

Product Specification Sheet

Product Series: Transparent Indoor Display

Product Model: TN2652/3978/52104

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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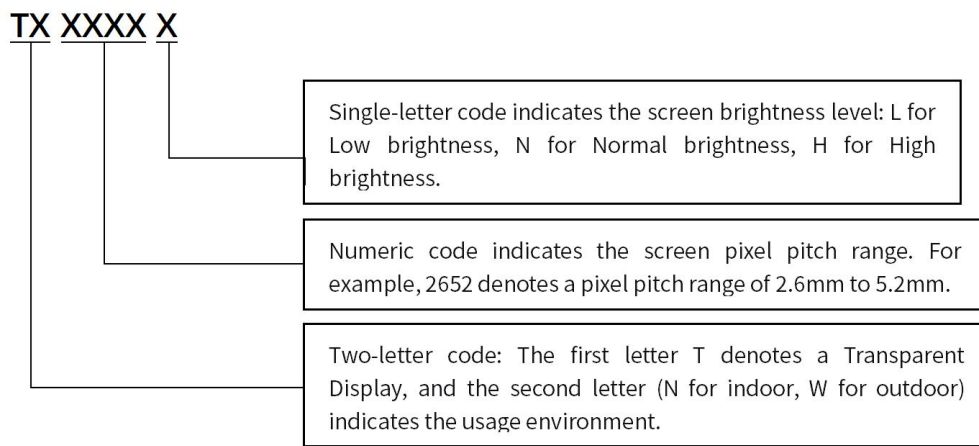
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1. Scope of Application

This technical manual applies exclusively to the cabinets of the Transparent Indoor Display Series models TN2652, TN3978, and TN52104. The parameters provided below correspond to standard product configurations, custom specifications are available for specialized requirements.

2. Naming Rules



Example: TN2652N refers to an LAC Vision Transparent Indoor Display with dimensions of 1000mm × 500mm and a pixel pitch of 2.6-5.2mm.

3. Product Introduction

LAC Vision LED Transparent Indoor Display is an innovative display product specifically designed for commercial spaces and premium indoor scenarios. Featuring fine pixel pitch and supporting a 3840Hz high refresh rate, it eliminates moiré patterns during shooting while ensuring flicker-free imagery and vibrant colors. Its ultra-thin cabinet combined with an open-frame structural design preserves architectural lighting requirements while delivering floating visual effects. Constructed with a lightweight aluminum-magnesium alloy frame, the product weighs 50% less than traditional LED displays. Suitable for shopping mall atriums, brand storefronts, and technology exhibition halls, it balances spatial transparency with visual impact, perfectly harmonizing spatial aesthetics with digital communication needs. The modular design increases maintenance convenience by 60%, with average

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power consumption reduced by 40% compared to conventional LED displays, making it an ideal choice for modern commercial space digital upgrades.



3.1 Product Features

- Industrial design: refined appearance with ultra-narrow power supply box design

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- Lightweight aluminum frame: combines aluminum alloy LED strips with open-frame structure
- Natural cooling system: aluminum alloy material paired with high-void structure eliminates need for auxiliary air conditioning
- Low power consumption: average power consumption $\leq 270\text{W/m}^2$, local illumination design saves over 50% energy during operation, significantly reducing operational costs
- Transparent stereo effect: open-grid structure maintains natural indoor lighting while creating three-dimensional visual effects through perspective
- Ultra-lightweight: aluminum frame weighs only 1/3 of traditional LED displays, requires no heavy steel support structures, and adapts to glass curtain walls/light partitions

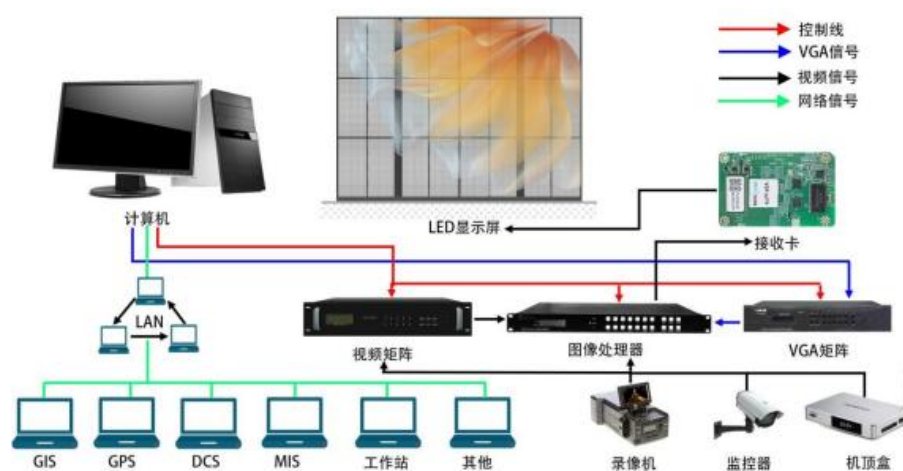
4. Product Parameters

Transparent Indoor Display							
Cabinet Parameters	Model	TN2652L	TN2652N	TN2652H	TN3978N	TN3978H	TN52104H
	Pixel Configuration	1R1G1B					
	LED Packaging	SMD1921	SMD2121	SMD1921	SMD1921		SMD2727
	Pixel Pitch（mm）	2.6-5.2			3.9-7.8		5.2-10.4
	Cabinet Size （W×H）（mm）	1000×500 / 1000×1000					
	Cabinet Resolution （W×H）	384×96 / 384×192			256×64 / 256×128		192×48/ 192×96
	Pixel Density（dot/m²）	73728			32768		18432
Optical Parameters	Brightness（cd/m²）	800	1200	4500	1500	4500	4500
	Transmittance	≥45%			≥50%		≥60%
	Viewing Angle	140° Horizontal / 140° Vertical					
	Luminance Uniformity	≥98%					
	Chromaticity Uniformity	Within±0.003Cx，Cy					
	Maximum Contrast Ratio	5000:1					

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Electrical Parameters	Peak Power Consumption (W/m²)	≤600	≤700	≤800	≤600	≤800	≤800
	Average Power Consumption (W/m²)	≤200	≤240	≤270	≤200	≤270	≤270
	Power Supply Requirements	AC220V 50Hz / AC110V 60Hz					
Processing Performance	Drive Method	16S			16S	8S	8S
	Frame Rate	50/60 Hz					
	Refresh Rate (Hz)	3840					
	Processing Depth (bit)	14					
Structural Parameters	Cabinet Weight (kg/m²)	≤8.5			≤8		≤7.5
	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 / Ceiling Mount					

5. System Topology



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6. Application Scenarios



7. 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.
	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

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		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.
	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.)
Usage Precautions	Cleaning Method	To clean the module surface, gently brush it with a soft-bristled brush. Do not use any liquid substances to clean the LED module surface, as this may damage the LED lamps.
	Electrostatic Discharge (ESD)	Installation personnel must wear anti-static wristbands and gloves, and all tools

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	Protection	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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