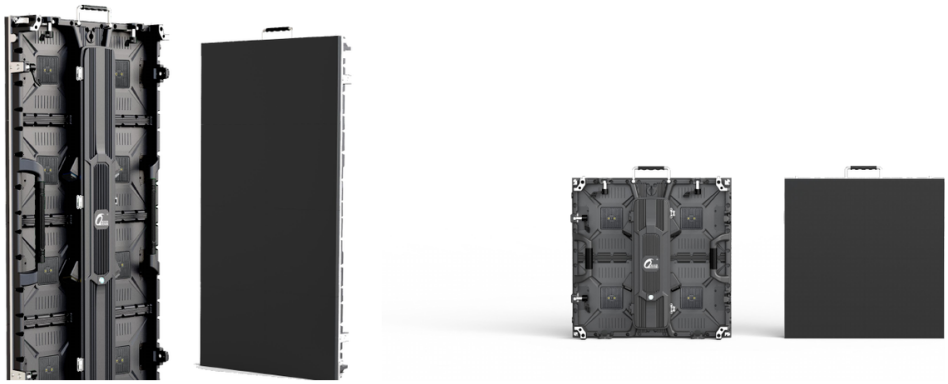
HITU DISPLAY

# RENTAL LED DISPLAY SYSTEM SPECIFICATION

## Outdoor Rental LED Display System

## HY3.9-16S-1921-H-7680

HY Series | Soft connection | 7680 Hz



COMPLETE RENTAL DISPLAY

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# SCOPE AND COMPLETE-SYSTEM DEFINITION

This document specifies the complete rental LED display system. The 500 x 500 mm and 500 x 1000 mm cabinets share the same LED module platform; their cabinet structure, module quantity, resolution, weight and total electrical load differ.

| DOCUMENT SCOPE | |
|---|---|
| **Product** | Outdoor Rental LED Display System |
| **Complete-system model** | HY3.9-16S-1921-H-7680 |
| **Series / connection** | HY / Soft connection |
| **Operating environment** | Outdoor |
| **Cabinet formats** | 500 x 500 x 84.5 mm / 500 x 1000 x 84.5 mm |
| **Shared module** | 250 x 250 x 16.5mm, 64 x 64 = 4096 dots |
| **Refresh rate** | 7680 Hz |
| **Installation** | Hanging or floor stacking |

### 1 Shared module

Optical, driving and module electrical parameters are common to both cabinet formats.

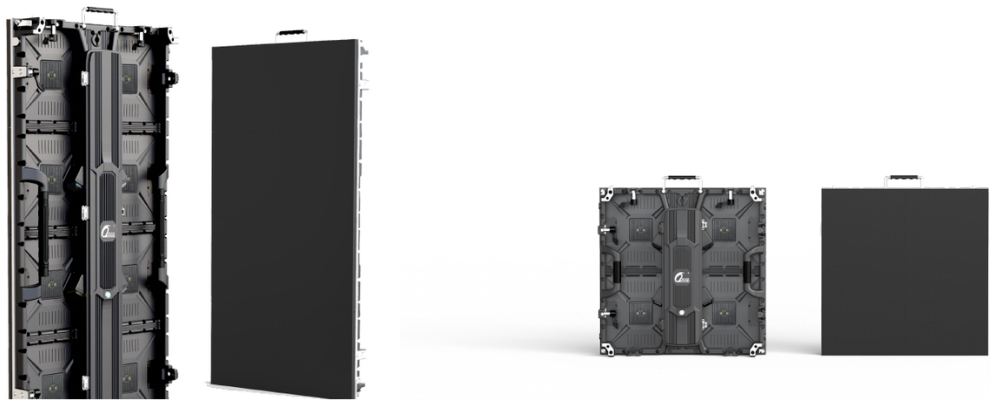
### 2 Different structure

Cabinet size, weight, installed module count, pixel count and total load are listed separately.

### 3 Rental use

Fast assembly, repeatable alignment, hanging and floor-stacking support.

# PRODUCT OVERVIEW AND KEY FEATURES



COMPLETE SYSTEM / CABINET FAMILY

The HY Series is a modular outdoor rental LED display designed around a shared 250 x 250 mm module platform and two compatible cabinet formats.

1. **500 x 500 mm and 500 x 1000 mm cabinets can be combined in one screen**
2. **Fast-lock rental structure for rapid assembly and dismantling**
3. **Flexible-cable power and signal architecture**
4. **Die-cast aluminum cabinet for low weight and repeatable alignment**

| PITCH | BRIGHTNESS | SCAN | REFRESH |
|---|---|---|---|
| 3.9mm | ≥4200cd/m2 | 1/16 | 7680 Hz |

# CABINET CONFIGURATION AND CALCULATED LOADS

## COMPLETE-CABINET DATA AND LOAD CALCULATION

| Parameter | 500 x 500 cabinet | 500 x 1000 cabinet |
|---|---|---|
| Cabinet dimensions | 500 x 500 x 84.5 mm | 500 x 1000 x 84.5 mm |
| Installed shared modules | 4 modules | 8 modules |
| Cabinet resolution | 128 x 128 dots | 128 x 256 dots |
| Total pixels | 16,384 pixels | 32,768 pixels |
| Display area | 0.25 m2 | 0.50 m2 |
| Cabinet weight | 7.5 kg | 12.0 kg |
| Maximum cabinet load | ≤120 W | ≤240 W |
| Average cabinet load | ≤40 W | ≤80 W |
| Cabinet material | Die-cast aluminum | Die-cast aluminum |
| Protection rating | IP65 front / IP54 rear | IP65 front / IP54 rear |

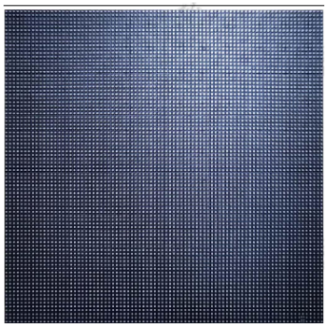
### CALCULATION BASIS

Cabinet pixel matrix = cabinet width and height divided by pixel pitch. Installed module count = cabinet area divided by 0.0625 m2 per 250 x 250 mm module. Declared cabinet power values take precedence over theoretical module multiplication.

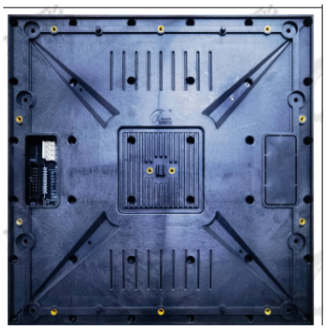
# DISPLAY AND SYSTEM SPECIFICATIONS

| COMPLETE-DISPLAY OPTICAL AND SYSTEM DATA | |
|---|---|
| **Pixel pitch** | 3.9mm |
| **Pixel density** | 65536Dots/m2 |
| **Pixel configuration** | 1R1G1B |
| **LED package** | SMD1921 |
| **Brightness** | ≥4200cd/m2 |
| **Brightness uniformity** | >0.95 |
| **Contrast ratio** | 5000:1 |
| **Horizontal viewing angle** | 140±10° |
| **Vertical viewing angle** | 130±10° |
| **Recommended viewing distance** | ≥7m |
| **Refresh rate** | 7680 Hz |
| **Frame rate** | ≥60 fps |
| **Grayscale** | 14-16Bit |
| **Display colors** | 4.398 trillion colors |
| **Operating temperature** | -20 to +40°C |
| **Operating humidity** | 10%-90% RH |
| **Application** | Outdoor |

# SHARED MODULE DETAILED SPECIFICATIONS



MODULE FRONT



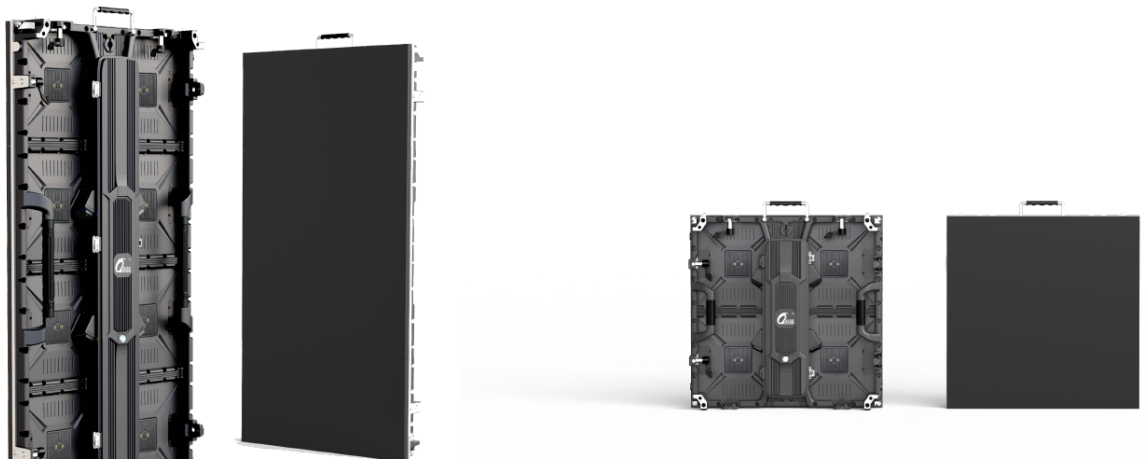
MODULE REAR / ASSEMBLY

## COMMON MODULE PLATFORM

| | |
|---|---|
| **Module dimensions** | 250 x 250 x 16.5mm |
| **Module resolution** | 64 x 64 = 4096 dots |
| **Module weight** | 0.55kg±0.01kg |
| **LED package** | SMD1921 |
| **DC input voltage** | 4.2±0.1V |
| **Maximum current** | ≤7A |
| **Maximum module power** | ≤30 W |
| **Drive / scan method** | 1/16 constant-current drive |
| **Signal interface** | HUB75E |
| **Maximum module power per m2** | ≤480 W/m2 |
| **Recommended distribution capacity** | ≤724 W/m2 |

The same module specification is used in both complete-cabinet formats. Cabinet totals vary only because the 500 x 1000 mm cabinet contains twice the module quantity and display area of the 500 x 500 mm cabinet.

# CABINET STRUCTURE AND MECHANICAL FEATURES



CABINET STRUCTURE / FORMAT REFERENCE

## MECHANICAL CONFIGURATION

| | |
|---|---|
| **Cabinet formats** | 500 x 500 x 84.5 mm / 500 x 1000 x 84.5 mm |
| **Material** | Die-cast aluminum |
| **Connection architecture** | Soft connection |
| **Module service access** | Rear service |
| **Installation modes** | Hanging or floor stacking |
| **Protection** | IP65 front / IP54 rear |

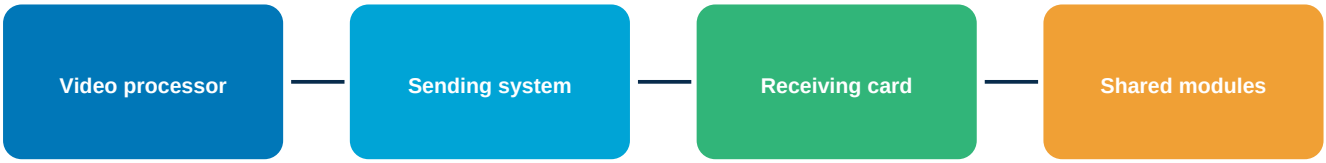
1. Confirm that the support frame is level, rigid and grounded.
2. Engage all positioning pins and fast locks before energizing the screen.
3. Keep cabinet seams uniform; do not force a cabinet into alignment.
4. For outdoor systems, complete project-level waterproofing around the assembled screen.

# POWER, SIGNAL AND INSTALLATION GUIDANCE

## CABINET POWER AND SIGNAL SUMMARY

| Parameter | 500 x 500 cabinet | 500 x 1000 cabinet |
|---|---|---|
| Shared module quantity | 4 modules | 8 modules |
| Maximum cabinet load | ≤120 W | ≤240 W |
| Average cabinet load | ≤40 W | ≤80 W |
| Signal interface | HUB75E | HUB75E |
| Service access | Rear service | Rear service |

## RECOMMENDED CONNECTION FLOW




1. Isolate AC power before connecting or replacing cabinets and modules.
2. Verify protective earth, DC polarity, voltage and connector retention.
3. Distribute circuits from the declared maximum cabinet load, including project safety margin.
4. Power on by section while monitoring current, temperature and image mapping.
5. Separate signal and power routes where practical; protect cables from strain and sharp bends.

# INSPECTION, ACCEPTANCE AND CONTACT

| COMPLETE-SYSTEM ACCEPTANCE CHECKLIST | |
|---|---|
| **Visual inspection** | No damaged LEDs, deformed modules, loose locks, loose connectors or abnormal contamination. |
| **Mechanical check** | Cabinet alignment, seams, hanging/floor hardware and service access are complete. |
| **Electrical check** | Grounding, polarity, voltage, circuit protection and cable retention have been verified. |
| **Image test** | Red, green, blue, white and grayscale patterns show no persistent uncontrolled pixels. |
| **Uniformity** | Brightness and color are consistent; calibration data is loaded when required. |
| **System test** | Stable operation at 7680 Hz with the project controller and mapping file. |
| **Environmental check** | Installation matches outdoor use and the declared IP65 front / IP54 rear protection. |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Document note: confirm project-specific drawings, controller settings and final power distribution before production.