

# Narrow Pixel Pitch Direct View LED



VS-15NP160 / VS-15NP180 / VS-12NP160 / VS-12NP180



## ◆ What is Narrow Pixel Pitch Direct View LED?

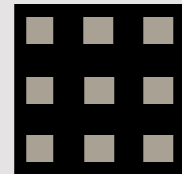
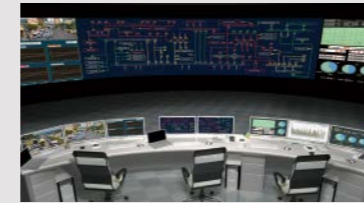
By definition, pixel pitch is the distance from the center of an LED element to the center of the next LED element. Our 1.25 / 1.5 mm narrow pixel pitch LED (NPP-LED) is an indoor-exclusive high-definition LED display with a smaller pixel size and pixel pitch than most conventional indoor/outdoor LED displays. This allows for creating seamless display walls with a wide viewing angle in large installations.

Mitsubishi Electric's NPP-LEDs are specifically engineered to address the needs of demanding command and control room environments by delivering stunning visuals with innovative features and unbeatable durability and reliability.

Conventional Indoor/Outdoor LED

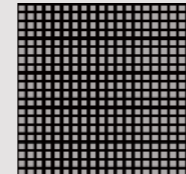


Narrow Pixel Pitch Direct View LED



10 mm pixel pitch

Compared to 30 x 30 mm reference



1.5 mm pixel pitch

## Seamless

Delivers smooth and consistent graphics without the vertical and horizontal black lines appearing in large-screen multi-display walls.



Image for screen gap such as LCD



Image non-screen gap such as LED

## Flexible Installation

Narrow Pixel Pitch Direct View LED screens are available as rear access - and front access models.



Smooth curved design

Space-saving layout

## Long Service Life

Mitsubishi Electric's direct-view NPP-LED has a lifetime rating of 100,000 hours till half-brightness. It is designed for continuous 24/7 operations that is often required for mission-critical environments.

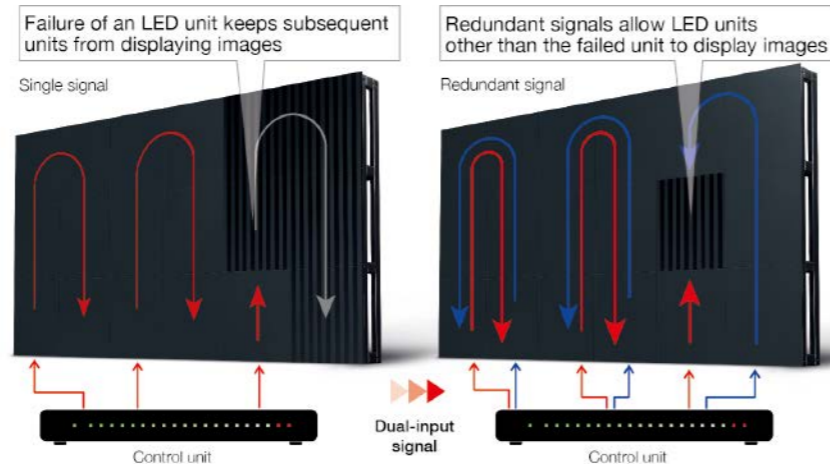
## ◆ Redundancy

### Signal Redundancy

In the unlikely event of a single-unit failure, other panels will still keep displaying images via two way image transmission throughout the system.

### Power Redundancy

Optional power unit provides continuous operation at time of a power module failure.

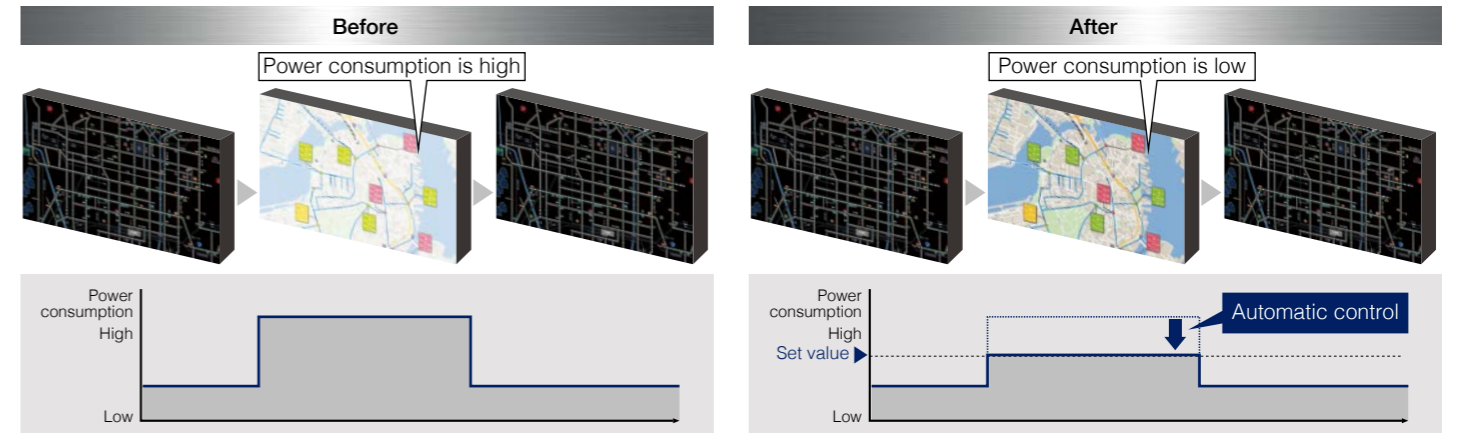


\* Only applicable to VS-15NP160F/R and VS-12NP160F

## ◆ Active power peak saving function

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LED power consumption changes depending on the content displayed. Active power peak saving function limits the maximum power consumption by detecting the image brightness and automatically optimizing the image.



## ◆ Anti-Burn In

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LED brightness gradually diminishes over time as the display gets used. So, when displaying a static image over a long period of time, variations of luminance and chromaticity are caused by the difference in the operating time or age of each pixel.

Anti-Burn-In corrects these display variations and anomalies. As a result, uniformed luminance and chromaticity is preserved longer over the lifetime of the display.



Burn-in



Burn-in compensated

## ◆ Mitsubishi Electric imaging technologies - Enhanced picture quality and visibility

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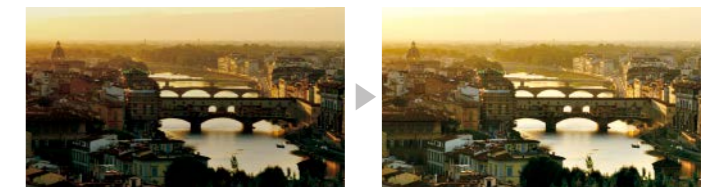
### Natural Color Matrix

Wider color reproduction range for brilliant, vivid displays.



### Dynamic Gamma

Optimal contrast ratio shows more details, even with darker contents.



### 2-Dimensional Noise Reduction (2DNR)

Reduces noise from compressed images (i.e., MPEG).

### Scalability

- Intel® OPS-Standard slot (control unit)
  - Supports OPS standard computers
  - Supports OPS 3G-SDI-input board (DP-1SDI-3G)
  - Supports OPS HDBaseT™ input board (VC-LM1HD)



DP-1SDI-3G



Check website and video for details



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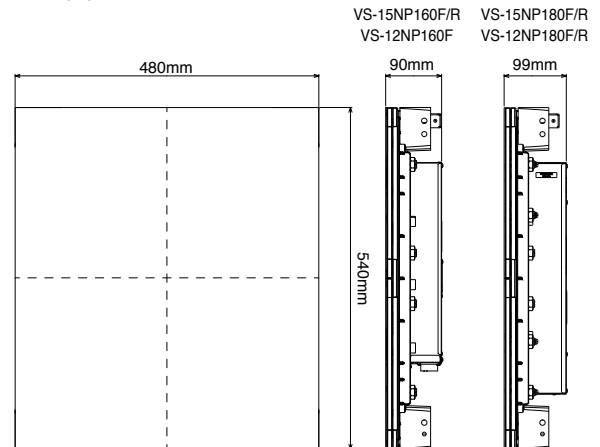
### LED unit

Model Name	VS-15NP160F	VS-15NP160R	VS-15NP180F	VS-15NP180R	VS-12NP160F	VS-12NP180F	VS-12NP180R	
Pixel pitch	1.50 mm				1.25 mm			
LED type	Direct LED (SMD 3 in 1)							
Average lifetime	100,000 hours in all brightness modes							
Resolution	320 x 360 pixels				384 x 432 pixels			
Contrast ratio	16,000:1							
Viewing angle (1/2 gain)	Horizontal	170°						
	Vertical	170°						
Color processing	16-bit							
Frame rate	50/60 Hz							
Front maintenance structure	○		○		○			
Calibrated brightness (typ.)	Bright	800 cd/m <sup>2</sup>						
	Normal	500 cd/m <sup>2</sup>						
	Eco	190 cd/m <sup>2</sup>						
Power consumption (typ.)	Bright	195 W		185 W		215 W	185 W	
	Normal	150 W		135 W		165 W	135 W	
	Eco	105 W		85 W		100 W	85 W	
Voltage range	Supplied by Power unit		AC 100 - 120 V, 220 - 240 V ±10 %, 50/60 Hz ±1 Hz		Supplied by Power unit		AC 100 - 120 V, 220 - 240 V ±10 %, 50/60 Hz ±1 Hz	
Power connection	DC input/output x1		AC input/output x1		DC input/output x1		AC input/output x1	
Power units structure	External		Internal		External		Internal	
Environmental condition	5 - 40 °C, 20 - 80 % RH non-condensing							
Dimensions (W x H x D)	480 x 540 x 90 mm		480 x 540 x 99 mm		480 x 540 x 90 mm		480 x 540 x 99 mm	
Weight	12.6 kg	11.9 kg	13.0 kg	12.4 kg	13.1 kg	13.4 kg	12.6 kg	
Country of origin	Japan							

### Power unit (exclusive for VS-15NP160F/R and VS-12NP160F)

Model Name	S-NP15PWR	S-NP15PWR-EX
Voltage range	AC 100 - 240 V +/-10 %, 50/60 Hz +/-1 Hz	
Output power terminal	Circular type connector	
Redundant power supply	—	○
Dimensions (W x H x D)	415 x 88 x 565 mm	
Weight	8.1 kg	8.8 kg
Country of origin	Japan	

### LED unit



### Control unit

Model Name	VC-NP1000	
Voltage range	AC 100 - 240 V +/-10 %, 50/60 Hz +/-1 Hz	
Power consumption (typ.)	with an OPS	80 W
	without OPS	30 W
External control	LAN (RJ45 x 1)	
Image input	DVI-D (HDCP) x 2	
Resolution	VGA (640 x 480) - WUXGA (1920 x 1200)	
Input frequencies	Horizontal	31.5 - 92 kHz
	Vertical	49 - 85 Hz
	Pixel clock	25 - 165 MHz
Optional input board slot	Intel® OPS slot x 1	
Input signal terminals	DVI-D (with HDCP) x 2 Up to 50-meter long DVI cable supported **	
Control interface	LAN (RJ45 x 1)	
Dimensions (W x H x D)	415 x 108 x 194 mm	
Weight	3.2 kg	
Country of origin	Japan	

\*1 The length varies depending on the quality of the source signals and the cables.

- \* This product requires special installation to prevent falling or toppling. This should be done by installation specialists.
- \* Electrostatic discharge may harm the surface of the LED units. To prevent such damage, you should discharge static electricity from your body before you contact with the LED units.
- \* Power cord is not included with main unit and need the designated DC power cord (JC-PC3DC2, 5, 8, 12, 15, 20, 30, or 60) or AC power cord (JC-PC3AC2, 5 or 8)
- \* Service parts for this product are only stocked for five years after model production is discontinued.
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for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.



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