NEC Display Solutions

\Orchestrating a brighter world

A New Class of Super Silent Laser Projectors

SUPER SILENT

PA1004UL / PA804UL Professional Installation Projectors

LASER PHOSPHOR

Powerful laser installation projectors equipped to take on the most demanding integration projects

The World's Only Filter-free Laser Projectors using LCD Technology

Filter-free Structure with NEC's Original Cooling System

High dustproof performance is achieved by NEC's new design of completely sealed optical engine with perfect noise reduction. Due to its excellent dustproof performance, this projector does not have the cumbersome filters that ordinary LCD projectors require. The new laser-based LCD projector offers better total cost of ownership (TCO) with less maintenance.

NEC's unique LCD panel cooling design

A Long-life Laser Diode is Provided in the Light Module

Advanced laser technology delivers a reliable light source up to 20,000 hours or even longer (depending on usage conditions).

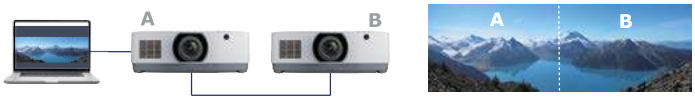
Maintains the Set Brightness for a Long Time

The projector is equipped with a "constant brightness mode" that detects changes in brightness due to aging and automatically adjusts the output to keep the brightness constant. This makes it possible to project with stable brightness for a long time.

Excellent Ease of Installation and Functionality in Various Uses and Applications

Edge Blending

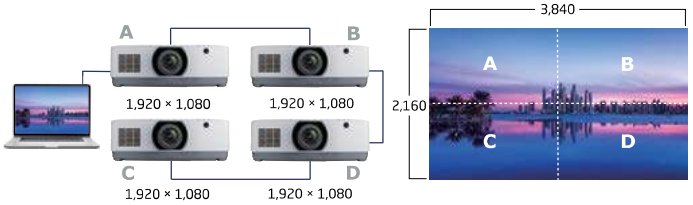
This function seamlessly blends multiple projected images to display a single high-resolution image.



e.g. Horizontal high resolution image by side edge blending

Multi-screen Function

Multi-display capabilities and tiling technologies are integrated. The projector is also equipped with multiple digital input and HDBaseT output terminals that can connect multiple projectors in a digital daisy chain. These cutting-edge built-in functions produce a beautiful 4K UHD image using 4 projectors and various picture-in-picture and picture-by-picture configurations.



e.g. 4K projection by Daisy Chain and Screen Splitter (Multi-display)

Super Silent Operation

The unique cooling system not only improves the dustproof performance but also reduces the noise of the fan. With excellent quietness of 28 to 32 dB in ECO mode, even in a very quiet meeting room or classroom, the presence of the projector is not felt.

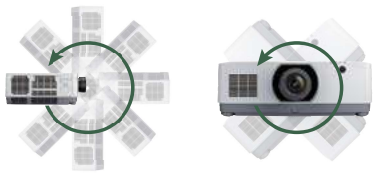
Optional Lenses

In addition, non-motorized lenses of lamp based PA Series models can be used, reducing costs of projector replacement, with no need for new lenses. The ultra short throw lens NP44ML-PA4 can eliminate space challenges with shorter projection distances (such as 100" at only 0.7 m distance).

The NP40ZL and NP41ZL lenses are also equipped with peripheral motorised focus, and focus adjustment is possible in two stages by the centre and the periphery, which offers excellent image quality.

Highly Flexible Installation Options with 360° Positioning in any Direction

This projector can be installed at any angle. Tilt-free, roll-free and portrait installations are supported. The projector can be rotated freely (360°) to point up or down depending on the installation requirements and can be rotated and installed on its side to create a portrait image. Some Installation angles require cable cover option NP13CV.



ProAssist Software

Where projected images may appear side-by-side, or overlap, even imperceptible misalignments in colour and brightness become annoyingy apparent. Making manual adjustments to individual projectors is difficult, yet with ProAssist, each projector is fine-tuned via the network to produce a single homogeneous result. ProAssist manages the settings for colour uniformity, colour gamma, lens control as well as edge blending in one single application.

A High-definition Design to Meet the Era of High-resolution Content and Devices

NEC's Unique High-definition Functionality with 4th Generation Content Enhancement for 4K Content

The 4th generation of this contrast enhancement function supports 4K 60 Hz input signals and has been upgraded to support HDR10 and Rec.2020 signal. It offers a high definition image by raising the contrast in the boundary parts of an image.

Supports High-definition Processing of Both Digital and Analogue Inputs

10-bit high-definition signal processing is possible with all digital and analogue inputs. An image can be projected with an excellent visual experience of 1024 gradations and over 1 billion colours in 4K images.

Support for 4K Input

The HDMI and HDBaseT input terminals support up to 4K @ 60Hz video for display of ultrahigh resolution video.

Multiple Input Terminals for HDMI and DisplayPort and Input and Output Terminals for HDBaseT

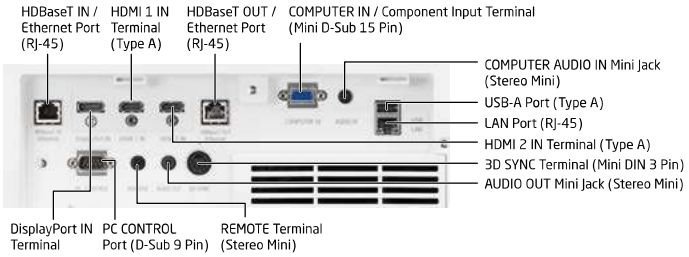
Built-in HDBaseT (In/out)

Simplify your installations with HDBaseT, which is optimised for video applications and supports uncompressed full HD digital video, audio, Ethernet and various control signals. With only a single cable (up to 100 m) to run, infrastructure and labour costs are reduced, installations are significantly easier, and there is no cable clutter to manage. With uncompressed HD video support, images have never been more stunning.

Digital Inputs

Among the PA Series' wide selection of inputs are dual HDMI with HDCP and DisplayPort with HDCP for connecting to high-definition sources such as Blu-ray players, cable boxes, satellite receivers and personal computers.

Terminals



Other Useful Functions and Features

- Cornerstone
- Geometric correction to project an image on more non-standard surfaces
- Stacking correction to boost image brightness
- Centre lens design for easy setup
- Lens memory
- Seamless switch function for smoother screen changes when switching the signal
- Wall colour correction
- PIN security / control panel lock / security bar / security slot
- DICOM simulation
- ProAssist support

Network Control

- NaViSet Administrator 2
- PC control
- Alert mail
- CRESTRON ROOMVIEW with emergency function and Extron XTP compatibility
- AMX BEACON
- PJLink
- HTTP server (projector adjustment)

NaViSet Administrator 2

PA1004UL

10,000 lumens | WUXGA | 24.4kg*

PA804UL

8,200 lumens | WUXGA | 24.1kg*

*Brightness using boost mode. Weight does not include lens.

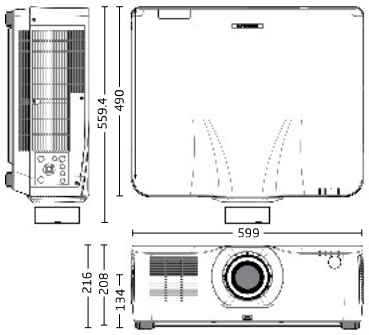
Specifications

Model			NP-PA804UL	NP-PA1004UL
Method			3LCD Technology	
Specifications of main parts				
	Liquid crystal panel	Size	0.76" (with DMLA) × 3 (aspect ratio: 16:10)	
		Pixels	2,304,000 (1,920 dots × 1,200 lines)	
	Projection lenses	Zoom	Manual and motorised	
		Focus	Manual and motorised	
		Lens shifting	Refer to Lens specification	
	Light source		Laser diode	
	Light source (laser diode) life[1]		20,000 H	
Light output		Boost mode	8,200 lumens	10,000 lumens
		Normal mode	7,500 lumens	9,000 lumens
		ECO 1 mode	6,000 lumens	7,200 lumens
		ECO 2 mode	3,800 lumens	4,500 lumens
Contrast ratio[2] (all white / all black)			3,000,000 : 1 with dynamic contrast	
Screen size (throw distance)			50" to 500" (throw distance depends on lens)	
Colour reproducibility			10-bit colour processing (approx. 1.07 billion colours)	
Scan rate		Horizontal	Analogue: 15 kHz, 24 to 100 kHz (24 kHz or greater for RGB inputs), conforms to VESA standards / Digital: 15 kHz, 24 to 153 kHz, conforms to VESA standards	
		Vertical	Analogue: 48 Hz, 50 to 85 Hz, 100, 120 Hz conforms to VESA standards / Digital: 24, 25, 30, 48 Hz, 50 to 85 Hz, 100, 120 Hz conforms to VESA standards	
Maximum resolution (horizontal × vertical)			Analogue: 1,920 × 1,200 / Digital: 4,096 × 2,160	
Keystone correction		Horizontal	Manual, Approx. ± 40 degrees max	
		Vertical	Manual, Approx. ± 40 degrees max	
Input / output connectors				
	Computer / component	Video input	Mini D-Sub 15-pin × 1	
		Audio input	Stereo mini jack × 1	
		Audio output	Stereo mini jack × 1 (common for all signals)	
	HDMI	Video input	Type A HDMI connector × 2, Deep Colour (colour depth): Support 8 bits, 10 bits, 12 bits, Colourimetry Support: RGB, YCbCr444, YCbCr422, YCbCr420, Rec.2020, Rec.709, Rec.601, Support 4K, 3D, HDCP, LipSync, HDR	
		Audio input	Yes	
	HDBaseT / Ethernet Port	Video input	RJ45 × 1, Support 100BASE-TX, Deep Colour (colour depth): Support 8 bits, 10 bits, 12 bits, Colourimetry Support: RGB, YCbCr444, YCbCr422, YCbCr420, Rec.2020, Rec.709, Rec.601, Support 4K, 3D, HDCP, LipSync, HDR	
		Audio input	Yes	
		Video output	RJ45 × 1, Support 100BASE-TX, Deep Colour (colour depth): Support 8 bits, 10 bits, 12 bits, Colourimetry Support: RGB, YCbCr444, YCbCr422, Rec.709, Rec.601, Support 4K, 3D, HDCP, LipSync	
		Audio output	Yes	
	DisplayPort	Video input	DisplayPort 20 pin connecter × 1, Deep Colour (colour depth): Support 8 bits, 10 bits, 12 bits, Colourimetry Support: RGB, YCbCr444, YCbCr422, Rec.709, Rec.601, Support 4K, 3D, HDCP	
		Audio input	Yes	
	PC control connector		D-Sub 9-pin × 1	
	USB port		USB type A × 1, (USB 2.0 High speed / Full speed / Low speed) for Mouse	
	Ethernet / LAN / HDBaseT port		RJ-45 × 1, Supports 10BASE-T / 100BASE-TX, HDBaseT	
	Remote connector		Stereo mini jack × 1	
	3D SYNC output terminal		5 V / 10 mA, synchronized signal output for 3D use	
Usage environment			Operating temperature: 5 to 40°C*[8], Operating humidity: 20 to 80 % (with no condensation)	
			Storage temperature: -10 to 50°C, Storage humidity: 20 to 80 % (with no condensation)	
			Operating altitude: 0 to 3,650 m (1,700 to 3,650 m: Set [FAN MODE] to [HIGH ALTITUDE])	
Power supply			100 to 240 V AC, 50/60 Hz	
Power consumption		Boost mode	655 W (200 to 240 V)	810 W (200 to 240 V)
		Normal mode	615 W (200 to 240 V)	725 W (200 to 240 V)
		ECO mode	350 W (200 to 240 V)	395 W (200 to 240 V)
		Standby	0.28W (200 to 240 V), Network Standby 0.8W	
Dimensions (W × H × D)			599 × 208 × 490 mm (Net dimensions, not including protruding parts)	
Weight			24.1 kg (not including lens)	24.4 kg (not including lens)

[1] 50% of initial brightness at the end of specified laser life time. [2] Compliance with ISO21118-2012.

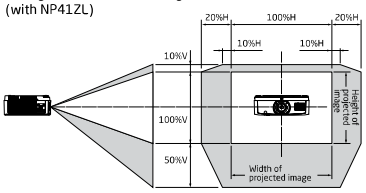
Cabinet dimensions

Unit: mm



Lens shift range

Ceiling mount / Front shooting
(with NP41ZL)



V: Height of projected image
H: Width of projected image
* Lens shift range of desktop and front projection is same.

Optional Lens Specifications

Model	NP11FL	NP12ZL	NP13ZL	NP14ZL	NP15ZL	NP40ZL	NP41ZL	NP43ZL	NP44ML-PA4*
Lens Type	Fixed Zoom Lens	Zoom Lens	Zoom Lens	Zoom Lens	Zoom Lens	Zoom Lens	Zoom Lens	Zoom Lens	UST Lens
Zoom / Focus	Manual (Focus)	Manual	Manual	Manual	Manual	Motorised	Motorised	Motorised	Motorised
F# (Wide-Tele)	2.3	2.2 to 2.69	1.7 to 2.37	2.2 to 2.64	2.2 to 2.7	2.0 to 2.5	1.7 to 2.0	2.2 to 2.6	2.0
f (mm)	13.2	19.4 to 25.3	24.4 to 48.6	48.5 to 77.6	76.6 to 116.5	13.3 to 18.6	21.8 to 49.7	49.7 to 99.8	6.27
Throw ratio (WUXGA @ 100 inch)	0.79	1.16 to 1.52	1.46 to 2.95	2.90 to 4.68	4.59 to 7.02	0.79 to 1.11	1.30 to 3.02	2.99 to 5.93	0.32
Zoom Ratio	-	1.3	2.0	1.6	1.52	1.4	2.3	2.0	1.0
Screen Size	40 to 150 inch	30 to 500 inch	40 to 500 inch	60 to 500 inch	60 to 500 inch	60 to 500 inch	50 to 500 inch	50 to 500 inch	97 to 400 inch
Weight	1.2 kg	1.2 kg	0.8 kg	1.0 kg	1.0 kg	1.63 kg	1.69 kg	1.77 kg	3.1 kg

* The lens unit NP44ML-PA4 does not support LENS CALIBRATION, LENS SHIFT and LENS MEMORY.

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