

PX750U Installation Guide

Desktop and Ceiling Mount

Rev 1.3

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Product Description

Type:	1 chip DMD Reflection Type 0.67 in. 2x LVDS DMD	Dimensions:	19.84"(W) x 8.67"(H) x 20.55"(D)
Resolution:	1920 x 1200 (16:10)	Weight:	PX750U: 19.7kg / 43.3 lbs
Fan Noise:	PX750U: 43 dB / 39dB @ 1 meter	Brightness:	PX750U: 7500 Lumens
Power Consumption:	PX750U: 1008W (max)	BTU's:	PX750U: 3439.44 BTU/hour

Network Ready, integrated wired and wireless adapter
Manual: Lens Shift, Horizontal & Vertical /Zoom/ Focus

Lens Specifications

NP16FL:	Throw Ratio: ~ 0.76:1 Screen Sizes: 50"-300"	Focal Length: 11.6mm F/#: 1.85	NP19ZL:	Throw Ratio: 2.22 -3.67:1 Screen Sizes: 50-300"	Focal Length: 32.9 – 54.2mm F/#: 1.86 – 2.48
NP17ZL:	Throw Ratio: 1.29 - 1.79:1 Screen Sizes: 50-300"	Focal Length: 18.7 – 26.5mm F/#: 1.85-2.5	NP20ZL:	Throw Ratio: 3.60 – 5.40:1 Screen Sizes: 50-300"	Focal Length: 52.8 – 79.1mm F/#: 1.85-2.41
NP18ZL:	Throw Ratio: 1.73. – 2.27:1 Screen Sizes: 50-300"	Focal Length: 25.7 – 33.7mm F/#: 1.64 – 1.86	NP21ZL:	Throw Ratio: 5.30 – 8.30:1 Screen Sizes: 50-300"	Focal Length:78.5 -121.9mm F/#: 1.85 – 2.48

Screen/Aspect Ratio

4:3, 16:9 and 16:10 screens are fully supported with proper aspect ratio control for both type sources using NEC developed scaling technology. Menu selections have settings for each screen type and aspect ratio control for each source type.

Notes

- For screen sizes not indicated on the projection tables, use the formulas below.
If the figures on the tables do not match the results of formulas, use the figures in the table..
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary ±5%.

Formulas: 16:10 Aspect Ratio (PX750U—WUXGA)

The Projection Formulas use the image width for calculation. Image width is the same for all aspect ratios, only vertical image size varies. For proper projector placement, determine the image width for a desired screen size. Use the Screen Formulas below to calculate all screen dimensions. Plug in the image width for "W" in the Projection Formulas.

Refer to the diagrams and charts for popular screen sizes on page 2 and 3:

Projection Formulas:

NP16FL:	C = 0.794W – 1.85
NP17ZL:	C(Wide) = 1.281W – 2.094 ----- C(Tele) = 1.825W – 1.913
NP18ZL:	C(Wide) = 1.764W – 2.677 ----- C(Tele) = 2.313W – 2.638
NP19ZL:	C(Wide) = 2.261W – 3.150 ----- C(Tele) = 3.747W – 3.114
NP20ZL:	C(Wide) = 3.654W – 5.319 ----- C(Tele) = 5.492W – 5.299
NP21ZL:	C(Wide) = 5.469W – 11.626 ----- C(Tele) = 8.527W – 11.531

Definitions:

W = Image Width
H = Image Height (size)
C = Throw distance

16:10 Screen Formulas

W = H x 16/10
H = W x 10/16
Screen Diagonal = W x 18.868/16

16:9 Screen Formulas

W = H x 16/9
H = W x 9/16
Screen Diagonal = W x 18.358/16

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Distance Chart for popular 16:10 Screens (WUXGA)

Screen Size (16:10)			Rear Lens	Zoom Lenses									
Diagonal	Width(W)	Height (H)	NP16FL	NP17ZL	NP18ZL	NP19ZL	NP20ZL	NP21ZL					
inches	inches	inches	0.76:1	1.29-1.79:1	1.73-2.27-1	2.22-3.67:1	3.60-5.40:1	5.30-8.30:1					
			inches	inches	inches	inches	inches	inches					
40	34	21	24.83	40.9 - 59.4	56.6 - 75.1	72.8 - 122.8	117.5 - 179.2	212.3 - 275.0					
60	51	32	38.80	63.5 - 91.5	87.6 - 115.8	112.6 - 188.7	181.8 - 275.9	335.6 - 425.1					
67	58	36	43.88	71.7 - 103.2	98.9 - 130.6	127.1 - 212.7	205.2 - 311.0	380.5 - 479.6					
72	61	38	46.43	75.8 - 109.0	104.6 - 138.0	134.3 - 224.7	216.8 - 328.6	402.9 - 506.9					
84	72	45	55.32	90.1 - 129.5	124.3 - 163.9	159.6 - 266.7	257.8 - 390.1	481.3 - 602.4					
90	77	48	59.13	96.3 - 138.2	132.8 - 175.0	170.5 - 284.7	275.3 - 416.5	515.0 - 643.3					
100	85	53	65.48	106.5 - 152.8	146.9 - 193.5	188.6 - 314.6	304.5 - 460.4	571.0 - 711.6					
120	102	64	79.46	129.1 - 185.0	178.0 - 234.2	228.4 - 380.6	368.9 - 557.1	694.3 - 861.6					
150	126	79	98.51	159.8 - 228.8	220.3 - 289.7	282.6 - 470.5	456.5 - 688.9	862.5 - 1066.3					
180	152	95	118.84	192.6 - 275.5	265.5 - 348.9	340.5 - 566.4	550.1 - 829.5	1041.8 - 1284.6					
210	178	111	139.16	225.4 - 322.2	310.6 - 408.2	398.4 - 662.4	643.6 - 970.1	1221.2 - 1502.9					
240	203	127	159.49	258.2 - 368.9	355.8 - 467.4	456.3 - 758.3	737.2 - 1110.7	1400.5 - 1721.2					
270	229	143	179.82	291.0 - 415.6	400.9 - 526.6	514.2 - 854.2	830.7 - 1251.3	1579.8 - 1939.4					
300	254	159	200.14	323.8 - 462.4	446.1 - 585.8	572.0 - 950.1	924.3 - 1391.9	1759.2 - 2157.7					

Distance Chart for popular 16:9 Screens (1080p)

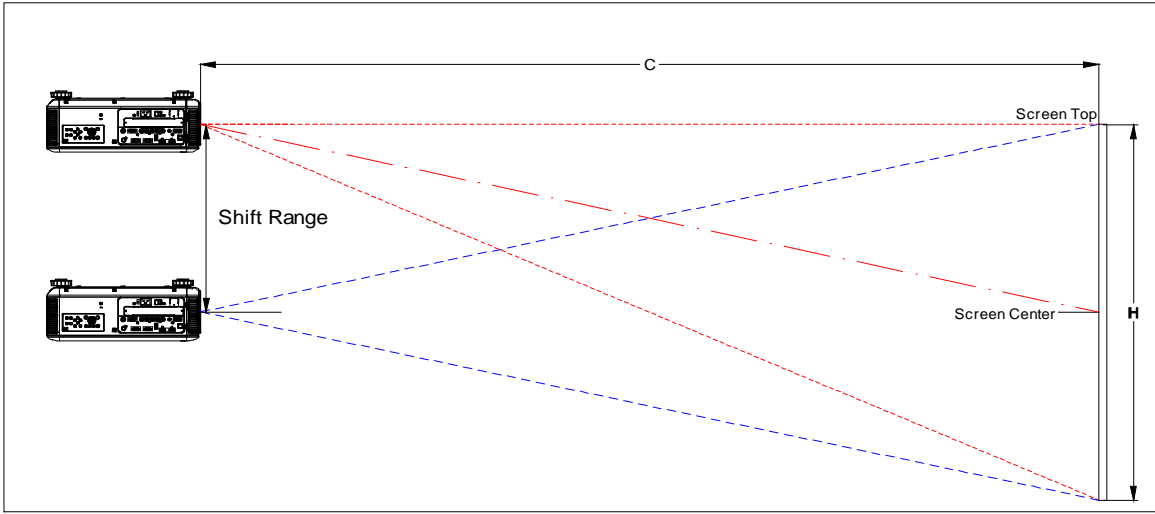
Screen Size (16:9)			Rear Lens	Zoom Lenses									
Diagonal	Width(W)	Height (H)	NP16FL	NP17ZL	NP18ZL	NP19ZL	NP20ZL	NP21ZL					
inches	inches	inches	0.76:1	1.29-1.79:1	1.73-2.27-1	2.22-3.67:1	3.60-5.40:1	5.30-8.30:1					
			inches	inches	inches	inches	inches	inches					
43	37	21	27.79	45.7 - 66.2	63.2 - 83.7	81.3 - 136.8	131.1 - 199.7	238.5 - 306.8					
65	57	32	43.32	70.8 - 101.9	97.7 - 128.9	125.5 - 210.0	202.6 - 307.1	375.5 - 473.6					
73	64	36	48.97	79.9 - 114.9	110.2 - 145.4	141.6 - 236.7	228.5 - 346.2	425.3 - 534.2					
78	68	38	51.79	84.4 - 121.4	116.5 - 153.6	149.6 - 250.0	241.5 - 365.7	450.2 - 564.5					
92	80	45	61.67	100.4 - 144.1	138.4 - 182.4	177.7 - 296.6	287.0 - 434.1	537.4 - 670.6					
98	85	48	65.90	107.2 - 153.8	147.9 - 194.7	189.8 - 316.6	306.5 - 463.4	574.7 - 716.1					
108	94	53	72.96	118.6 - 170.0	163.5 - 215.3	209.9 - 349.9	339.0 - 512.2	637.0 - 791.9					
131	114	64	88.49	143.7 - 205.7	198.0 - 260.5	254.1 - 423.2	410.4 - 619.6	774.0 - 958.7					
161	140	79	109.66	177.8 - 254.4	245.1 - 322.2	314.4 - 523.1	507.9 - 766.0	960.8 - 1186.0					
194	169	95	132.25	214.3 - 306.3	295.2 - 388.0	378.7 - 629.7	611.8 - 922.2	1160.1 - 1428.6					
226	197	111	154.83	250.7 - 358.2	345.4 - 453.8	443.0 - 736.3	715.7 - 1078.5	1359.4 - 1671.1					
259	226	127	177.42	287.1 - 410.1	395.6 - 519.6	507.3 - 842.9	819.7 - 1234.7	1558.7 - 1913.7					
292	254	143	200.00	323.6 - 462.0	445.8 - 585.4	571.6 - 949.5	923.6 - 1390.9	1757.9 - 2156.2					
324	283	159	222.59	360.0 - 514.0	495.9 - 651.2	636.0 - 1056.0	1027.5 - 1547.1	1957.2 - 2398.8					

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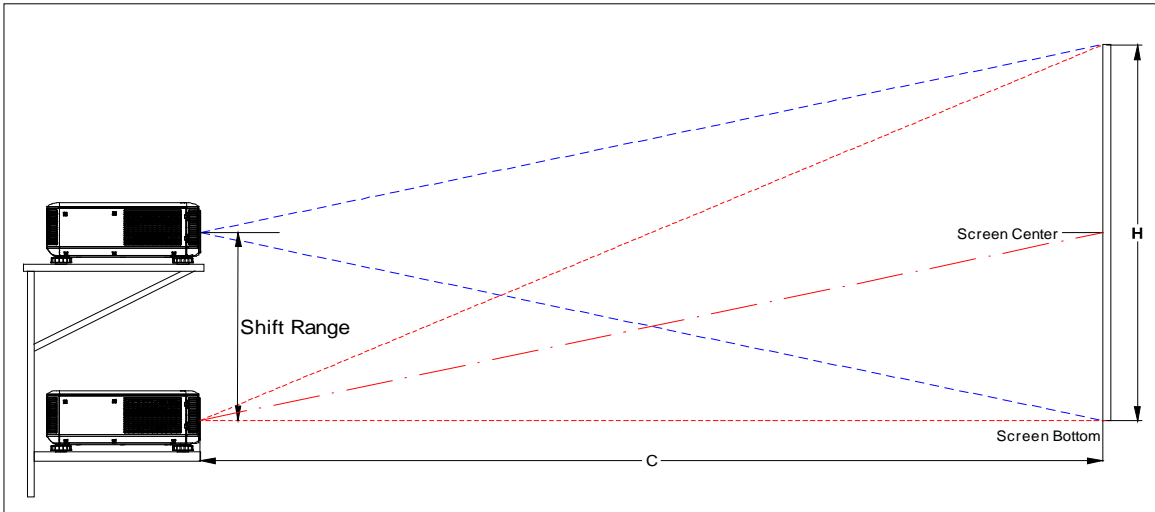
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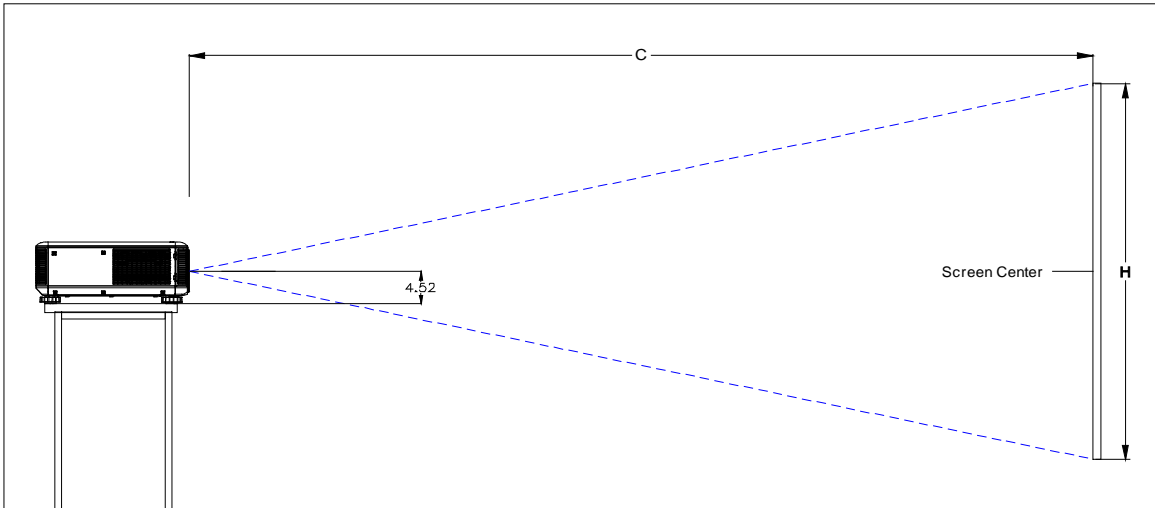
Ceiling Mount Installation



Desktop Installation



Note: Lens Shift Feature is not available to NP16FL. This lens should only be used for "zero degree"/"no-offset" applications. See below

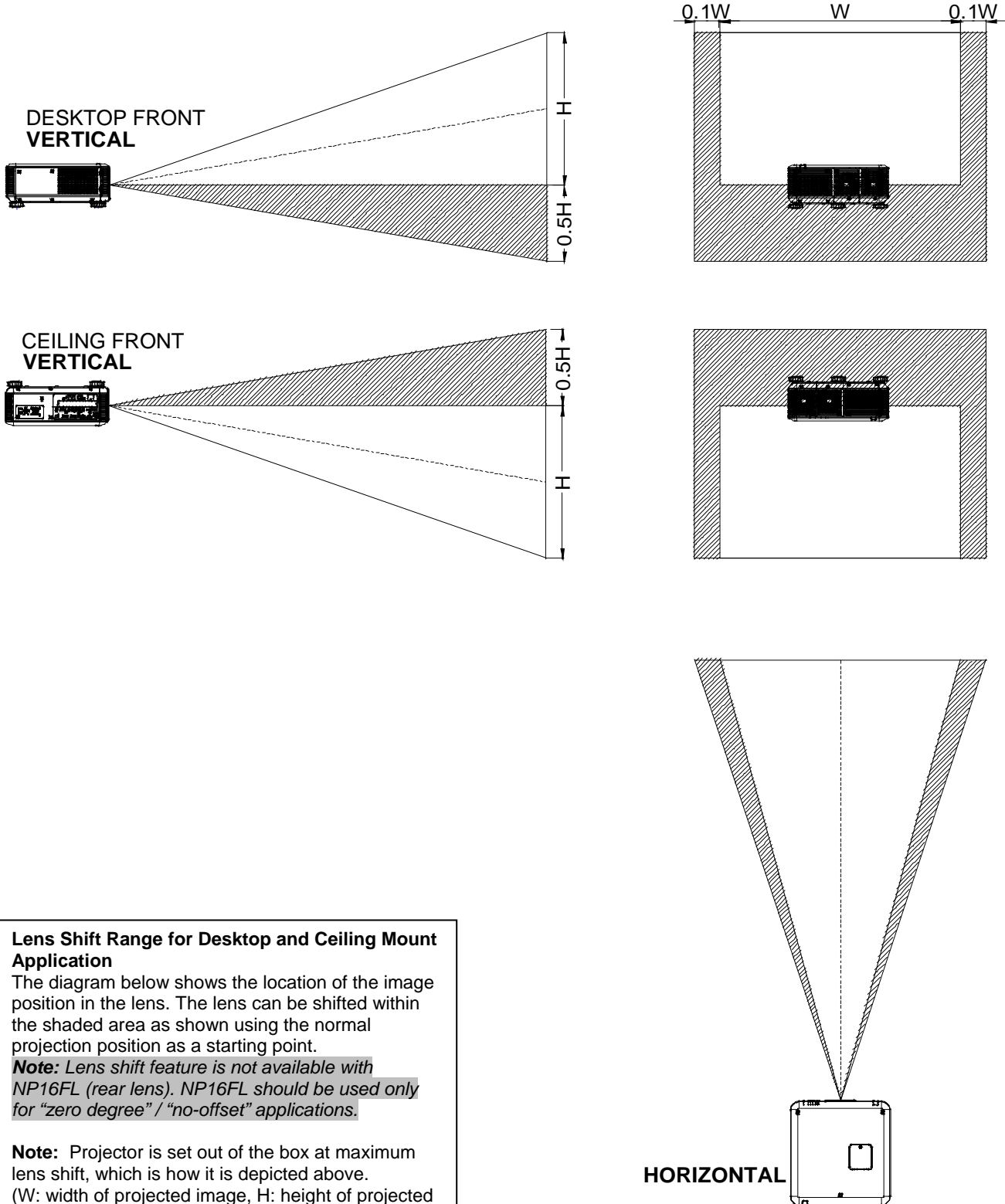


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Lens Shift Adjustable Range



Lens Shift Range for Desktop and Ceiling Mount Application

The diagram below shows the location of the image position in the lens. The lens can be shifted within the shaded area as shown using the normal projection position as a starting point.

Note: Lens shift feature is not available with NP16FL (rear lens). NP16FL should be used only for "zero degree" / "no-offset" applications.

Note: Projector is set out of the box at maximum lens shift, which is how it is depicted above.
(W: width of projected image, H: height of projected image)

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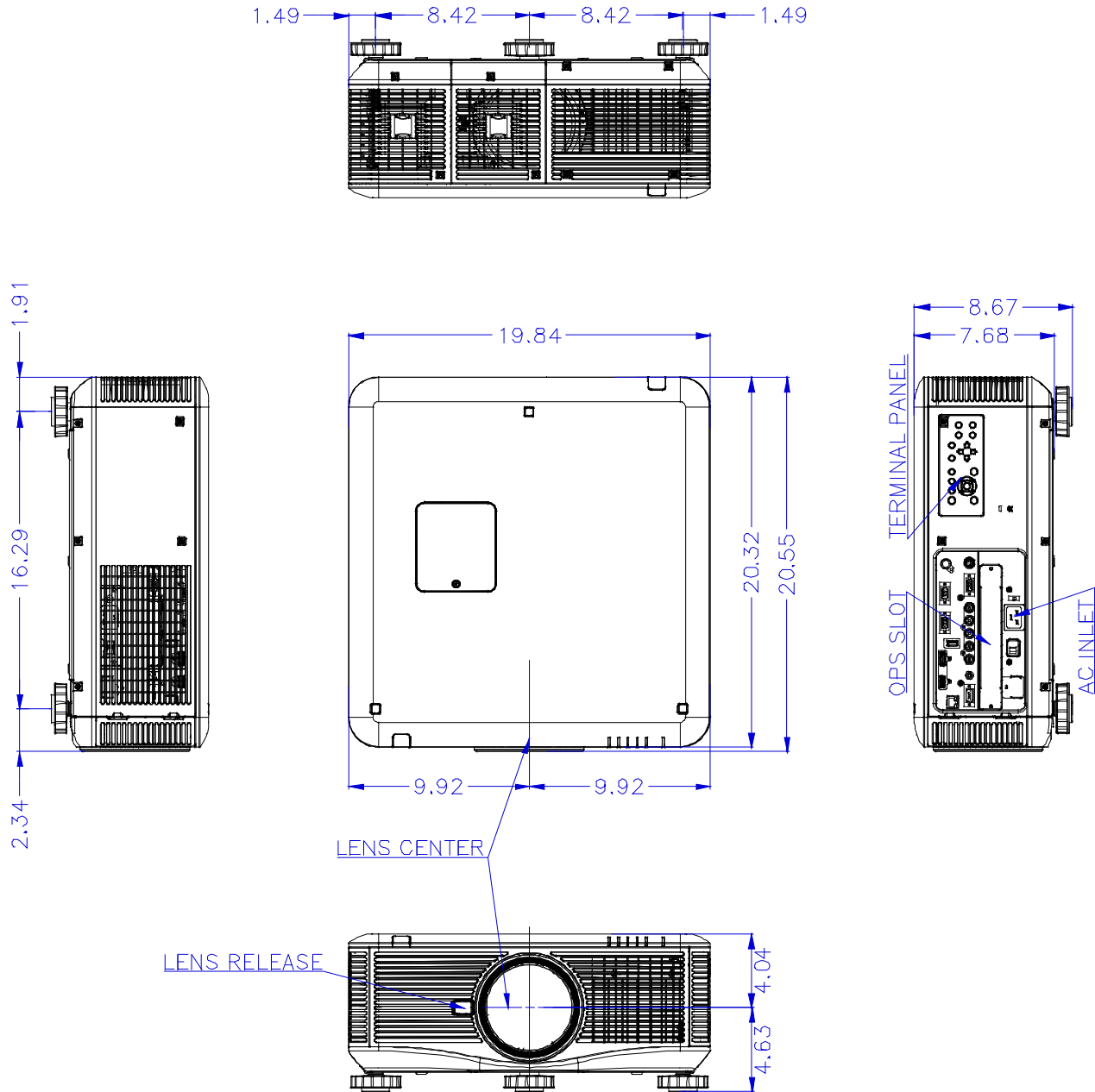
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Cabinet Dimensions

The following diagrams show the cabinet dimensions for the PX750U.

Dimensions are in inches. For millimeters multiply by 25.4.

Note: Dimensions below shown with the NP18ZL lens

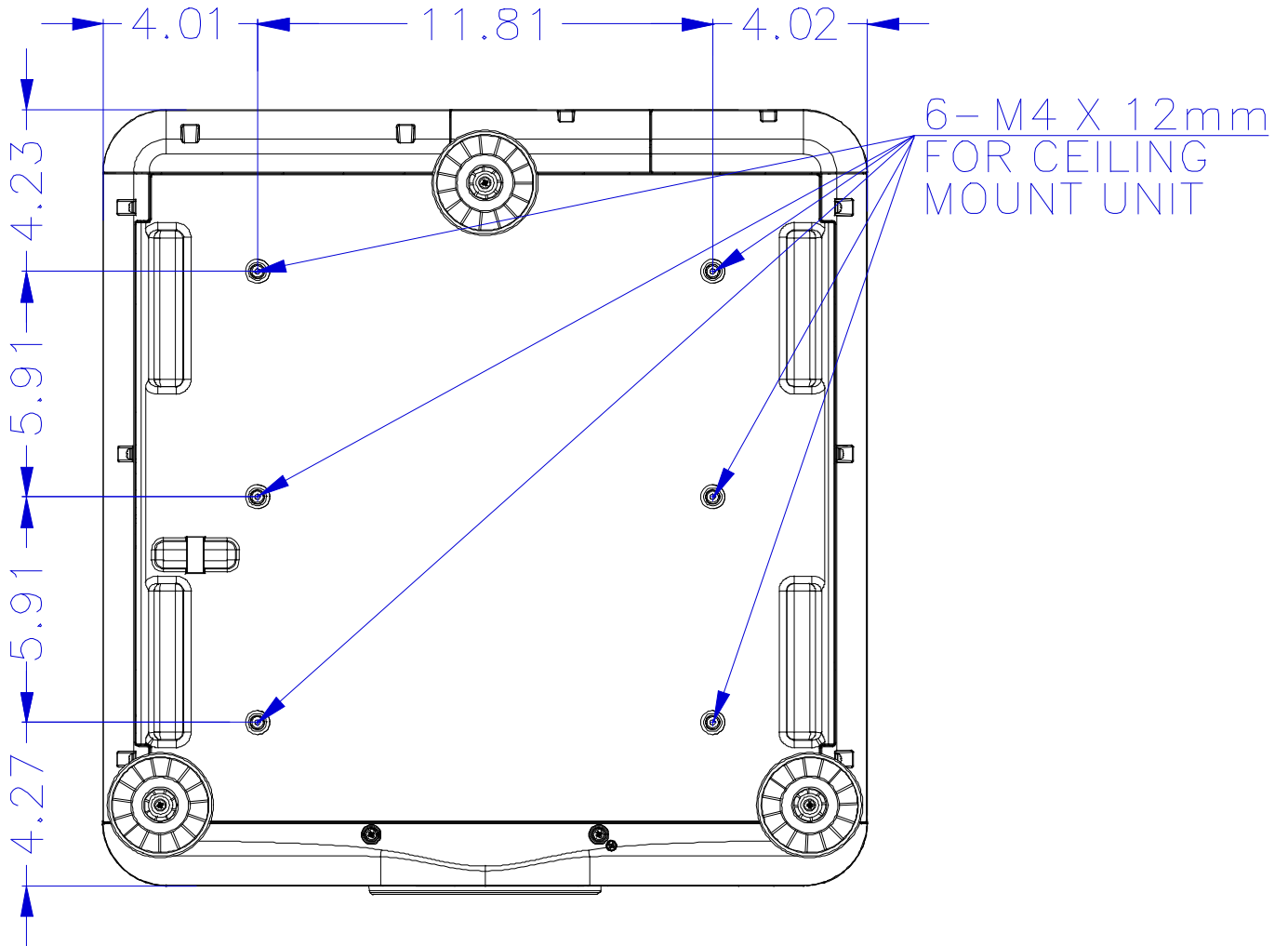


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Cabinet Dimensions

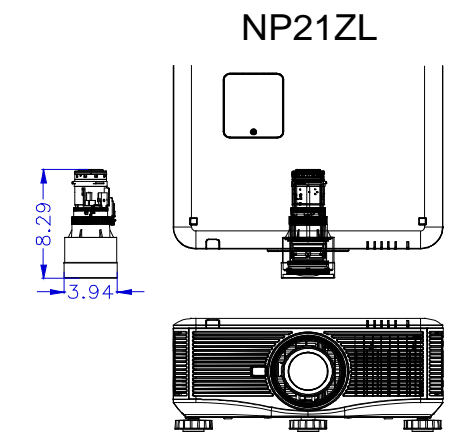
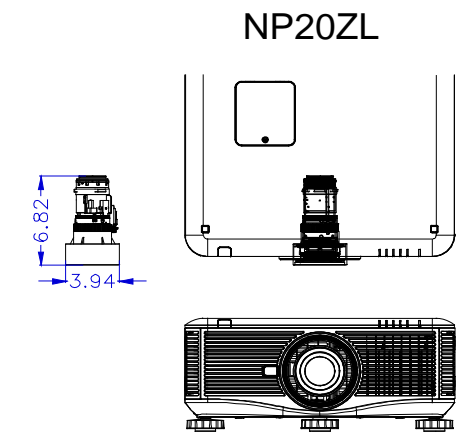
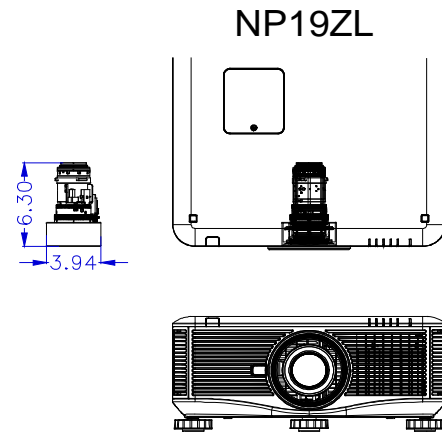
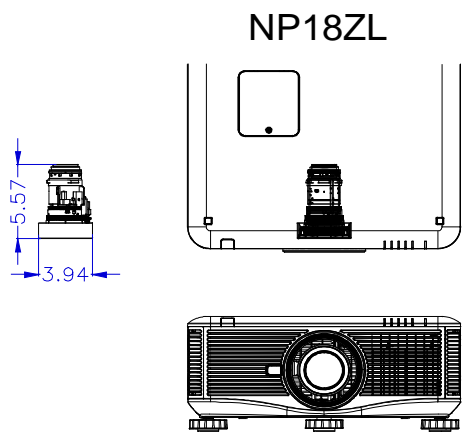
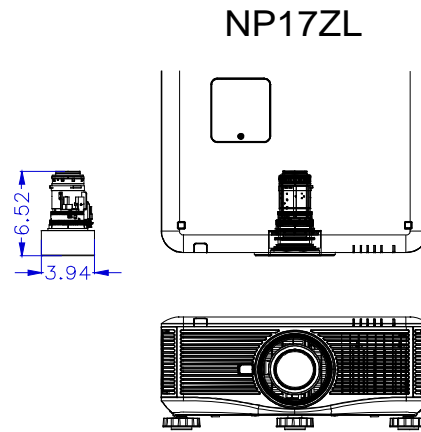
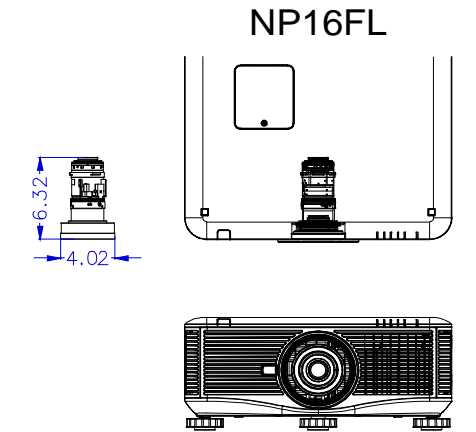


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Optional Lens Dimensions



Note: Depth for the PX750U will remain at 20.55" if the NP16FL, NP18ZL or NP19ZL are utilized.

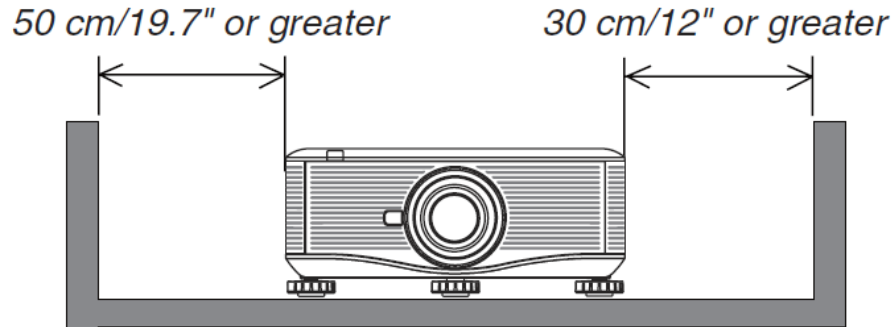
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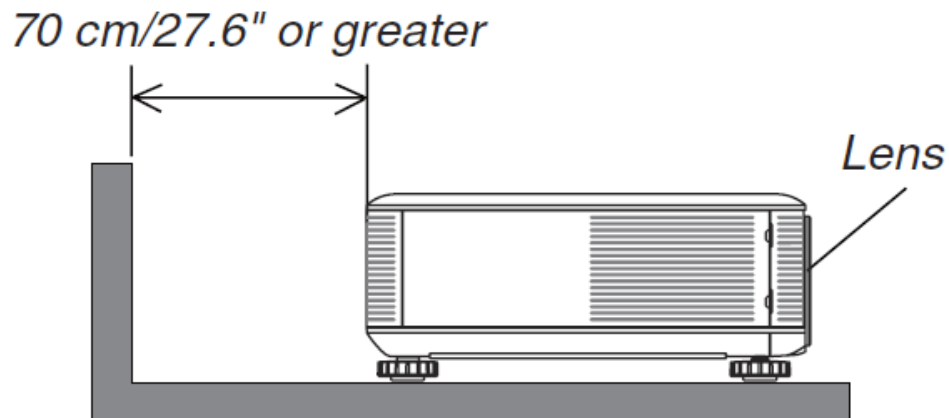
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Ventilation Requirements

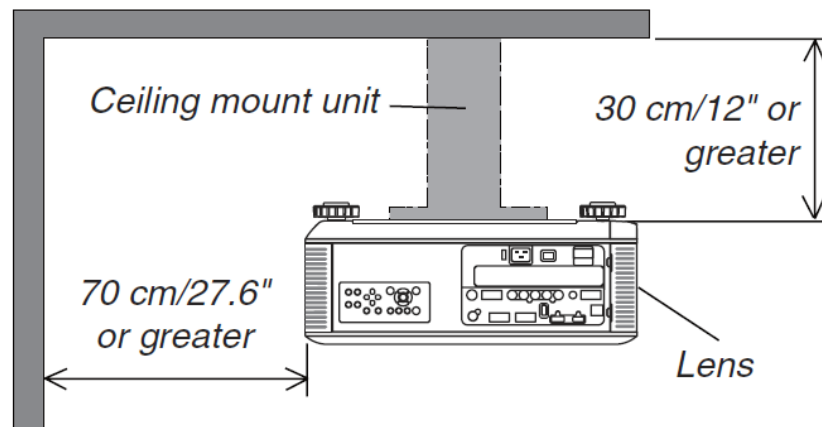
- If there are walls on both sides of the projector :



- If there's a wall behind the projector :



- For ceiling mounting :

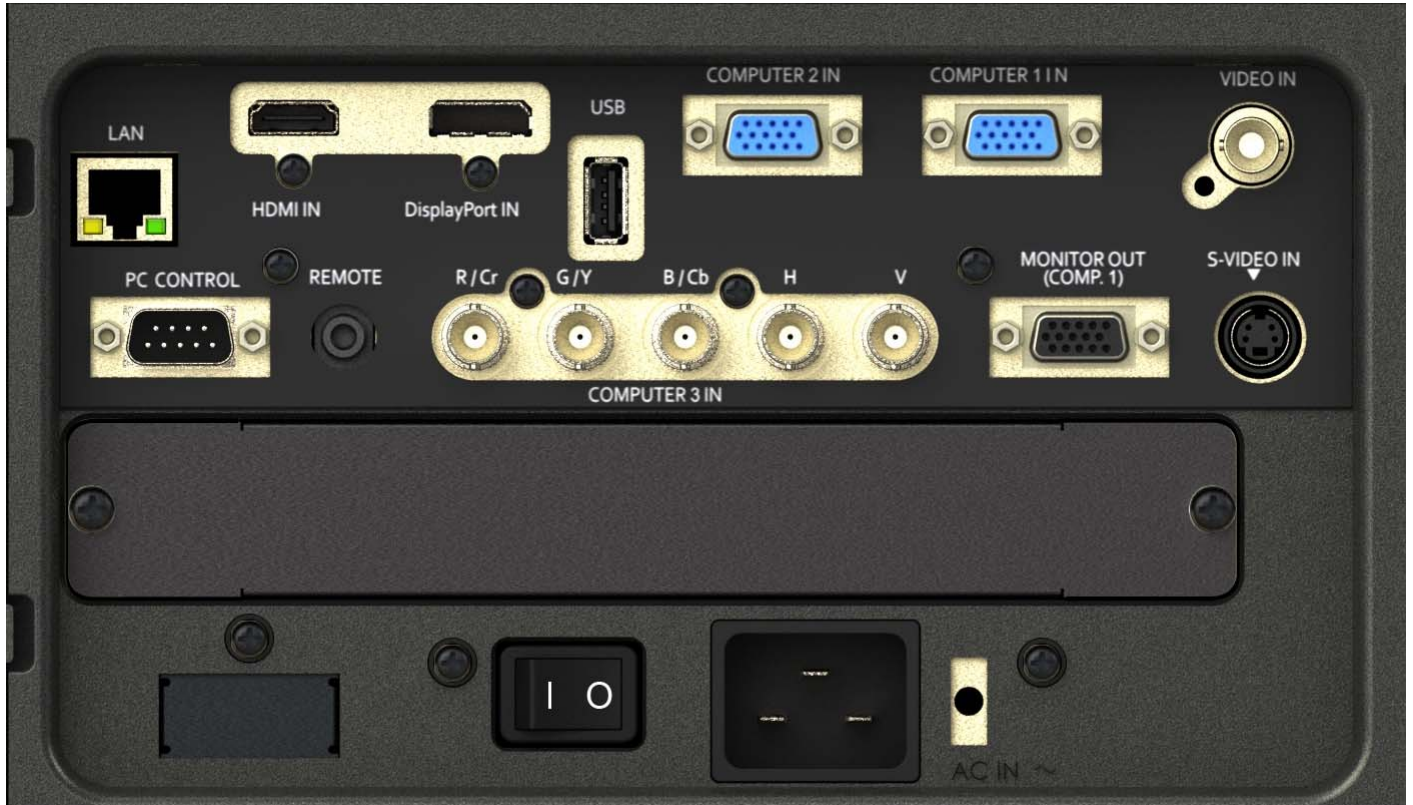


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Input Panel



Button Panel



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PC Control Codes

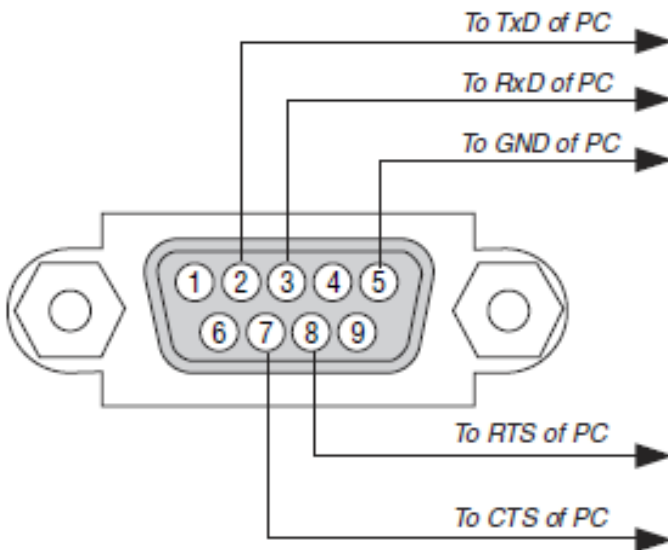
Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT COMPUTER 1	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT COMPUTER 2	02H 03H 00H 00H 02H 01H 02H 0AH
INPUT SELECT COMPUTER 3	02H 03H 00H 00H 02H 01H 03H 0BH
INPUT SELECT HDMI	02H 03H 00H 00H 02H 01H 1AH 22H
INPUT SELECT DisplayPort	02H 03H 00H 00H 02H 01H 1BH 23H
INPUT SELECT VIDEO	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT S-VIDEO	02H 03H 00H 00H 02H 01H 0BH 13H
INPUT SELECT VIEWER	02H 03H 00H 00H 02H 01H 1FH 27H
INPUT SELECT NETWORK	02H 03H 00H 00H 02H 01H 20H 28H
PICTURE MUTE ON	02H 10H 00H 00H 00H 12H
PICTURE MUTE OFF	02H 11H 00H 00H 00H 13H

Cable Connection

Communication Protocol:

Baud Rate: 38400 bps (for cable lengths longer than 20', it is recommended changing to 9600 bps in setup menu)
 Data Length: 8 bits
 Parity: No Parity
 Stop Bit: One bit
 X on/off: None
 Communications: Full duplex

PC Control Connector (D-Sub 9P)



Note 1 : Pins 1, 4, 6, and 9 are used inside the projector.

Note 2 : For long cable runs it is recommended to set communication speed within the projector to 9600 bps.

Note 3 : Jumper "Request to Send" and "Clear to Send" together on both ends of the cable to simplify cable connection.