

# HDO Series

High Brightness Outside.  
**Precision Fine-Pitch Vision.**



## Overview

The HDO Series combines Flip-Chip MiniLED and MicroLED-in-Package (MiP) technology to deliver fine-pitch visual clarity, rugged outdoor durability, and high installation flexibility. Engineered for demanding outdoor environments, it features standard 16:9 die-cast aluminum cabinets, patented IP66 waterproofing, and ultra-high brightness for seamless, high-impact viewing at close distances.

## KEY ADVANTAGES



### Outdoor MiP & Flip-Chip

Advanced MiniLED/MicroLED packaging with Flip-Chip technology ensures long-term reliability and fine-pitch display performance outdoors.



### Ultra-High Brightness

Delivers up to 5000 nits brightness and up to 15,000:1 contrast ratio for vivid, sunlight-readable visuals from all viewing angles.



### Native 16:9 Scaling

Standard 600x337.5 mm cabinet design scales cleanly to standard 2K, 4K, and 8K outdoor display resolutions.



### 7680Hz Refresh Rate

High-refresh driver technology guarantees flicker-free, camera-friendly visuals for DOOH, sports, and professional outdoor use.



### Full Front Service

Every module is serviced entirely from the front, enabling simple maintenance and flexible mounting in any outdoor installation.



### Patented IP66 Protection

Engineered with a patented waterproof design providing full IP66 protection on both front and rear against severe weather.

# Technical Specifications

HDO Outdoor Fine Pitch · 0.93 | 1.25 | 1.56 | 1.87 mm pixel pitch

|                             |                                               |                                               |             |           |             |
|-----------------------------|-----------------------------------------------|-----------------------------------------------|-------------|-----------|-------------|
| Mechanical Parameters       | Pixel Pitch (mm)                              | 0.93                                          | 1.25        | 1.56      | 1.87        |
|                             | LED Package Technology                        | Flip Chip MiniLED / MicroLED In Package (MiP) |             |           |             |
|                             | LED Type                                      | MiP 0606                                      |             | MiP 1010  |             |
|                             | Module Resolution (Pixels)                    | 320 x 180                                     | 240 x 135   | 192 x 108 | 160 x 90    |
|                             | Module Size (mm)                              | 300 (W) × 168.75 (H)                          |             |           |             |
|                             | Cabinet Size (mm)                             | 600 x 337.5 x 49                              |             |           |             |
|                             | Cabinet Resolution (pixels)                   | 640 x 360                                     | 480 x 270   | 384 x 216 | 320 x180    |
|                             | Cabinet Area (m²)                             | 0.2025                                        |             |           |             |
|                             | Cabinet Weight (kg)                           | ≤ 6.5 kg per cabinet                          |             |           |             |
|                             | Cabinet Material                              | AL Die Cast                                   |             |           |             |
|                             | Pixel Density (dot/m2)                        | 1,137,777                                     | 640,000     | 409,600   | 1.87        |
|                             | Flatness (mm)                                 | ≤0.1                                          |             |           |             |
|                             | Ingress Protections (IP)                      | 66 (Front/Rear)                               |             |           |             |
|                             | Maintenance                                   | Front                                         |             |           |             |
|                             | Optical Parameters                            | Brightness (nits) @ 6500K                     | 4000 - 4500 |           | 4500 - 5000 |
| Color Temperature (K)       |                                               | 3200-9300 adjustable                          |             |           |             |
| Viewing Angle (H/V)°        |                                               | 170°/170°                                     |             |           |             |
| Center Point Deviation      |                                               | <3%                                           |             |           |             |
| Brightness/Color Uniformity |                                               | ≥97%                                          |             |           |             |
| Contrast Ratio              |                                               | 15,000:1                                      |             | 10,000:1  |             |
| Electrical Parameters       | Max/Average Power Consumption                 | 680 (Max), 220 (Average)(W/pc)                |             |           |             |
|                             | Voltage Range                                 | VAC100-240V, 50/60 (Hz)                       |             |           |             |
| Processing Performance      | Frame Rate (Hz)                               | 50 & 60                                       |             |           |             |
|                             | Drive Mode                                    | Constant Current Drive                        |             |           |             |
|                             | Gray Scale                                    | 14-16 bits                                    |             |           |             |
|                             | Refresh Rate (Hz)                             | 3840 - 7680                                   |             |           |             |
|                             | Color Figures                                 | 14-16 bit                                     |             |           |             |
| Operating Parameters        | Life Time (hrs)                               | 100,000 hrs                                   |             |           |             |
|                             | Operating Temperature /Humidity Range (°C/RH) | -40 - 50/10%-80% (non-condensing)             |             |           |             |
|                             | Storage Temperature /Humidity Range (°C/RH)   | -40 - 60/10%-85% (non-condensing)             |             |           |             |