

## DP-N250GY

## Indoor P2.5 Full-Color LED Screen



## Description

The DP-N250GY Indoor P2.5 Full-Color LED Screen is a high-definition, fine-pitch indoor LED display module designed for applications requiring clear and vibrant visuals at close viewing distances. With a 2.5 mm pixel pitch and SMD2121 RGB LEDs, the module delivers bright colors, high brightness, and a wide 170° viewing angle. Featuring  $\geq 14$ -bit grayscale, a high refresh rate of  $\geq 3840$  Hz (constant current drive), and adjustable color temperature from 1000K to 20000K, it ensures smooth, vivid visuals for indoor environments such as control rooms, exhibition halls, conference rooms, and other high-resolution digital signage applications. The module supports brightness and chromaticity calibration, providing consistent image quality, while its 1/32 scan design ensures stable, efficient operation for long-term indoor use.

## Features

- 2.5 mm pixel pitch for fine-detail indoor display
- SMD2121 RGB LEDs with wide 110° per-color viewing angle and brightness  $\geq 700$  cd/m<sup>2</sup>
- $\geq 14$ -bit grayscale with high refresh rate  $\geq 3840$  Hz (constant current drive) for smooth, flicker-free visuals
- Adjustable color temperature: 1000K–20000K, brightness range 0–255
- Wide 170° field of view for optimal viewing experience
- Reliable indoor operation: -20°C to 60°C, 10%–90% RH non-condensing
- Signal interface: HUB75E (IDC16), operating voltage: DC5V  $\pm 10\%$
- Maximum power consumption: 28 W (typical), maximum current 5.6 A
- 32-scan method with constant current drive ensures stable performance
- Supports brightness and chromaticity calibration for consistent image quality

# Specifications

(T=25° C)

Product Model	Color	IF (mA) TEST	Rd (nm) Typ	lv (mcd) Typ	Vf (V) Typ	View Angle (deg.)
SMD2121	Red	15	620	50	2.0	110
	Green	10	525	170	3.0	110
	Blue	8	470	23	3.0	110
Pixel Pitch	2.5mm					
Pixel Density	160000dots/m <sup>2</sup>					
Module Resolution	128 × 64 pixels (Width×Height)					
Module Dimensions	320mm × 160mm × 14.2mm (Width×Height×Thickness)					
Module Weight	Approx. 350g					
Driving Method	Constant Current Drive					
Scanning Method	1/32 Scan					
Operating Voltage	DC5V±10%					
Maximum Current	5.6A (Typical) <sup>(1)</sup>					
Maximum Power Consumption	28W (Typical) <sup>(2)</sup>					
Power Interface	VH4					
Signal Interface	HUB75E (IDC16)					
Brightness	≥700cd/m <sup>2</sup>					
Color Temperature	1000K-20000K (Adjustable)					
Viewing Angle	170°					
Optimal Viewing Distance	≥2.5m					
Gray Scale Level	≥14 Bit					
Brightness and Chromaticity Calibration	Support					
Refresh Rate	≥3840Hz <sup>(3)</sup>					
Operating Environment	Indoor					
Brightness Adjustment Range	0-255 (Adjustable)					
Lifespan	100,000 Hours					
Operating Temperature	-20°C-60°C					
Operating Humidity	10%-90%RH Non-condensing					
Storage Temperature	-40°C- 80°C					

Note: ①② Depend on the brightness of the LEDs, for reference only; ③ Driven by PWM driver chip with a refresh rate above 3840 Hz.