NOVA media
LEYARD

# MG-2 Series

## NEXT GEN MG INDOOR FINE PITCH LED DISPLAY

### DIVERSE UPGRADES FOR ENTRY-LEVEL TO PREMIUM MARKET SEGMENTS

The new generation MG, is the upgrade of the very success model of MG series. It supports the front and rear installation, front access.

The series covers three different position lines: entry level with Top LEDs; mainstream with 4in1 MicroLEDs CC or CA driver IC, and premium with MicroLEDs and high performance driver IC; DCI P3 optional; EMC Class B optional; the GOB optional; and the selectable control system.

## KEY FEATURES

- Micro LED Full Flip Chip
- 2000nit High Brightness
- EMC Class B
- Super Heat Management
- Power/Signal Redundancy
- Front Access
- Diagnostic
- 6 Axis Adjustment
- Low Power Consumption
- High Dynamic Range
- Wide Viewing Angle
- High Refresh Rate

## HISTORY MG FAMILY


**Next Gen MG** Excellence · Renewed

### Upgrade

| | |
|---|---|
| Thinner | From 53mm to 45mm, 8mm less |
| Lighter | From 6KG to 4.8KG, 1.2KG less |
| Highly Integrated | From 4 modules to 2 |
| Better Flatness | Module strong bracket, GOB ready |
| Smarter | Optional diagnostic feature |
| Better Heat Dissipation | Smart design on PSU position to emit the heat |
| Uniformity | Better while uniformity |

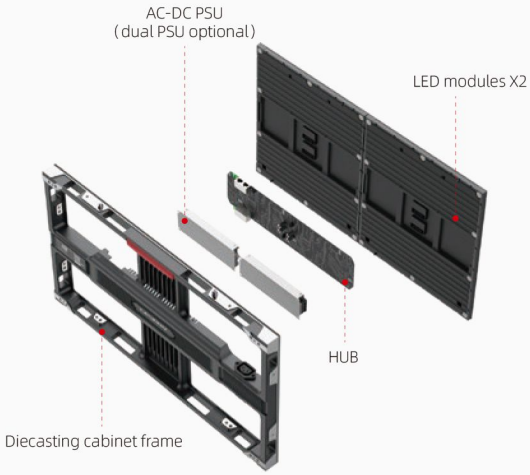
## Scientific and Reasonable Layout Highlighting the Aesthetics of Technology

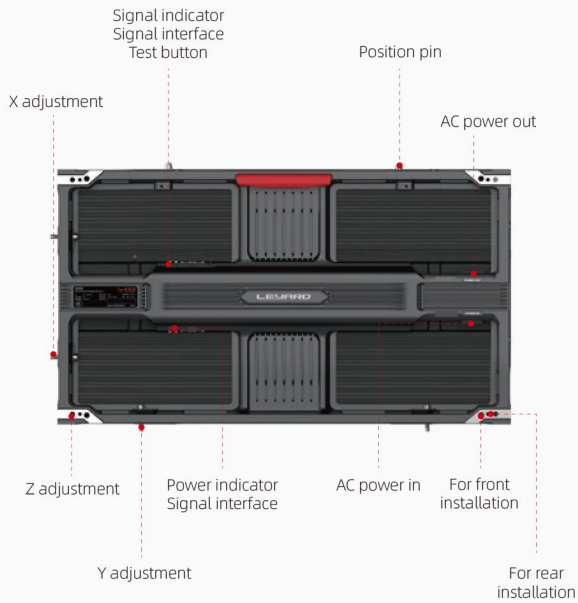
> Dual signal redundancy plus loop redundancy;

> Dual power redundancy;

> AC input at bottom and output at top, plus 300mm distance between power and data interfaces to reduce the interference to signal;

> Float connectors between hub and modules for stable connection.



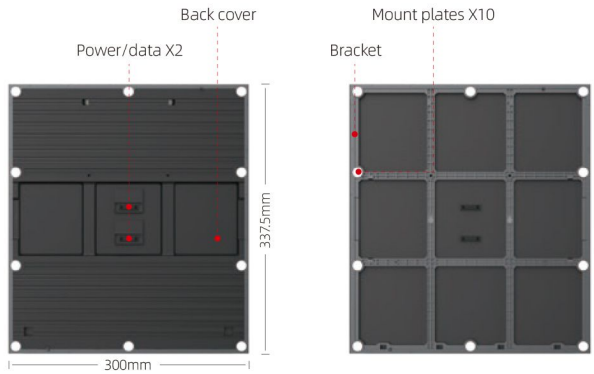




## Diagnostic

Power Status | Temperature Alert | Humidity Alert | Smoke Detection | Abnormal Status

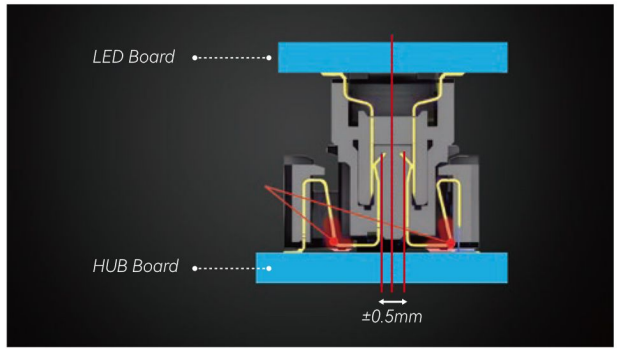
## Dual Interface LED Module

Careful designed modules to be GOB ready, much better flatness.




## Floating Connectors

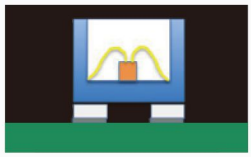
The time-proved connection method, introduced by Leyard into the LED display industry.



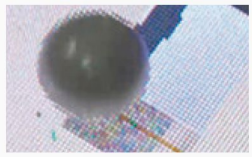
## LED - GOB

- COB similar approach but with binning/mixing of LEDs = better uniformity
- 4H hardness
- Waterproof, easy to clean the surface

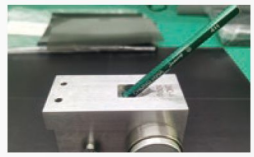
SMD



SMD soldering force = 1kg

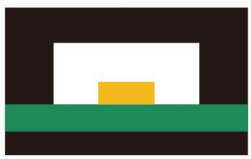


SMD hit test

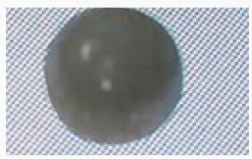


Hardness test

GOB



GOB soldering force＞10kg



GOB hit test >10 KG

Easy to clean

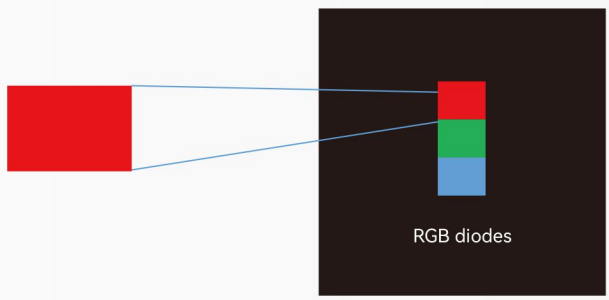
## Micro LED Full Flip Chip

> Micro LED shorter side < 100µm

> Flip chip LEDs, no wires anymore

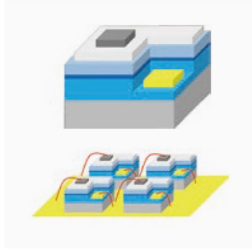
> Compare to wired LED:

- Less soldering, improved reliability
- 7.3x bigger soldering pad, improved reliability
- No wires to block the light, improved electric-optical efficiency
- No wires, darker LEDs, improved contrast
- Less power at same light output, lower power consumption
- Lower heat, improved reliability

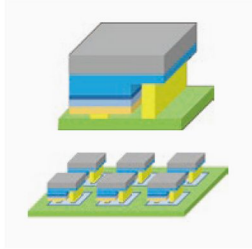



Wired LEDs, the gold/copper wire cosmetics the LED wall color

Flip chip LEDs are super black



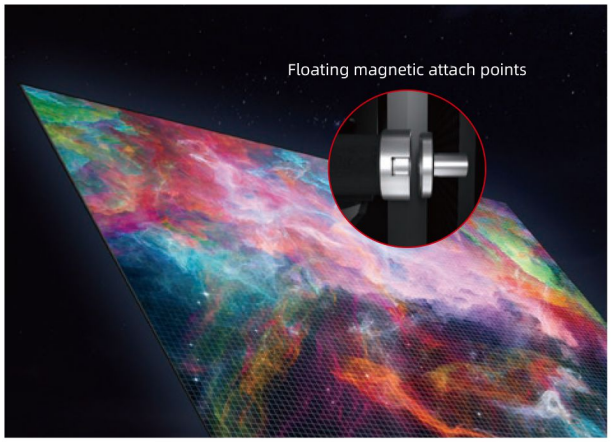
Wired LED



Flip chip

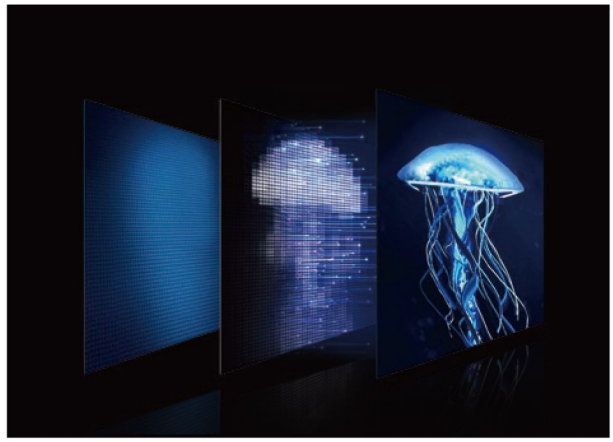
## Flat, From Modules to Displays

Experience of fine pixel pitch in decades, the superior performance.



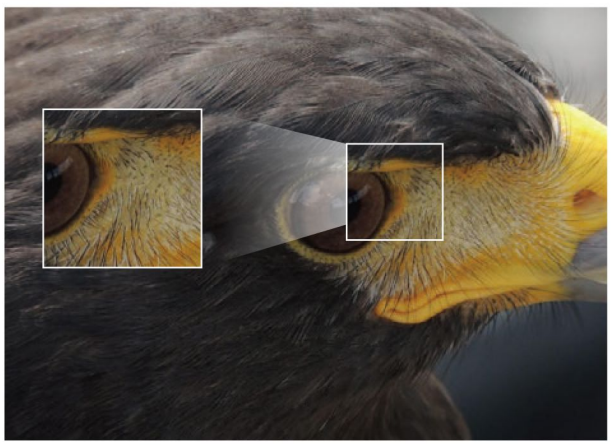

## MicroLED High Brightness, High Contrast

MicroLED in 2000nits and 20000:1 contrast ratio.



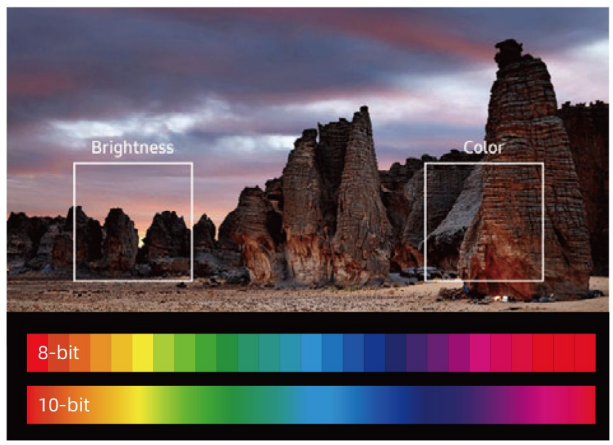
## More Details at Low Brightness

The display is 16 bits to deliver high grayscales at low brightness area.



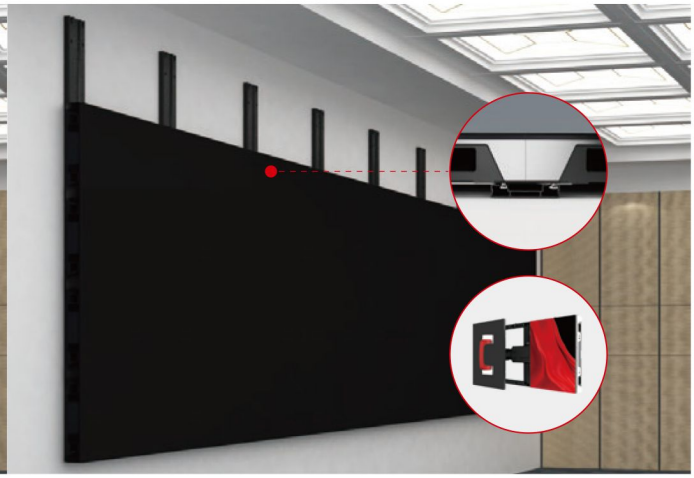
## HDR - High Dynamic Range

HDR content is in 10 bits, new gen MG can deliver a much bigger color volume than SDR LED display




## Front Access, Fast Installation

Multiple installation method, front/rear installation and front access.



## Comparison — MG VS New Gen MG

| Item | MG | New Gen MG |
|---|---|---|
| Pixel Pitch | 0.78/0.93/1.25/1.56/1.87/2.5/1.05/1.17mm | 0.93/1.25/1.56/1.87/2.5mm |
| Optical | 1. Contrast 5000:1; 2. Brightness 600–800nit | 1. Contrast ratio 20000:1; 2. Max brightness 1500-2000(Micro);<br>3. Color gamut can be DCI-P3 (Micro, optional) |
| Three Position Lines | | Entry: TOP-LED, CA; Mainstream: 4in1-LED, CA or CC;<br>Premium: Micro LED, CC, Premium driver IC; optional DCI-P3 |
| Access | Front | Front |
| Cabinet Dimension | 600x337.5x53mm | 600x337.5x45mm, 8mm less |
| Weight | 6KG | 4.8KG, 1.2KG less |
| LED Modules | 4, no bracket | 2, with bracket, GOB ready |
| EMC | CLASS A | CLASS A, CLASS B optional |
| Heat Management | | PSU attached to cabinet frame, better heat management, better uniformity;<br>RX with attached Graphene heat sinker |
| Diagnostic | Temperature and PSU only | More to support, temperature, humidity, smoke, and abnormal of PSU,... optional |
| No Changes | On the mounting plates, power and signal cables, package materials. | |

## EXTENSIVE APPLICATIONS

Leyard MG-2 series offers enhanced versatility and performance across its range. It supports both front and rear installations with easy access, catering to diverse environments. This series is ideal for various applications, from retail to high-end event spaces.


## FOR WORLDWIDE MARKET (CERTIFICATION WILL BE READY SOON)

MG-2 series will has passed the international and domestic authority of electrical, safety, electromagnetic radiation, environmental protection certificates, including **CCC, HDR, CE, CB, cTUVus, FCC, ROHS, REACH, WEEE**, etc.

# SPECIFICATIONS

| Item | MG0093-2 | MG0125-2 | MG0125-2 | MG0125-2 | MG0156-2 | MG0187-2 | MG0250-2 |
|---|---|---|---|---|---|---|---|
| LED Type | Micro 4in1 LED | SMD-TOP | SMD-Chip | Micro 4in1 LED | SMD-TOP | SMD-TOP | SMD-TOP |
| Pitch Pitch (mm) | 0.9375 | 1.25 | 1.25 | 1.25 | 1.5625 | 1.875 | 2.5 |
| Module Resolution (WxH) | 320x360 | 240x270 | 240x270 | 240x270 | 192x216 | 160x180 | 120x135 |
| Module Size (WxH, mm) | 300x337.5 | 300x337.5 | 300x337.5 | 300x337.5 | 300x337.5 | 300x337.5 | 300x337.5 |
| Module Composition (WxH) | 2x1 | 2x1 | 2x1 | 2x1 | 2x1 | 2x1 | 2x1 |
| Cabinet Resolution (WxH) | 640x360 | 480x270 | 480x270 | 480x270 | 384x216 | 320x180 | 240x135 |
| Cabinet Dimension (mm) | 600x337.5x45 | 600x337.5x45 | 600x337.5x45 | 600x337.5x45 | 600x337.5x45 | 600x337.5x45 | 600x337.5x45 |
| Cabinet Area (m²) | 0.2025 | 0.2025 | 0.2025 | 0.2025 | 0.2025 | 0.2025 | 0.2025 |
| Weight (kg/cabinet; kg/m²) | 4.5; 22.2 | 4.5; 22.2 | 4.5; 22.2 | 4.5; 22.2 | 4.5; 22.2 | 4.5; 22.2 | 4.5; 22.2 |
| Pixel Density (Point/m²) | 1137778 | 640000 | 640000 | 640000 | 409600 | 284444 | 160000 |
| Flatness (mm) | ≤0.1 | ≤0.1 | ≤0.1 | ≤0.1 | ≤0.1 | ≤0.1 | ≤0.1 |
| Brightness Calibration | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Color Cablibration | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Peak Brightness (nits)(after calibration) | 2000 | 1000 | 800 | 2000 | 800 | 800 | 900 |
| Full White Brightness (nits)(After calibration) | 1000-1200 * | 600-800 * | 600-800 * | 1200-1500 * | 600-800 * | 600-800 * | 600-800 * |
| Color Temperature (K) | 3000-10000 Adjustable | | | | | | |
| Horizontal Viewing Angle ( ° ) | 170 | 160 | 160 | 170 | 160 | 160 | 160 |
| Vertical Viewing Angle ( ° ) | 170 | 140 | 160 | 170 | 140 | 140 | 140 |
| Deviation from Color Luminous Center | <3% | <3% | <3% | <3% | <3% | <3% | <3% |
| Brightness Uniformity | ≥98% | ≥98% | ≥98% | ≥97% | ≥98% | ≥98% | ≥98% |
| Color Uniformity | ±0.003Cx,Cy | ±0.003Cx,Cy | ±0.003Cx,Cy | ±0.003Cx,Cy | ±0.003Cx,Cy | ±0.003Cx,Cy | ±0.003Cx,Cy |
| NTSC Color Gamut Coverage | 120% * | 120% * | 120% * | 125% * | 120% * | 120% * | 120% * |
| Contrast Ratio | 20000:1 | 5000:1 | 5000:1 | 20000:1 | 5000:1 | 5000:1 | 5000:1 |
| Max Power Consumption (W/cabinet; W/m²) | 76; 376 | 104; 514 | 117; 578 | 78; 385 | 94; 464 | 86; 425 | 80; 397 |
| Avg. Power Consumption (W/cabinet; W/m²) | 37; 181 | 32; 158 | 30; 150 | 27; 134 | 27; 135 | 23; 111 | 16; 76 |
| Input Voltage | AC100~240V(50/60Hz) | | | | | | |
| Leakage Current (single cabinet) | ≤3.5mA | ≤3.5mA | ≤3.5mA | ≤3.5mA | ≤3.5mA | ≤3.5mA | ≤3.5mA |
| Driving Method | Common Cathode PWM CCD | PWM CCD | PWM CCD | PWM CCD | PWM CCD | PWM CCD | PWM CCD |
| Frame Rate (Hz) | 50&60 | | | | | | |
| Refresh Rate (Hz) | ≥3840 | | | | | | |
| 3D (100/120Hz) | Optional | | | | | | |
| Lifetime (hrs) | 100,000 | | | | | | |
| Working Temperature (°C) | -20 ~ 40 | | | | | | |
| Storage Temperature (°C) | -30 ~ 60 | | | | | | |
| Working Humidity (RH) | 10 ~ 90% no condensation | | | | | | |
| Storage Humidity (RH) | 10 ~ 80% no condensation | | | | | | |
| Installation | Front/Rear | | | | | | |
| Service (modules, PSU, Controller) | Front | | | | | | |
| Certification | CCC | | | | | | |

> White balance 100% brightness (nits) (after correction) value between 600-800nit brightness range;

> NTSC color gamut coverage, because the LED will have wavelength variance, the color gamut has batch difference on mass production output; (-20-0) %;

> The peak power consumption refers to the power consumption under the condition of 100% brightness of full white;

Note: The above parameters are for reference. The actual conditions prevail.

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