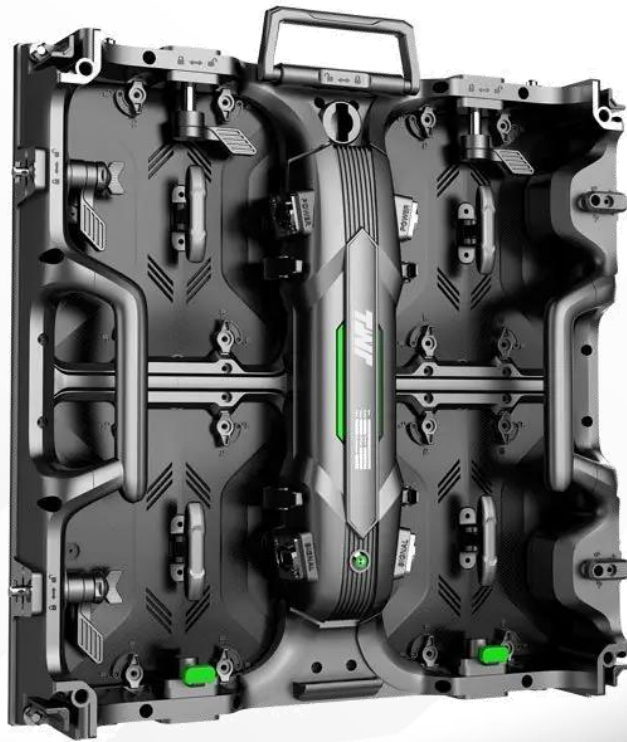




TSMX P1.9

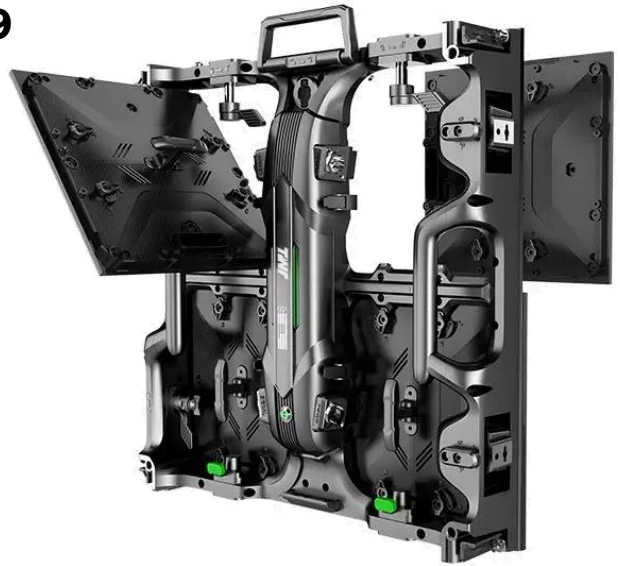
LED INDOOR



01

APPEARANCE

Model: TSMX-P1.9



02

KEY FEATURES

➤ **Ultra-Fine Pixel Pitch of 1.9mm**

Designed to meet HD and 4K high-resolution display needs, the 1.9mm pixel pitch provides unparalleled clarity and detail for various visual applications.

➤ **High Resolution for Superb Visual Quality**

Delivers HD and 4K resolution, ensuring vivid, sharp visuals for a range of professional settings.

➤ **Versatile Installation**

Equipped with a fast and safe locking system, this display supports both hanging and stacking configurations, making it adaptable for diverse installations.

➤ **Switchable Control Box**

Flexible control options for quick adjustments and streamlined management.

➤ **Patent Edge Protection with Optimized Heat Dissipation**

Advanced design ensures the longevity of each tile, enhancing durability and performance.

➤ **Portable & Rental-Friendly**

The compact and lightweight P1.9 indoor LED screen is optimized for rentals, making it easy to transport and set up for temporary installations.

➤ **Seamless Tile Alignment**

Precision-aligned LED modules ensure a continuous, seamless visual experience across all tiles.

➤ **Black LED Technology with High Contrast Ratio**

Utilizing Black LED technology, this display achieves a 1:5000 ultra-high contrast ratio, enhancing image depth and quality.

➤ **High Refresh Rate of 3840Hz**

With a 3840Hz refresh rate, it eliminates scan lines, delivering smooth, flicker-free visuals even in fast-paced environments.

➤ **Flexible Curvable Design**

Capable of ± 2.5 -degree curve installations, it supports creative displays for unique viewing experiences.

➤ **Multiple Application**

PossibilitiesIdeal for both permanent and rental installations, this display's modular design enables quick setup and easy maintenance.

Pixel Pitch (mm)	1.9mm
Pixel Density (dots/m²)	262144
Pixel Configuration	SMD 1010
Brightness (nits)	≥700
Scan Mode	1/32
Power Consumption (Max/Average) (W/m²)	446 / 149
Module Size (mm)	250 x 250
Cabinet Size (mm)	500 x 500
Module Resolution (pixels)	128 x 128
Cabinet Resolution (pixels)	256 x 256
Cabinet Weight (kg)	7.5 kg
Refresh Rate (Hz)	3840
Gray Scale (bits)	14
Viewing Angle (H/V)	160° / 160°
IP Rating	IP40
Input Voltage (AC)	AC100~240V 50/60 Hz
Operating Temperature	-20°C to 60°C
Lifespan (hours)	>100,000 hours
Operation Humidity(RH)	10-80% no condensation
Storage Humidity(RH)	10-85% no condensation

Optoelectronic Properties

Specification	Blue LED	Green LED	Red LED
Forward Current (IF)	20mA	20mA	30mA
Peak Forward Current (IFP)	30mA	30mA	50mA
Power Consumption (PD)	68mW	68mW	72mW
Reverse Voltage VR	10V		
Operating Temperature of LED Pad (Topr)	-30 ~ +85°C		
Storage Temperature Tstg	-40 ~ +85°C		
Forward Voltage VF	min 2.4V ~ max 3.4V (under test condition IF=5mA)	min 2.4V ~ max 3.4V (under test condition IF=5mA)	min 1.7V ~ max 2.4V (under test condition IF=10mA)
Reverse Current IR	max 0.5μA (under test condition VR=10V)		
Viewing angle Δλ1/2	110° (under test condition IF=10/5/5mA)		
Luminous Intensity Iv	min 18Mcd ~ max 48Mcd (under test condition IF=5mA)	min 105Mcd ~ max 200Mcd (under test condition IF=5mA)	min 40Mcd ~ max 65Mcd (under test condition IF=10mA)
Dominant Wavelength (λD)	min 455Nm ~ max 480Nm (under test condition IF=5mA)	min 510Nm ~ max 535Nm (under test condition IF=5mA)	min 620Nm ~ max 625Nm (under test condition IF=10mA)

Specialized Controller Chip for High-Density Full-Color LED Display

- Uses unique SC-PWM technology for fast output response, high refresh rate, excellent current integrity, robust anti-coupling, and resistance to parasitic PCB interference.
- Ideal for LED displays with small pixel spacing, high scanning speed, and high refresh rate. The chip's output current can be adjusted via an external resistor, and the chip's internal reference ensures precise LED current output. It features extremely low current error between channels and chips, effectively reducing low-gray mottling, color distortion, color block issues, and first-line dimming.

Supply Voltage Range	3.8V ~ 5.5V
Scanning Capability	Supports scanning from 1 to 64
Adjustable Output Current	Precisely tunable via external resistor
Constant Current Output Range	0.5~25mA at VDD=5V 0.5~18mA at VDD=4.2V
Current Accuracy	Between channels: $\pm 2\%$ (max) Between chips: $\pm 2\%$ (max)

Integrated power-saving mode

Integrated dead pixel elimination function, effectively removing open diagonal lines
Effectively prevents low-gray mottling, color blocks, and other artifacts in high-scan modes

Low power consumption design, optimal display achievable at a supply voltage of 4.2V~4.5V

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