

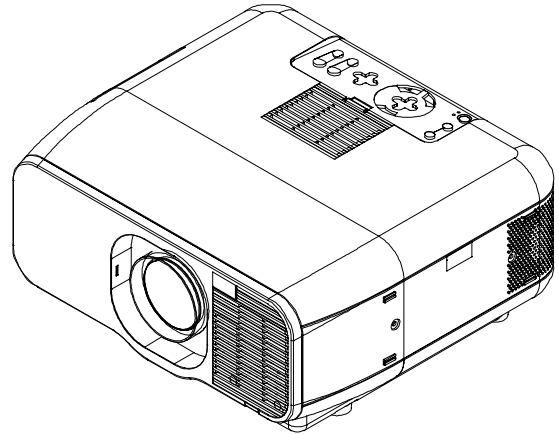
GT950 Installation Guide

Desktop and Ceiling Mounted

v4.0

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Product Description

Type:	3 panel LCD projector, 0.9" p-Si TFT w/MLA	Dimensions:	14.25"(W) x 6.62"(H) x 12.72"(D)
Native Resolution:	1024 x 768	Weight:	15.9 lbs
Brightness:	2000 ANSI Lumens	Power Lens Shift/Power Zoom/Power Focus	

Lens Specifications

Standard Lens	Throw Ratio:	2.0 - 2.4:1(approx.)	Focal Length:	36.7mm – 44.0mm
	Screen Sizes:	25"-300"	F/#:	2.0 – 2.6

Optional Lens

GT35-9ZL	Throw Ratio:	3.4 - 5.1:1(approx.)	Focal Length:	64.1 - 96.1mm
	Screen Sizes:	40" - 300"	F/#:	2.5 - 3.2

Note: This lens is not user changeable and must be installed by an authorized service center.

Notes

- For screen sizes not indicated on the projection charts, use the formulas below.
- If a value in a chart does not match the results of the formulas, use the values in the chart.
- The ceiling must be strong enough to support the LCD projector and the installation must be in accordance with any local building codes.
- All formulas are based on a 4:3 aspect ratio and screen.
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary $\pm 5\%$.

Formulas

units: inches (for millimeters multiply final number by 25.4)

Definitions:

H = Horizontal Screen Width (4:3)
V = Vertical Screen Height (4:3)
C = Throw distance

Projection Formulas:

Std Lens: $C(\text{Wide}) = 1.9833H - 1.949$ ----- $C(\text{Tele}) = C(\text{Wide}) \times 1.2$

Optional Lens

GT35-9ZL: $C(\text{Wide}) = 3.4596H - 3.996$ ----- $C(\text{Tele}) = C(\text{Wide}) \times 1.5$

Screen Formulas:

H = Screen Diagonal $\times 4/5$
V = Screen Diagonal $\times 3/5$
Screen Diagonal = $H \times 5/4$

Warning: To avoid premature lamp failure, do not tilt the front of the GT950 up or down by more than 10° from level.

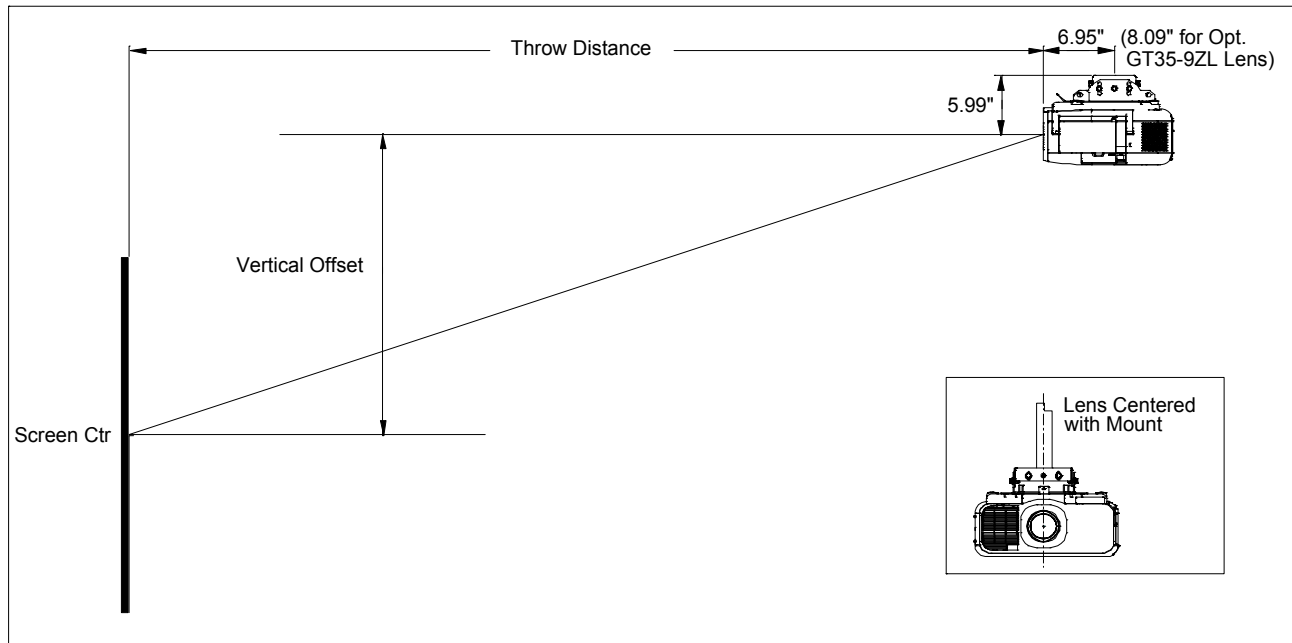
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Ceiling Mounted Installation

The following diagram shows the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.



Distance Chart

Screen Size (4:3)			Throw Distance	
			Std Lens	GT35-9ZL(option lens)
Diagonal	Width(H)	Height (V)	2.0 - 2.4:1	3.4 - 5.1:1
inches	inches	inches	inches	inches
25	20	15	NA - 45.3	NA
40	32	24	61.5 - 73.8	NA - 160.1
60	48	36	93.2 - 111.9	162.1 - 243.1
67	53.6	40.2	104.4 - 125.2	181.4 - 272.2
72	57.6	43.2	112.3 - 134.7	195.3 - 292.9
84	67.2	50.4	131.3 - 157.6	228.5 - 342.7
90	72	54	140.8 - 169.0	245.1 - 367.6
100	80	60	156.7 - 188.1	272.8 - 409.2
120	96	72	188.4 - 226.1	328.1 - 492.2
150	120	90	236.0 - 283.3	411.2 - 616.7
180	144	108	283.6 - 340.4	494.2 - 741.3
210	168	126	331.2 - 397.5	577.2 - NA
240	192	144	378.8 - 454.6	660.2 - NA
270	216	162	426.4 - NA	743.3 - NA
300	240	180	474.0 - NA	826.3 - NA

Note: For screen sizes not indicated on the chart, use the formulas on page 1.

Note: Optional GT35-9ZL lens is not user changeable and must be installed by an authorized service center.

Warning: To avoid premature lamp failure, do not tilt the front of the GT950 up or down by more than 10° from level.

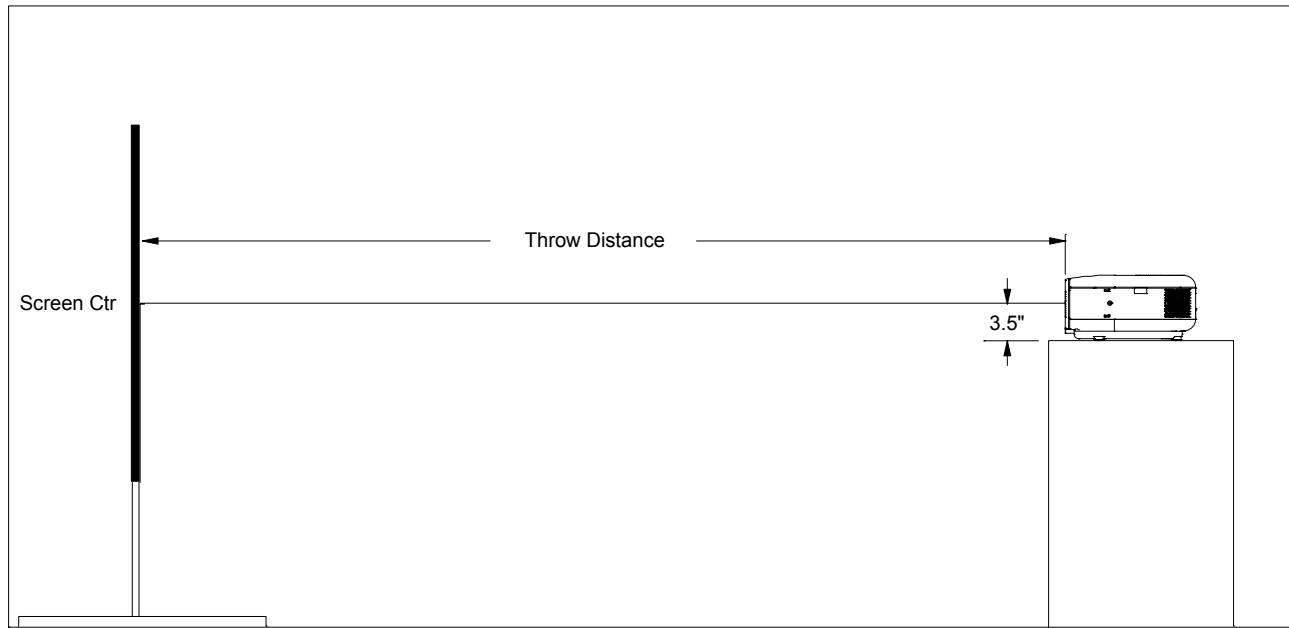
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Desktop Setup

The following diagram shows the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.



Distance Chart

Screen Size (4:3)			Throw Distance	
			Std Lens	GT35-9ZL(option lens)
Diagonal	Width(H)	Height (V)	2.0 - 2.4:1	3.4 - 5.1:1
inches	inches	inches	inches	inches
25	20	15	NA - 45.3	NA
40	32	24	61.5 - 73.8	NA - 160.1
60	48	36	93.2 - 111.9	162.1 - 243.1
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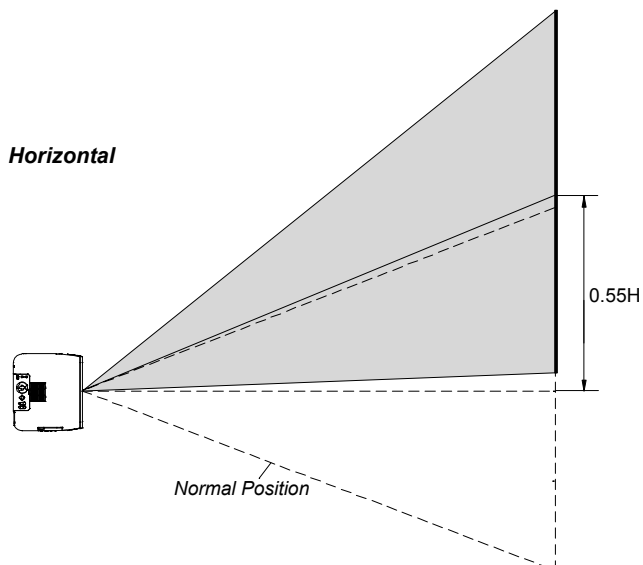
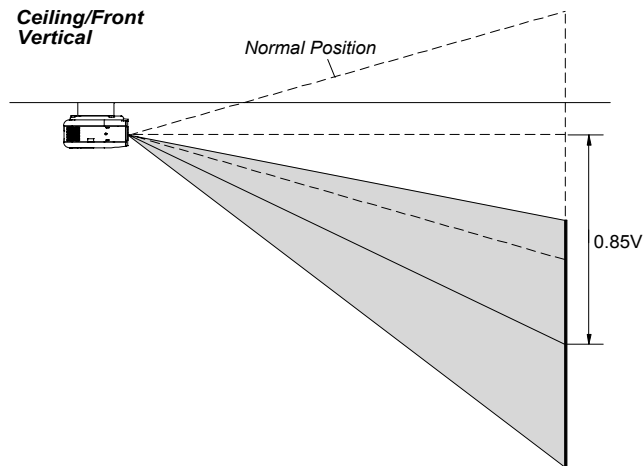
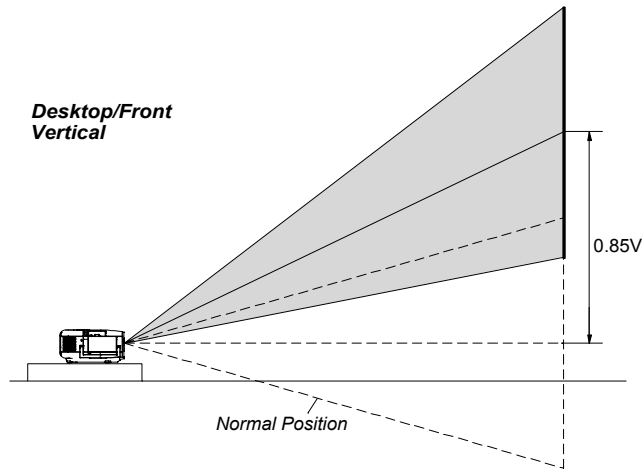
Warning: To avoid premature lamp failure, do not tilt the front of the GT950 up or down by more than 10° from level.

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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.

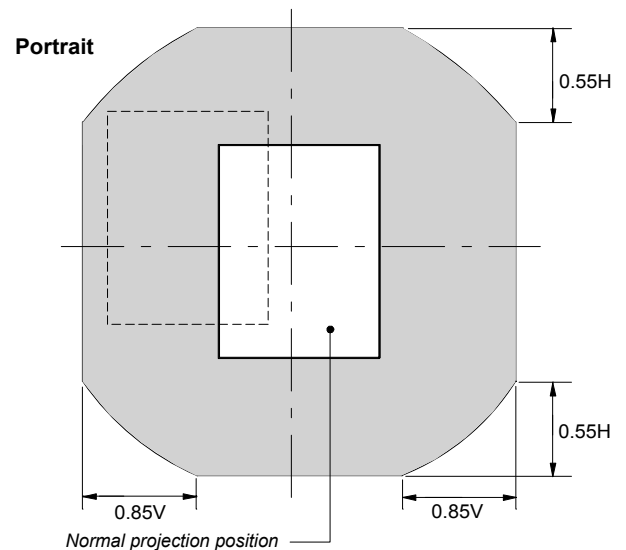
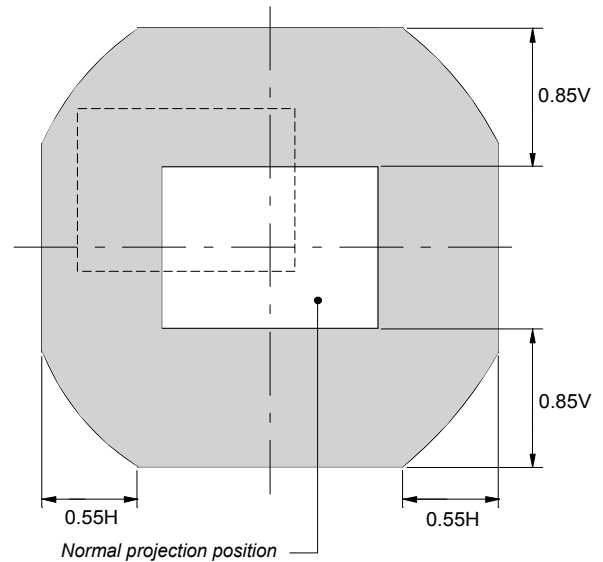
Maximum Possible Range:

Up: 0.85V Right: 0.55H

Down: 0.85V Left: 0.55H

(H: width of projected image, V: height of projected image)

Note: If lens is shifted in two directions combined, maximum range in either direction cannot be obtained due to rounded off area near edge of lens. (example: shift up and left)
See diagram below.



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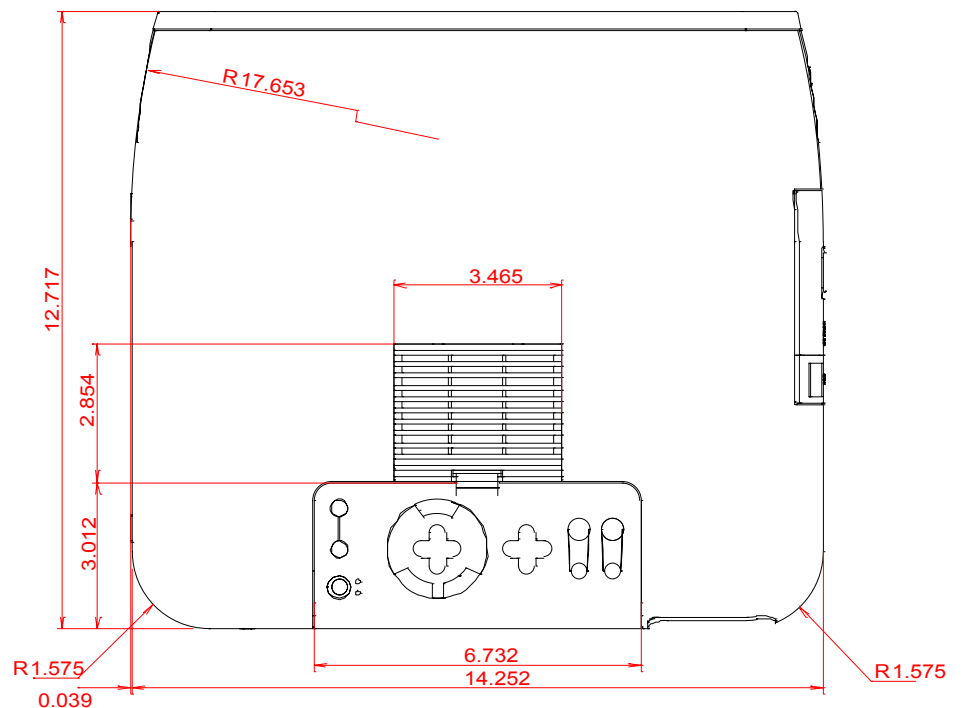
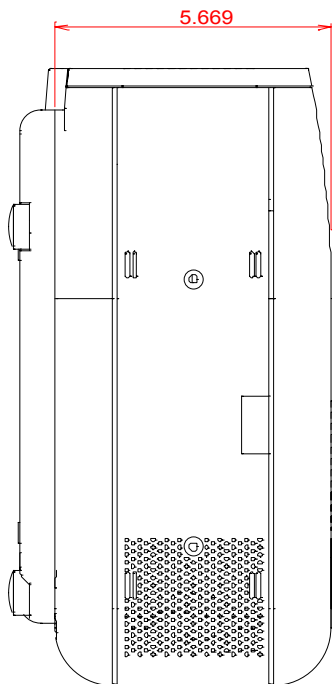
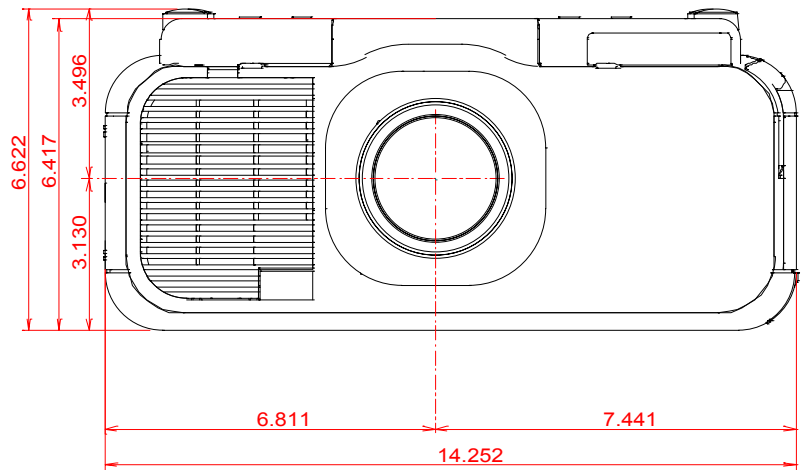
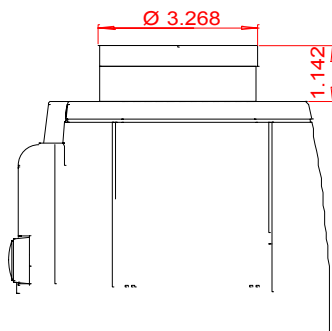
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Cabinet Dimensions

The following drawings show the cabinet dimensions for the GT950.
Dimensions are in inches. For millimeters multiply by 25.4.

GT950 with Optional GT35-9ZL Lens



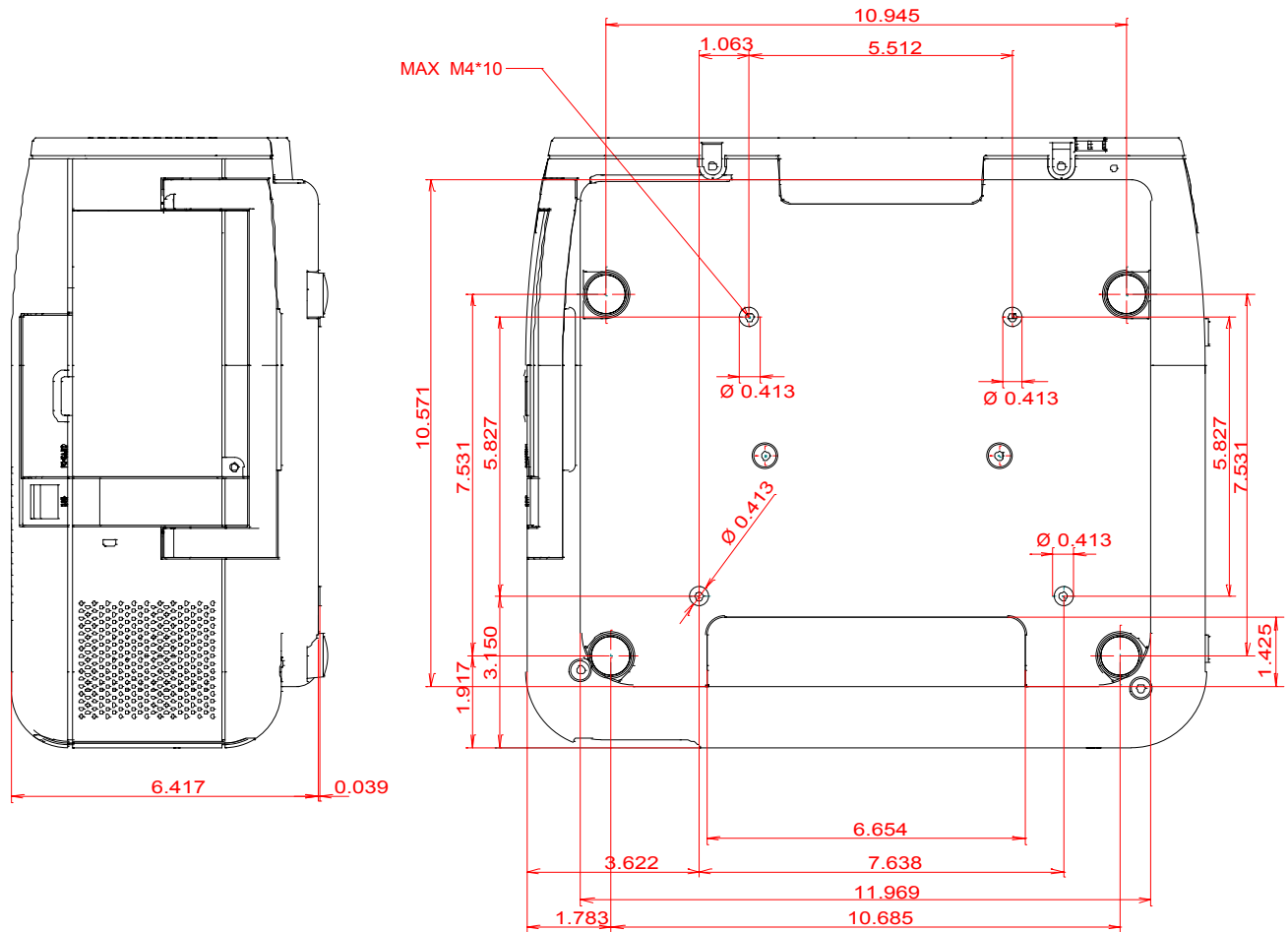
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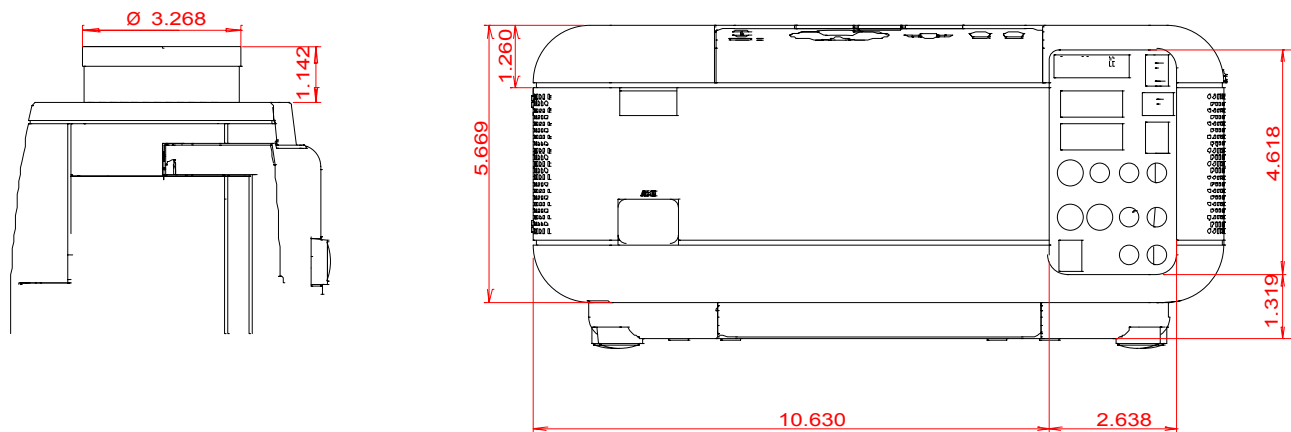
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Cabinet Dimensions (continued)

The following drawings show the cabinet dimensions for the GT950. Dimensions are in inches. For millimeters multiply by 25.4.



GT950 with Optional GT35-9ZL Lens



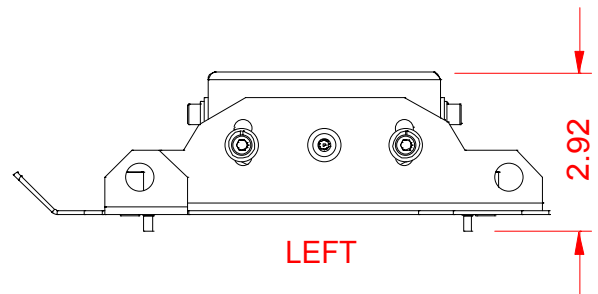
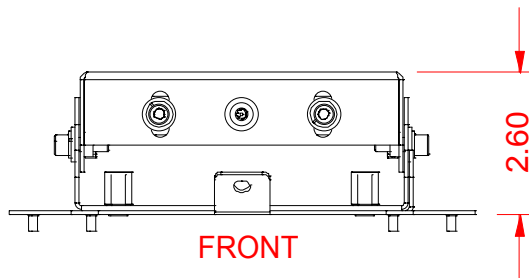
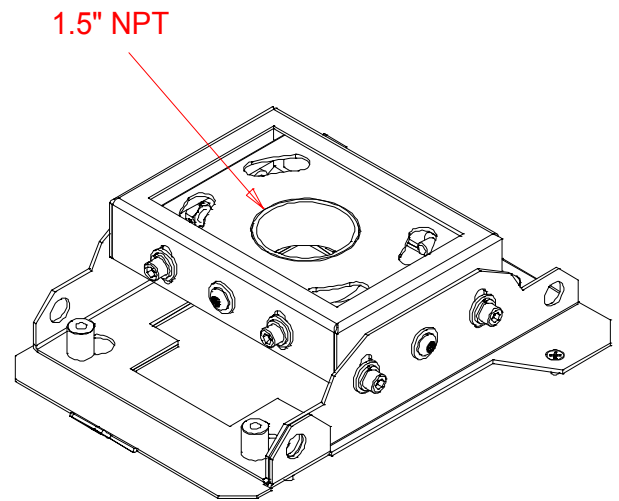
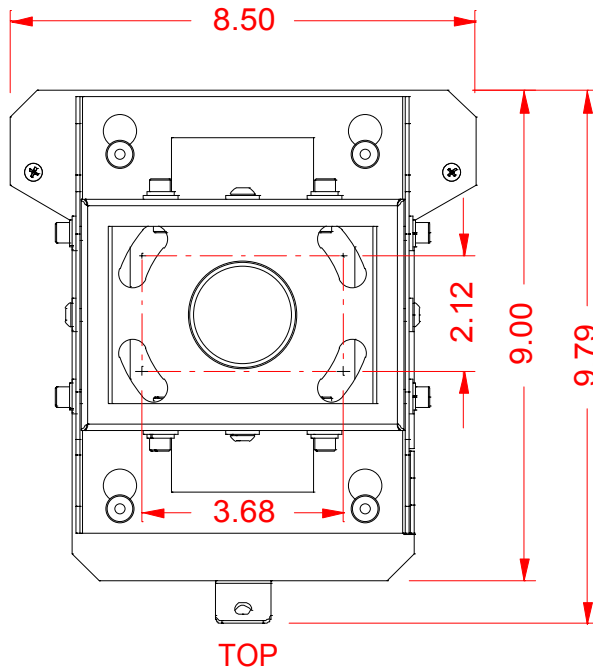
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Optional Ceiling Mount Dimensions (Model #: GT95CM)

The following drawings show ceiling mount dimensions for the GT950.
Dimensions are in inches. For millimeters multiply by 25.4.



Mount Weight: 4.0 lbs

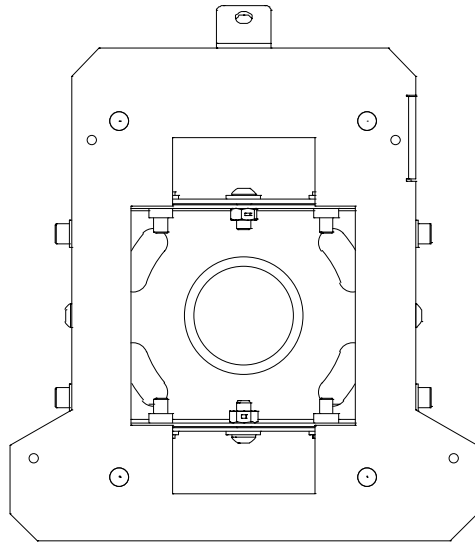
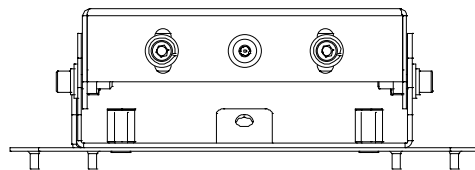
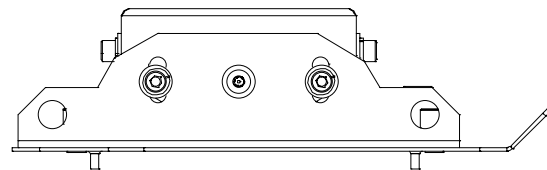
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Optional Ceiling Mount Dimensions (Model #: GT95CM) (continued)

The following drawings show ceiling mount dimensions for the GT950.
Dimensions are in inches. For millimeters multiply by 25.4.

**BOTTOM****BACK****RIGHT**

Mount Weight: 4.0 lbs

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Control Codes

Function	Code Data							
POWER ON	02H	00H	00H	00H	00H	02H		
POWER OFF	02H	01H	00H	00H	00H	03H		
INPUT SELECT RGB	02H	03H	00H	00H	02H	01H	01H	09H
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 DVI (DIGITAL)	02H	03H	00H	00H	02H	01H	1AH	22H
INPUT SELECT DVI (ANALOG)	02H	03H	00H	00H	02H	01H	02H	0AH
INPUT SELECT PC CARD VIEWER	02H	03H	00H	00H	02H	01H	1FH	27H
PICTURE MUTE ON	02H	10H	00H	00H	00H	12H		
PICTURE MUTE OFF	02H	11H	00H	00H	00H	13H		
SOUND MUTE ON	02H	12H	00H	00H	00H	14H		
SOUND MUTE OFF	02H	13H	00H	00H	00H	15H		
ON SCREEN MUTE ON	02H	14H	00H	00H	00H	16H		
ON SCREEN MUTE OFF	02H	15H	00H	00H	00H	17H		

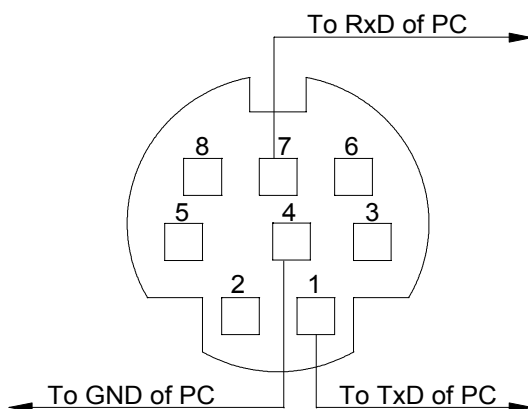
NOTE: Contact your NEC rep for codes not listed.

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 (DIN-8P)



NOTE: Pins 2, 3, 5, 6 and 8 are used inside the projector.

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