

Product Specification Sheet

Product Series: Transparent Outdoor Display

Product Model: TW10416/125/15625

Document Revision History

No	Revision No.	Change Status	Description of Changes (+/-)	Approved By	Date
1	V1.0	C	Creation	Jeremy Wong	2024.10.15
2	V1.1	M	Modified the format and content of the specification	Kevin Meng	2025.09.19
3	V1.1	M	Modification	Gloria	2026.06.08
4	V1.1	M	Modification	Lynn	2026.06.09

*Note on Change Status: C——Creation, A——Addition, M——Modification, D——Deletion

Disclaimer: This document outlines the technical parameters for the standard model within this series.
The actual product specifications may vary based on the configuration specified in the sales contract.
The images provided are for illustrative purposes only, the actual product may differ.

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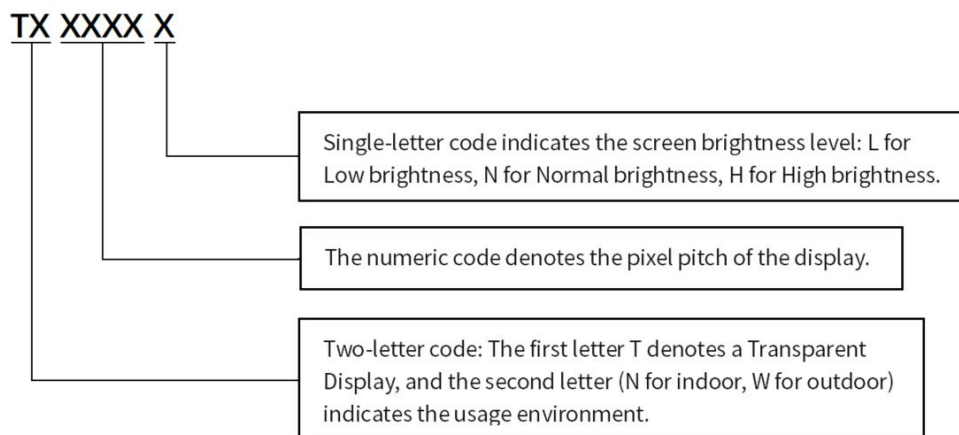
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1. Scope of Application

This technical manual applies exclusively to the cabinets of the Transparent Outdoor Display Series models TW10416, TW125, and TW15625. The parameters provided below correspond to standard product configurations, custom specifications are available for specialized requirements.

2. Naming Rules



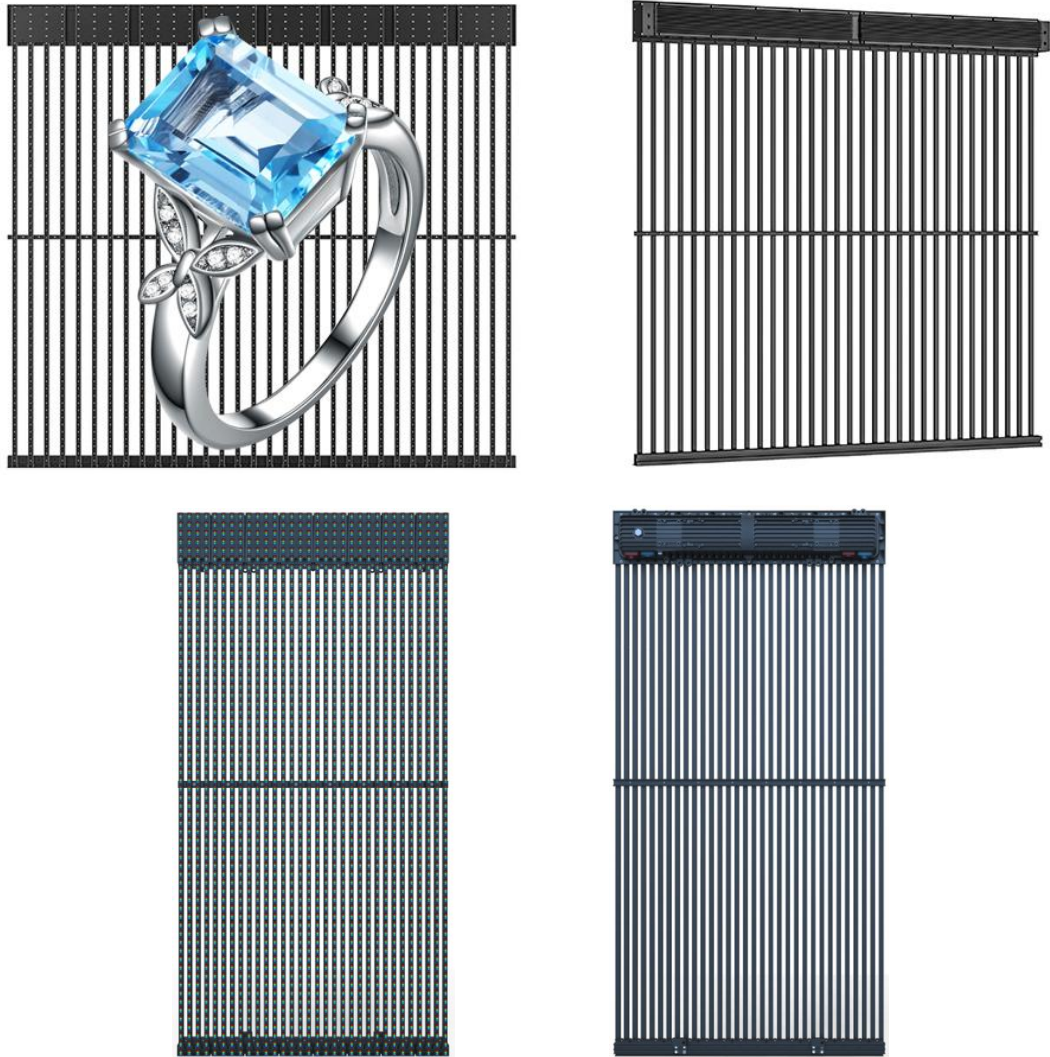
Example: TW10416N refers to an LAC Vision Transparent Outdoor Display with a pixel pitch of 10.416mm and standard brightness of 5000 cd/m².

3. Product Introduction

LAC Vision LED Transparent Outdoor Display Series is a high-performance display product specifically designed for outdoor environments. It combines high light transmittance with high brightness and wide viewing angles, enabling resistance to strong light interference and ensuring clear round-the-clock visibility. With an IP65 protection rating, the product offers excellent waterproof performance, allowing reliable operation in harsh weather conditions without issues like fogging or water droplets. It is suitable for building facades, transportation hubs, commercial complexes, and other outdoor scenarios. The lightweight aluminum alloy frame and modular design ensure structural stability while facilitating quick installation and maintenance. Compatible with various media playback protocols, it meets diverse needs such as advertising, public information dissemination, and urban beautification. It can also be deployed

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for outdoor billboards, building curtain walls, rooftop installations, and large-scale events like concerts, delivering an enhanced viewing experience for audiences.



3.1 Product Features

- Industrial design: refined appearance with ultra-narrow power supply box
- Air-conditioning free cooling: natural heat dissipation without air conditioning, low power consumption saves over 50% energy compared to standard large screens, enhancing energy efficiency and environmental friendliness

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- Transparent stereo effect: unique grille design preserves building lighting needs while creating three-dimensional visual effects through perspective
- Easy installation & maintenance: integrated lightweight aluminum frame design with quick bolt-fastened connections enables rapid assembly and convenient maintenance
- High definition & refresh rate: standard brightness of 5000-5500 cd/m² with refresh rate up to 3840Hz
- Ultra-thin & lightweight: weighs only 1/3 of traditional displays, reducing transportation costs, installation steel structures, and labor expenses

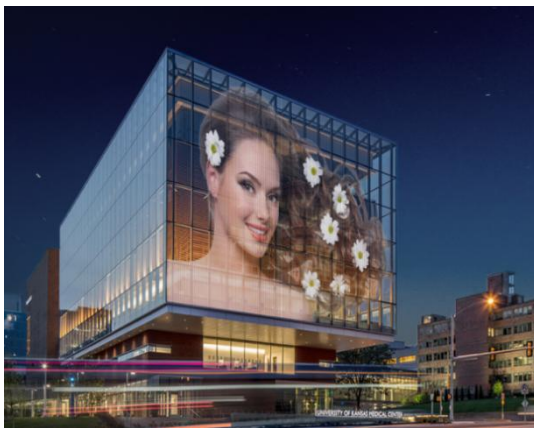
4. Product Parameters

Transparent Outdoor Display				
Cabinet Parameters	Model	TW10416N	TW125N	TW15625N
	Pixel Configuration	1R1G1B		
	LED Packaging	SMD2727	SMD2727	SMD3535
	Pixel Pitch (mm)	10.416	12.5	15.625
	Cabinet Size (W×H) (mm)	1000×500/1000×1000		
	Cabinet Resolution (W×H)	96×48/96×96	80×40/80×80	64×32/64×64
	Pixel Density (dot/m ²)	9217	6400	4096
Optical Parameters	Brightness (cd/m ²)	5000	5500	5500
	Transmittance	≥35%	≥40%	≥40%
	Viewing Angle	Horizontal 120° / Vertical 60°		
	Luminance Uniformity	≥98%		
	Chromaticity Uniformity	Within ±0.003Cx, Cy		
	Maximum Contrast Ratio	5000:1		
Electrical Parameters	Peak Power Consumption (W/m ²)	≤800		
	Average Power Consumption (W/m ²)	≤270		

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	Power Supply Requirements	AC220V 50Hz / AC110V 60Hz		
Processing Performance	Drive Method	1/2	1/2	Static
	Frame Rate	3840		
	Refresh Rate (Hz)	14		
Structural Parameters	Cabinet Weight (kg/m ²)	≤22	≤20	≤18
	Protection Rating	IP65		
Usage Parameters	Typical Lifetime (h)	≥100000		
	Operating Temperature/Humidity	-20°C ~ 50°C / 10% ~ 90%RH (no condensation)		
	Storage Temperature/Humidity	-40°C ~ 80°C / 10% ~ 90%RH (no condensation)		
	Installation Method	Fixed Installation		

5. Application Scenarios



6. Precautions

Item		Description
Environmental Precautions	Temperature Requirements	Storage Temperature Range: -40°C to +80°C. Temperature control (heating/cooling) is required if the ambient temperature falls outside this range. Operating Temperature Range: -20°C to +50°C. Temperature control equipment must be installed if the ambient temperature falls outside this range. LED Module Surface Temperature (During Operation): ≤ 60°C. Temperature control equipment is required if this limit is exceeded.

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	Humidity Requirements	Storage Humidity Range: 10% to 90% RH. Dehumidification is required if the humidity exceeds 90% RH. Operating Humidity Range: 10% to 90% RH. Normal operation can only be ensured after dehumidifying the operating environment if the humidity exceeds this limit.
	Handling of Overdue Storage	If the product has been stored unopened for over one month or powered off for more than 48 hours after unpacking, a 6-hour aging process must be performed before normal use. The aging procedure involves gradually increasing the full brightness level as follows: Set to 10% brightness for at least 1 hour, then 30% for at least 1 hour, then 60% for at least 2 hours, then 80% for at least 1 hour, and finally 100% for at least 1 hour. After this sequence, adjust to the normal operating brightness. This gradual heating expels moisture and ensures trouble-free operation.
	Dust Prevention Requirements	The rear side features an IP6X dust protection rating. To extend product service life, minimize exposure to high-dust environments such as sandy outdoor areas or dusty indoor workshops.
	Corrosion-Resistant Gas Protection	Corrosive gases can cause corrosion and crystal leakage in electronic components.
	Electromagnetic Radiation Protection	The display should not be installed in environments where electromagnetic or radio frequency radiation exceeds a field strength of 5V/m.
	Anti-static	It prevents damage to electronic components caused by static electricity in humid environments and also avoids electrical leakage that could harm the human body.
	Shock Resistance	The display screen should be mounted on a sturdy and reliable installation structure that is free from intense vibrations.
	Lightning Strike Protection	As an outdoor-installed product, appropriate lightning protection measures must be implemented to prevent damage and ensure operational continuity.
	Personal Injury Prevention	The installation angle and height of the display should be appropriate, and sharp edges should be packaged to prevent injury to personnel.
Usage	Special Environment	When using LED displays in special environments, proper usage must be ensured according to the product's application environment. (Examples: 1. Seaside, swimming pools, bathhouses, basements, tunnels. 2. Chemical environments, sulfide environments, halogen environments. 3. Environments with heavy sand or dust. 4. Environments with strong ultraviolet radiation. 5. Environments with strong electromagnetic fields. 6. Environments with temperatures below -20°C or above 55°C, etc.)
	Cleaning Method	To clean the module surface, gently brush it with a soft-bristled brush. Do not use

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Precautions		any liquid substances to clean the LED module surface, as this may damage the LED lamps.
	Electrostatic Discharge (ESD) Protection	Installation personnel must wear anti-static wristbands and gloves, and all tools used during assembly must be properly grounded.
	Safety Requirements	It is essential to ensure the stability of the power supply system, maintaining normal levels of frequency, voltage, and current harmonics. The metal components of the display screen, the housing of the switching power supply, and the enclosure must be properly grounded, with attention given to ensuring that the grounding resistance is $\leq 1\Omega$. Additionally, the leakage current to ground should not exceed 5% of the input current. The electrical strength should comply with the provisions of Section 5.7.5 in the SJ/T11141-2017 General Specification for Light Emitting Diode (LED) Displays.

Note:

The above parameters represent typical values for the product. Variations may occur across different production batches, and the actual parameters of the product shall be subject to the factory inspection report.

During the product manufacturing process, continuous optimization and iteration are carried out, and the product specifications may be adjusted at any time. Please consult with regional agents before making a purchase.

For customized products, a new specification sheet needs to be issued.

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