

Product Specification Sheet

Product Series: Flexible Module

Product Model: LC**SNP****R

Document Revision History

No	Revision No.	Change Status	Description of Changes (+/-)	Approved By	Date
1	V1.0	C	Creation	Jack Zhang	2024.12.23
2	V1.1	M	Modified the format and content of the specification	Joyce Dong	2025.09.26
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.

This document provides the technical specifications and images for the standard model, serving merely as a reference. The actual terms and details shall be governed by the contract.

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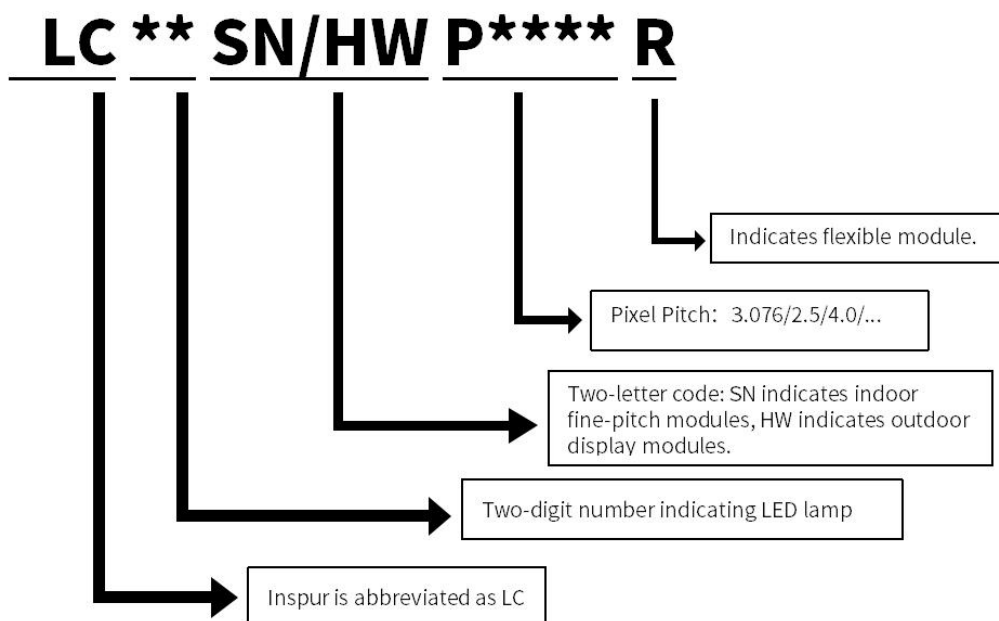
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1. Scope of Application

This technical manual applies exclusively to the following LAC Vision flexible LED display module unit boards from the series: LC10SNP125R, LC125SNP1538R, LC15SNP20R, LC15SNP25R, LC15SNP186R, LC21SNP25R, LC21SNP40R, and LC21SNP3076R. The parameters provided below pertain to standard product configurations. Customization is available for special requirements.

2. Naming Rules

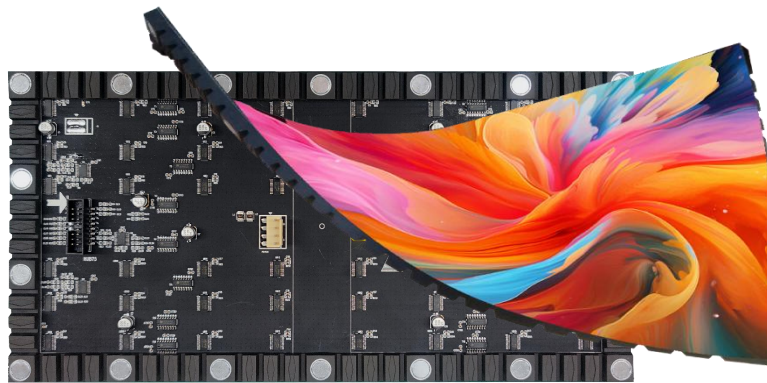


Example: LC10SNP125R refers to an LAC Vision indoor fine-pitch flexible module product with LED lamp specification 1010 and a pixel pitch of 1.25mm.

3. Product Introduction

Utilizing high-quality silicone materials and incorporating a wide-angle design, LAC Vision flexible LED display modules break through the limitations of traditional flat-screen displays. They can be flexibly spliced into various artistic forms such as curved screens, cylindrical screens, or other custom shapes as needed. This capability presents audiences with captivating visual effects, vividly showcasing more dynamic and diverse imagery.

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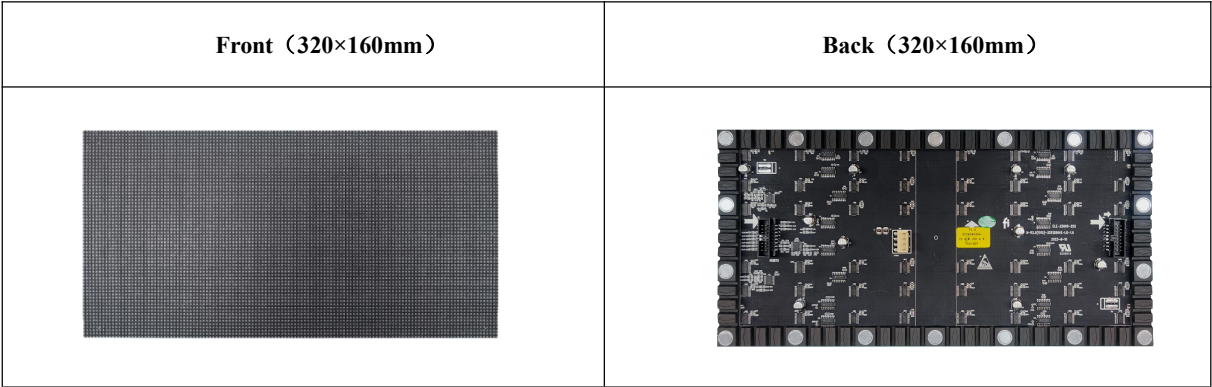


3.1 Product Features

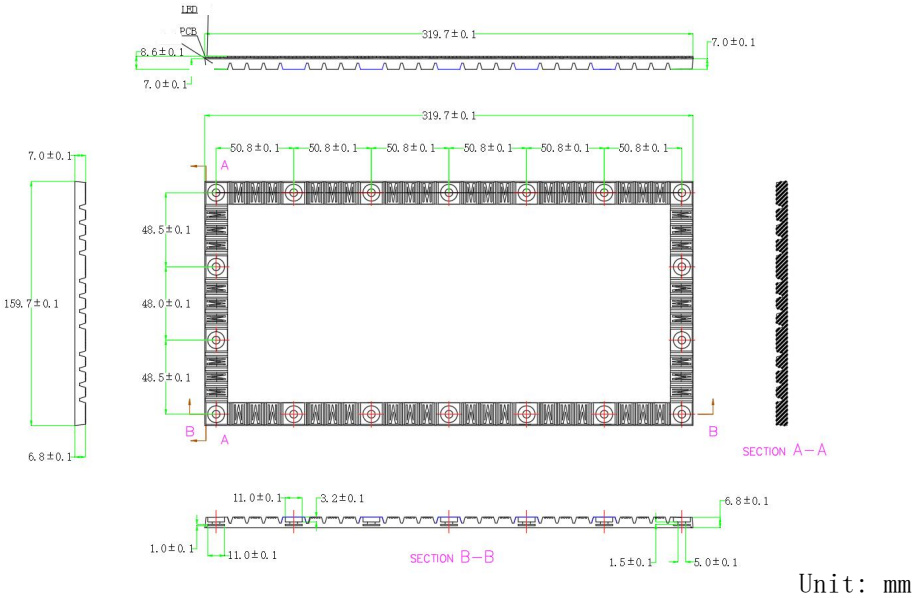
- Flexible silicone base, features a soft silicone substrate with excellent flexibility, high and low-temperature resistance, static electricity prevention, and strong protective properties.
- Superior image quality, delicate and true-to-life display with stable, uniform brightness, free from flickering and pixelation.
- Nanosecond response time, eliminates ghosting and motion blur for exceptionally smooth and detailed imagery.
- Uniform black color with excellent consistency.
- Broadcast-level grayscale, advanced grayscale processing reveals richer image details.
- Ultra-wide viewing angle, viewing angle exceeds 160 degrees.
- Seamless flexible splicing, capable of seamless splicing in any direction and into various shapes without visible gaps.

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3.2 Module Images



3.3 Product Dimensions



Unless otherwise specified, dimensional tolerances are $\pm 0.1\text{mm}$ and aperture tolerances are $\pm 0.05\text{mm}$.

Note: The above diagram is for reference only. Please refer to the actual order kit drawing for precise specifications.

4. Product Parameters

Flexible Module									
Module	Model	LC10SN P125R	LC12SN P1538R	LC15SN P186R	LC15SN P20R	LC15SN P25R	LC21SN P25R	LC21SN P3076R	LC21SN P40R
	Pixel Configuration	1R1G1B							
	LED Package	SMD 1010	SMD 1212	SMD 1515	SMD 1515	SMD 1515	SMD 2121	SMD 2121	SMD 2121

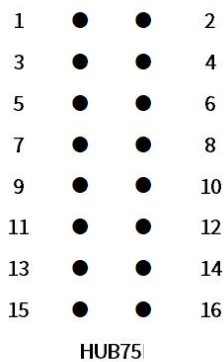
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	Pixel Pitch	1.25	1.538	1.86	2.0	2.5	2.5	3.076	4.0
	Module Size (W×H×D)	320×160×7.5							
	Module Resolution (W×H)	256×128	208×104	172×86	160×80	128×64	128×64	104×52	80×40
	Pixel Density (dot/m ²)	640000	422500	289032	249600	160000	160000	105625	62500
	Module Power Consumption	≤20W							
	Module Weight (g)	190±5	275±5	278±5	254±5	268±2	266±2	246±2	235±1
	Module Input Voltage	4.5V~5V							
Optical Parameters	Single-Point Brightness Calibration	Power							
	Single-Point Chromaticity Calibration	Power							
	Brightness (cd/m ²)	≥600							
	Color Temperature (K)	≥10000, adjustable							
	Viewing Angle	Horizontal 160° / Vertical 160°							
	Light-Emitting Point Center Deviation	<3%							
	Brightness/Chromaticity Uniformity	≥95%							
	Contrast Ratio	6000:1							
Electrical Parameters	Peak Power Consumption (W/m ²)	≤400							
	Average Power Consumption (W/m ²)	≤120							
	Power Supply Requirements	AC 110-220V, Frequency 47-63Hz							
Processing Performance	Drive Method (Constant Current Drive)	1/64 S	1/52 S	1/43 S	1/40 S	1/32 S	1/32 S	1/26 S	1/20 S
	Frame Change Frequency	≥60 Hz							
	Refresh Rate (Hz)	3840							
	Grayscale Level	16384							
	Brightness Control	Manual / Automatic / Programmable Control							

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Usage Parameters	Typical Lifespan(h)	≥100000	
	Interface Type	HUB320	HUB75
	Operating Temperature/ Humidity	-20°C ~ 60°C / 10% ~ 90%RH (no condensation)	
	Storage Temperature/ Humidity	-40°C ~ 60°C / 10% ~ 85%RH (no condensation)	

5. Signal Interface Definition of Unit Panel



Pin	Signal	Function	Pin	Signal	Function
1	R1	Red Data Signal	2	G1	Green Data Signal
3	B1	Blue Data Signal	4	GND	Power Ground
5	R2	Red Data Signal	6	G2	Green Data Signal
7	B2	Blue Data Signal	8	GND	Power Ground
9	A	Row Decoding Signal	10	B	Row Decoding Signal
11	C	Row Decoding Signal	12	GND	Power Ground
13	CLK	Clock Signal	14	LAT	Latch Signal
15	OE	Enable Signal	16	GND	Power Ground

Note: The unit board signal interface uses HUB75 as an example.

6. Precautions

Item		Description
Environmental Precautions	Temperature Requirements	Storage Temperature Range: -40°C to 60°C. Active cooling measures are required if the temperature exceeds 60°C. Operating Temperature Range: -20°C to 60°C. Temperature control equipment must be installed for environments outside this range.
	Humidity Requirements	Storage Humidity Range: 10% to 85% RH. Dehumidification is required if humidity exceeds 85% RH. Operating Humidity Range: 10% to 90% RH. The operating environment must be dehumidified prior to use if humidity exceeds this limit.
	Handling of Overdue Storage	If the display has been inactive for >3 days: Preheat at 30%-50% brightness for 4-8 hours before adjusting to normal operating brightness (80%-100%) to eliminate moisture and ensure proper functionality. If the display has been inactive for >7 days: Preheat at 30%-50% brightness for at least 12 hours before adjusting to normal operating brightness (80%-100%) to

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		eliminate moisture and ensure proper functionality.
	Dust Prevention Requirements	The display screen should not be exposed to dusty environments, such as during studio renovation or reconstruction. Special protective measures must be applied to the screen if such conditions are unavoidable. Installation of the LED display is prohibited during renovation work.
	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.
	Avoid Strong Light Exposure	Strong light can adversely affect display performance and reduce lifespan. Avoid installation in directions subject to prolonged direct sunlight.
	Keep Away from Water Sources	Indoor products have a lower protection rating. Water can cause short circuits, leading to component damage. Keep the display away from water sources.
	Prevent Static Electricity and Lightning Strikes	Ensure proper grounding of metal components, power supply housings, and cabinets, with a ground resistance $\leq 1\Omega$. This prevents static damage to electronics in humid environments and avoids electric shock hazards.
	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 Precautions	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 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.
	Lot Number Management	Products from different lot numbers must not be installed on the same screen. Otherwise, color inconsistency may occur across the display.
	Product Wiring	Use dedicated LED display switching power supplies. Modules require 5V DC input and must not be directly connected to 220V AC. Ensure correct polarity

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		when connecting power to unit boards.
	Handling & Transportation	Do not disassemble, push, squeeze, or press modules during handling to avoid damaging the display.
	Liquid Protection	Avoid contact with sweat or other liquids during installation / maintenance. If liquid exposure occurs, clean immediately with alcohol to prevent corrosion.
	Installation Torque Control	Tighten terminal screws securely during wiring to prevent loose connections, which may cause high contact resistance leading to cable burnout or product damage. Torque specifications: M4 screws: 6.0-8.0 Kgf.cm; M3 screws: 4.0-6.0 Kgf.cm. Low-temperature installation: Magnetic mounting is not recommended for modules in environments at or below -10°C to avoid deformation affecting flatness. Use screw fastening instead.
	Prohibition of Live Work	Assembly of unit boards must be performed with the main power disconnected. Module installation and splicing are prohibited while power cables or signal cables are connected and energized.
	Prohibition of Live Touch	Do not touch or handle the LED display during operation, as friction-induced static electricity may damage LEDs, lamps, and other components.
	Soldering Temperature and Duration	When repairing LED modules, it is strongly recommended to use a temperature-controlled soldering iron, with temperature adjusted according to solder wire composition: LED soldering: Iron temperature should generally be set around 315°C, with soldering time not exceeding 5 seconds (preferably ≤3s), and soldering attempts limited to three times. Driver IC soldering: Iron temperature must remain below 315°C, soldering time should not exceed 3 seconds, and soldering attempts limited to three times.
	Environmental Inspection	An ambient thermometer shall be installed at the display site to monitor surrounding conditions. After heavy rainfall, promptly inspect the display interior for moisture, water droplets, or condensation.

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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