> <li>▪ Up to 60 fps 3840 x 2160 (4k-UHD) pixels sequential input via single DisplayPort input.</li> <li>▪ Up to 120 fps (2 x 60 fps) 3840 x 2160 (4k UHD) pixels Dual-Pipe input via DisplayPort.</li> <li>▪ Dual Flash Processing capability,</li> <li>▪ Dark Time insertion capability,</li> <li>▪ Smear reduction for 2D displays,</li> <li>▪ Synchronisation of active glasses or polarising switcher,</li> <li>▪ Low latency processing.</li> </ul> |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Colour adjustments</b>              | <ul style="list-style-type: none"> <li>▪ Up to 12 bits per colour (RGB) processing (depending on source and input type).</li> <li>▪ Degamma table maps input to 16 bit palette (R, G &amp; B) for display.</li> <li>▪ Degamma selection from a list of parametric curves.</li> <li>▪ Individual R, G &amp; B lift and gain.</li> <li>▪ Black and White level adjustment via Brightness &amp; Contrast control.</li> </ul>  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>ColorMax™</b>                       | <ul style="list-style-type: none"> <li>▪ Accurate matching of projectors in tiled or blended applications.</li> <li>▪ User selection and storage of primary and secondary user defined color targets up to 7 points.</li> </ul>  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Control</b>                         | <ul style="list-style-type: none"> <li>▪ On-board touch-panel control.</li> <li>▪ Remote control - IR or cable.</li> <li>▪ Network control via RJ45.</li> <li>▪ Tablet and smart phone control via served web page.</li> <li>▪ PC control application.</li> </ul>  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Mounting</b>                        | <p><b>Head Mounting</b></p> <ul style="list-style-type: none"> <li>▪ Fixing points on Top/Bottom and sides.</li> <li>▪ Additional front fixing for third party attachments i.e optical blenders.</li> </ul> <p><b>MLS Mounting</b></p> <ul style="list-style-type: none"> <li>▪ 19" 3U (10K MLS) and 19" 4U (20K 30K MLS) rack mounting</li> </ul> <p><b>SCM Mounting</b></p> <ul style="list-style-type: none"> <li>▪ 19" 3U rack mounting</li> </ul>   |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Lens Features</b>                   | <ul style="list-style-type: none"> <li>▪ Robust lens mount with memorised position, zoom and focus.</li> <li>▪ Extensive lens shift encompassing all lens capabilities.</li> <li>▪ High quality sharp lenses designed for 4K performance with wide focal ranges. <ul style="list-style-type: none"> <li>▫ See below in the Lenses Section for further detail</li> </ul> </li> </ul>  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Source Compatibility</b>            | Graphics standards up to 3840 x 2160 at 60 fps via each DisplayPort. 60 fps via HDMI. Higher input frame rates supported at 2K resolution.   |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>Inputs/Outputs</b>                  | <table border="1"> <thead> <tr> <th colspan="2">Video &amp; Computer</th> </tr> </thead> <tbody> <tr> <td>DisplayPort 1.2</td> <td>4</td> </tr> <tr> <td>HDMI</td> <td>2</td> </tr> </tbody> </table>  | Video & Computer |  | DisplayPort 1.2 | 4 | HDMI | 2 | <table border="1"> <thead> <tr> <th colspan="3">Communication &amp; Control</th> </tr> </thead> <tbody> <tr> <td>3D Sync in/out</td> <td>BNC</td> <td>2</td> </tr> <tr> <td>LAN</td> <td>RJ45</td> <td>1</td> </tr> <tr> <td>Wired remote</td> <td>3.5mm Stereo Jack</td> <td>1</td> </tr> </tbody> </table> | Communication & Control |  |  | 3D Sync in/out | BNC | 2 | LAN | RJ45 | 1 | Wired remote | 3.5mm Stereo Jack | 1 |  |
| Video & Computer                       |  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| DisplayPort 1.2                        | 4  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| HDMI                                   | 2  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| Communication & Control                |  |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| 3D Sync in/out                         | BNC  | 2                |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| LAN                                    | RJ45   | 1                |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| Wired remote                           | 3.5mm Stereo Jack  | 1                |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |
| <b>3D Formats Supported</b>            | <ul style="list-style-type: none"> <li>▪ Dual Pipe &amp; Frame Sequential.</li> <li>▪ Frame Packed, Top-Bottom via HDMI</li> <li>▪ Up to 4K-UHD 3840 x 2160</li> </ul>   |                  |  |                 |   |      |   |  |                         |  |  |                |     |   |     |      |   |              |                   |   |  |

| <b>Formats Supported</b>                  | <ul style="list-style-type: none"> <li>7680 x 4320p (8k) (24, 25, 30, 48, 50, 60 Hz via Quad Pipe).<br/>Frame repeat (x2) on 24, 25 and 30 Hz to display 48, 50 and 60 Hz 8k respectively.</li> <li>3840 x 2160p (23.98, 24, 25, 29.97, 30, 48, 50, 59.94, 60 Hz)<br/>(Up to 120 Hz via Dual Pipe, or up to 240 Hz via 4 channels)</li> <li>1080p (24, 25, 29.97, 30, 50, 59.94, 60 Hz) (Up to 120 Hz)</li> </ul>   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
|---|---|------------------------------|--|---------------------------------------|------------------------------------|---|------------------------------------|---------------------------------------|---|---------------|---------|---------------|---|---------------|---------|---------------|---|
| <b>Computer Compatibility</b>             | <ul style="list-style-type: none"> <li>Up to 4096 x 2160 per DisplayPort Input</li> <li>Up to 7680 x 4320 in Quad Pipe, Four Input DisplayPort</li> </ul>   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Projector Head Control</b>             | IR & Wired remote control & On-Board touch Panel with OSD   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Automation Control</b>                 | LAN.  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Colour Temperature</b>                 | User selectable from 3300K to 10000K  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>illumination Type</b>                  | RGB Laser Light Source  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Typical illumination Life</b>          | 30,000 Hours  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Lenses</b>                             | <table border="1"> <thead> <tr> <th>Lens</th> <th>Part No.</th> <th>Throw Ratio at 8K &amp; 4K (UHD)</th> <th>Lens Shift (Frame)</th> </tr> </thead> <tbody> <tr> <td>1.13 - 1.72:1</td> <td>115-627</td> <td>1.21 - 1.83:1</td> <td>Vert: 0.40 (U) 0.20 (D), Hor: 0.08 (L) 0.14 (R)</td> </tr> <tr> <td>1.65 - 2.60:1</td> <td>115-630</td> <td>1.76 - 2.77:1</td> <td>Vert: 0.45 (U) 0.20 (D), Hor: 0.13 (L) 0.17 (R)</td> </tr> <tr> <td>2.53 - 4.98:1</td> <td>115-632</td> <td>2.70 - 5.31:1</td> <td>Vert: 0.42 (U) 0.20 (D), Hor: 0.13 (L) 0.17 (R)</td> </tr> </tbody> </table> <p>* Lens focal ranges above are the optimised distances but are likely to focus further, please contact your RSM for more details. Lens ratio tolerances: INSIGHT Series: +/-2%.</p> | Lens                         | Part No.   | Throw Ratio at 8K & 4K (UHD)          | Lens Shift (Frame)                 | 1.13 - 1.72:1                             | 115-627                            | 1.21 - 1.83:1                         | Vert: 0.40 (U) 0.20 (D), Hor: 0.08 (L) 0.14 (R) | 1.65 - 2.60:1 | 115-630 | 1.76 - 2.77:1 | Vert: 0.45 (U) 0.20 (D), Hor: 0.13 (L) 0.17 (R) | 2.53 - 4.98:1 | 115-632 | 2.70 - 5.31:1 | Vert: 0.42 (U) 0.20 (D), Hor: 0.13 (L) 0.17 (R) |
| Lens                                      | Part No.  | Throw Ratio at 8K & 4K (UHD) | Lens Shift (Frame)                                       |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| 1.13 - 1.72:1                             | 115-627   | 1.21 - 1.83:1                | Vert: 0.40 (U) 0.20 (D), Hor: 0.08 (L) 0.14 (R)          |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| 1.65 - 2.60:1                             | 115-630   | 1.76 - 2.77:1                | Vert: 0.45 (U) 0.20 (D), Hor: 0.13 (L) 0.17 (R)          |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| 2.53 - 4.98:1                             | 115-632   | 2.70 - 5.31:1                | Vert: 0.42 (U) 0.20 (D), Hor: 0.13 (L) 0.17 (R)          |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Lens Mount</b>                         | Motorised shift, zoom and focus. Intelligent Lens Memory with user-definable preset positions.  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Mechanical Mounting</b>                | Front/Rear Table. Front/Rear Ceiling. Adjustable Front/Rear Feet.   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Orientation</b>                        | Table Top or Inverted: Pointing Up. Pointing Down. Roll (Portrait).   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Power Requirements</b>                 | Head, MLS & SCM 100 - 240VAC 50/60Hz single phase   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Power Consumption</b>                  | <b>Head</b> 250W, <b>10K MLS</b> 1000W, <b>20K MLS</b> 1633W, <b>30K MLS</b> 2488W, <b>SCM</b> 100W   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Thermal Dissipation</b>                | <b>Head</b> with 10K Lumens 1200 BTU/Hr with 40K Lumens 2220 BTU/hr.<br><b>MLS 10K</b> 2500 BTU/Hr, <b>20K MLS</b> 5572 BTU/Hr, <b>30K MLS</b> 8489 BTU/hr, <b>SCM</b> 85 BTU/hr  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Fan Noise</b>                          | <b>Head</b> <40 dBA, <b>MLS 10K</b> 45 dBA, <b>20K</b> 54 dBA, <b>30K</b> 58 dBA, <b>SCM</b> 30 dBA   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Operating/Storage Temperature</b>      | Operating: 0 to 35C (32 to 95F) Storage: -10 to 50C (14 to 122F)  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Operating Humidity</b>                 | 20 to 80% non-condensing  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Weight</b>                             | <b>Head:</b> 46 kg / 101.5 lbs <b>MLS: 10K</b> 17Kg / 37 lbs, <b>20K</b> 28Kg / 61 lbs, <b>30K</b> 29Kg / 63 lbs, <b>SCM:</b> 6.5 Kg / 14 lbs   |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Dimensions</b>                         | <table> <tr> <td><b>Head</b></td> <td>H: 47 cm / 18.5 in W: 43 cm / 16.9 in L: 45 cm / 17.7 in</td> </tr> <tr> <td><b>Modular Light Source (MLS) 10K</b></td> <td>19" 3U rack unit 50cm / 19.6" deep</td> </tr> <tr> <td><b>Modular Light Source (MLS) 20K/30K</b></td> <td>19" 4U rack unit 75cm / 29.5" deep</td> </tr> <tr> <td><b>Satellite Control Module (SCM)</b></td> <td>3U rack unit 27cm / 10.6" deep</td> </tr> </table>  | <b>Head</b>                  | H: 47 cm / 18.5 in W: 43 cm / 16.9 in L: 45 cm / 17.7 in | <b>Modular Light Source (MLS) 10K</b> | 19" 3U rack unit 50cm / 19.6" deep | <b>Modular Light Source (MLS) 20K/30K</b> | 19" 4U rack unit 75cm / 29.5" deep | <b>Satellite Control Module (SCM)</b> | 3U rack unit 27cm / 10.6" deep                  |               |         |               |   |               |         |               |   |
| <b>Head</b>                               | H: 47 cm / 18.5 in W: 43 cm / 16.9 in L: 45 cm / 17.7 in  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Modular Light Source (MLS) 10K</b>     | 19" 3U rack unit 50cm / 19.6" deep  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Modular Light Source (MLS) 20K/30K</b> | 19" 4U rack unit 75cm / 29.5" deep  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |
| <b>Satellite Control Module (SCM)</b>     | 3U rack unit 27cm / 10.6" deep  |                              |  |                                       |                                    |   |                                    |                                       |   |               |         |               |   |               |         |               |   |

|                     |  |  |
|---------------------|--|--|
| <b>Part Numbers</b> | <b>Satellite Insight Head 8K60</b> 120-887<br><b>MLS 10000</b> 122-004<br><b>MLS 20000</b> 123-445<br><b>MLS 30000</b> 123-799 | For full details on the Satellite Link Cable please contact your local sales representative. |
|---------------------|--|--|



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Laser class Statement: Class 1 RG3 Laser Product. No direct exposure to the beam shall be permitted, RG3 IEC 62471-5:2015. Operators shall control access to the beam within the hazard distance or install the product at a height that will prevent exposure of the spectator's eyes within the hazard distance