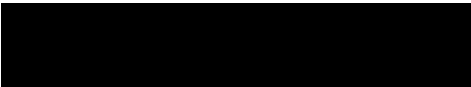SAMSUNG

Project Description

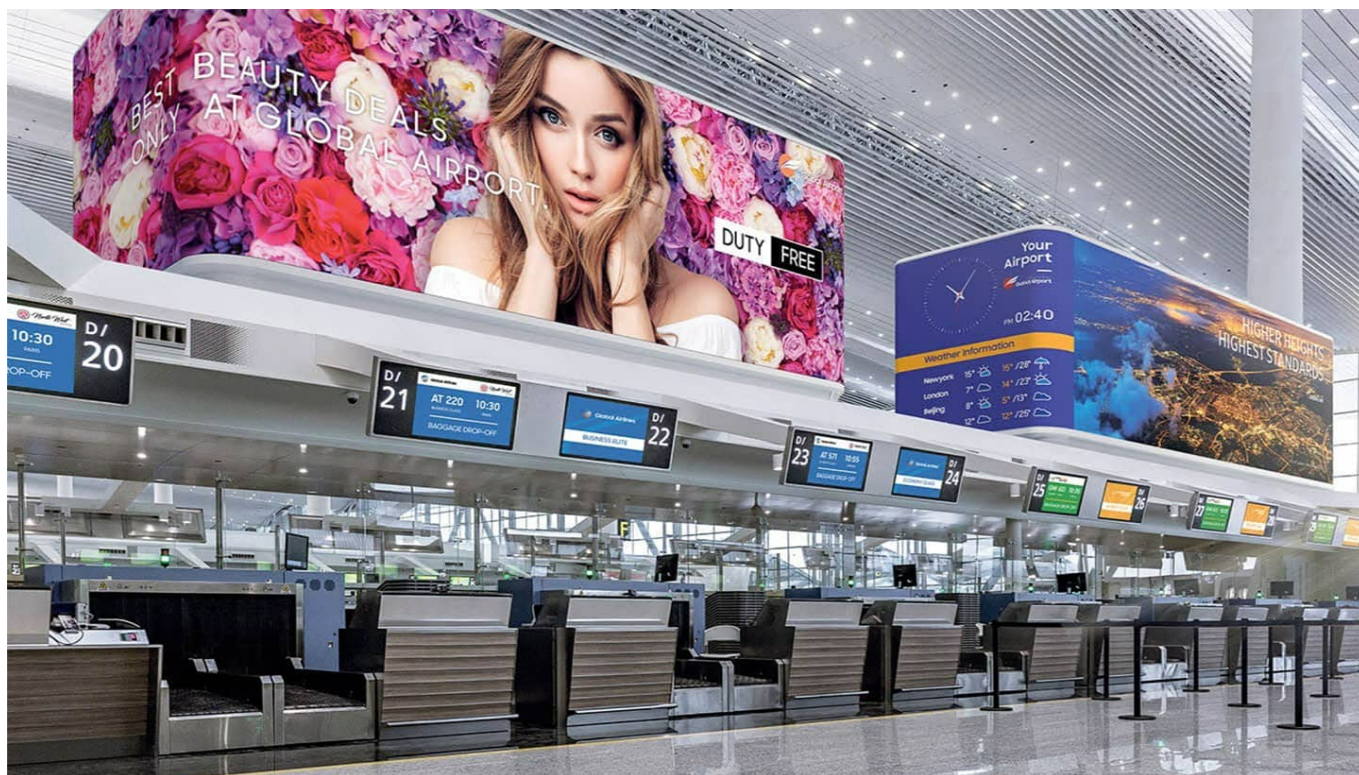Indoor LED Signage   **IF020R**

Brook Army Med Center IF020R 7x7

* The configuration information in this document is for simulated installation only, while actual physical specifications may vary. Please consult with Samsung or your installation partner for accurate information.
* Specifications are subject to change without notice.

Date of configuration : 17th October, 2024

Indoor LED signage has become an increasingly popular tool for businesses of all sizes to deliver crisp and compelling messages to customers. Samsung's IFR series combines best-in-class LED picture quality, flexible design options and efficient operation in any environment. Advanced picture refinement technology ensures every image provides an immersive viewing experience, with comprehensive calibration tools to ensure all LED displays maintain uniform picture quality. Brilliant, true-to-life image capabilities are supported by multiple installation options for hassle-free and innovative configurations, as well as efficient operation at all times.

Indoor LED Signage   **IF020R**

0.4285 ft   22.043 ft   0.4285 ft

0.3015 ft

12.397 ft

0.3015 ft

* Man 183cm
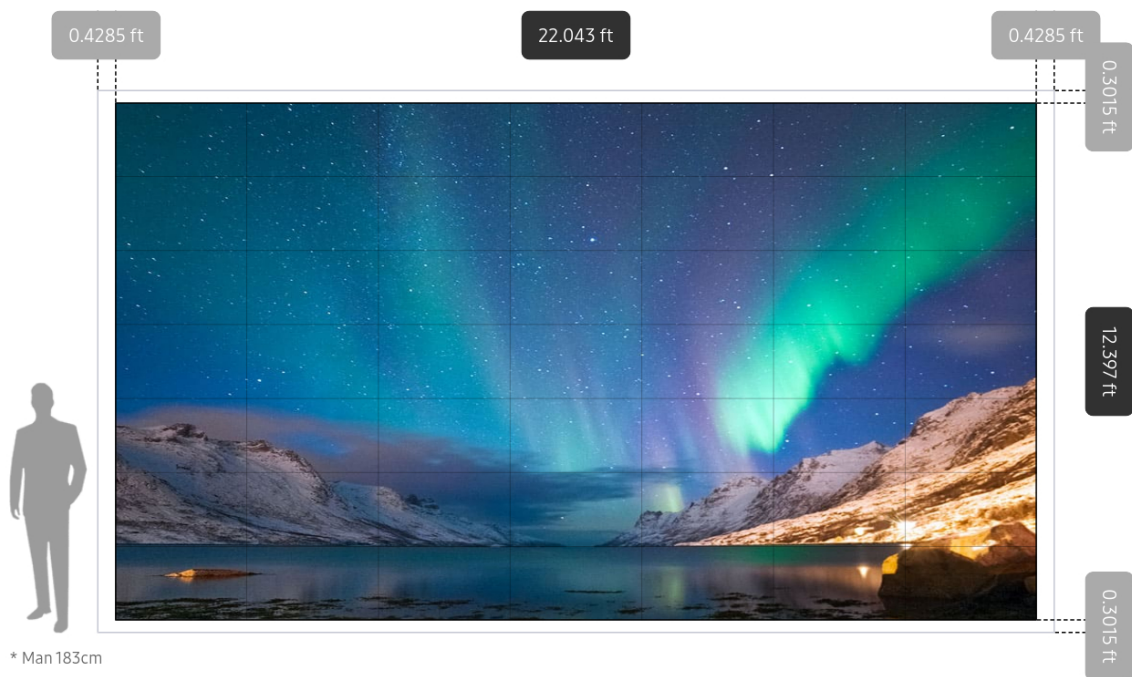
Screen Specifications

Model Name	**IF020R**

Display Requirements	Screen Configuration (WxH)		7 Units x 7 Units
Display Wall Dimensions	Dimensions		22.043 x 12.397 ft
	Display Area		273.27 ft²
	Diagonal		303.47 inch
	Weight(Only Cabinets)		607.6 Kg
Optical Parameter	Resolution		3360 x 1890
Power Requirements	Max		12740 Watts
	Typical		4263 Watts
	110V 20A Circuits	20A Circuit	9 Circuits
		Cabinets per circuit	6 Cabinets
		Cabinets per daisy chain	2 Cabinets
	208V 20A Circuits	20A Circuit	5 Circuits
		Cabinets per circuit	12 Cabinets
		Cabinets per daisy chain	4 Cabinets
Heat Generation	Max		4348162 BTU
	Typical		14553 BTU
Customer Selection	Orientation		Landscape

Screen Components

Model Name	**IF020R**

LED Cabinets	No. of Cabinets	49 Units
	No. of Spare Cabinets	2 Units
	Total No. of Cabinets(LH020IFRCLS)	51 Units
S-Box	SBB-CS4BPGS	1 Unit
Jig	CY-LJRNLS	0 Unit
Frame Kit	VG-LFR84FWL	1 Unit
	VG-LFR53FWL	1 Unit
	VG-LFR33FWL	1 Unit

* Please refer to "Ventilation Guide" of next page.

Ventilation Guide (A case Dynamic Peaking function is activated)

(CFM)

Temperature	FAN flow per a column	Total FAN flow
59°F	0	No fan required
68°F	0	No fan required
77°F	0	No fan required
86°F	105	735

Ventilation Guide (A case Dynamic Peaking function is deactivated)

(CFM)

Temperature	FAN flow per a column	Total FAN flow
59°F	0	No fan required
68°F	0	No fan required
77°F	0	No fan required
86°F	0	No fan required

Product Specification

Model Name	**IF020R**

Physical Parameter	Pixel Pitch	2mm
	Diode Type	Surface Mount Device (SMD)
	Dimensions (mm, LxHxD, per cabinet)	960x540x79.5 mm
	Diagonal (inch, DiagonalxD, per cabinet)	43.3 x 3.13 inch
	Weight (per cabinet/per m²)	12.4 kg / 23.9 kg
Optical Parameter	Brightness (Peak/Max)	1,600 nit / 1,000 nit
	Contrast Ratio (Peak/Max)	7,200:1
	Viewing angle - Horizontal	160°
	Viewing angle - Vertical	160°
	Bit Depth	16 bit (Internal processing 18bit)
	Color temperature - Adjustable	2,800 ~ 10,000K (use S/BOX)
Electrical Parameter	Video Rate	50/60 Hz
	Input Power Range	100~240 VAC, 50/60 Hz
	Power consumption - Max	502 (W/m²) / 260 (W/Cabinet)
	Power consumption - Typ	168 (W/m²) / 87 (W/Cabinet)
	Heat generation – Max	1,713.3 (BTU/m²) / 887.38 (BTU/Cabinet)
	Heat generation – Typical	573 (BTU/m²) / 297 (BTU/Cabinet)
	Refresh rate	3,840Hz
	Visual Refresh Rate	7,680Hz
Operation Conditions	Working Temperature / Humidity	0°C~40°C / 10~80%RH
	Storage Temperature / Humidity	-20°C~45°C / 5~95%RH
	IP Rating	IP20
	LED Lifetime	100,000 hours
Certification	Certification	Safety : 62368-1, 60950-1 / EMC : Class A
Service	Service	Front
Package	Box Dimension (mm, LxHxD)	1,119 x 206 x 699 mm
	Package Weight (kg, per cabinet)	18.1 kg

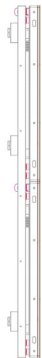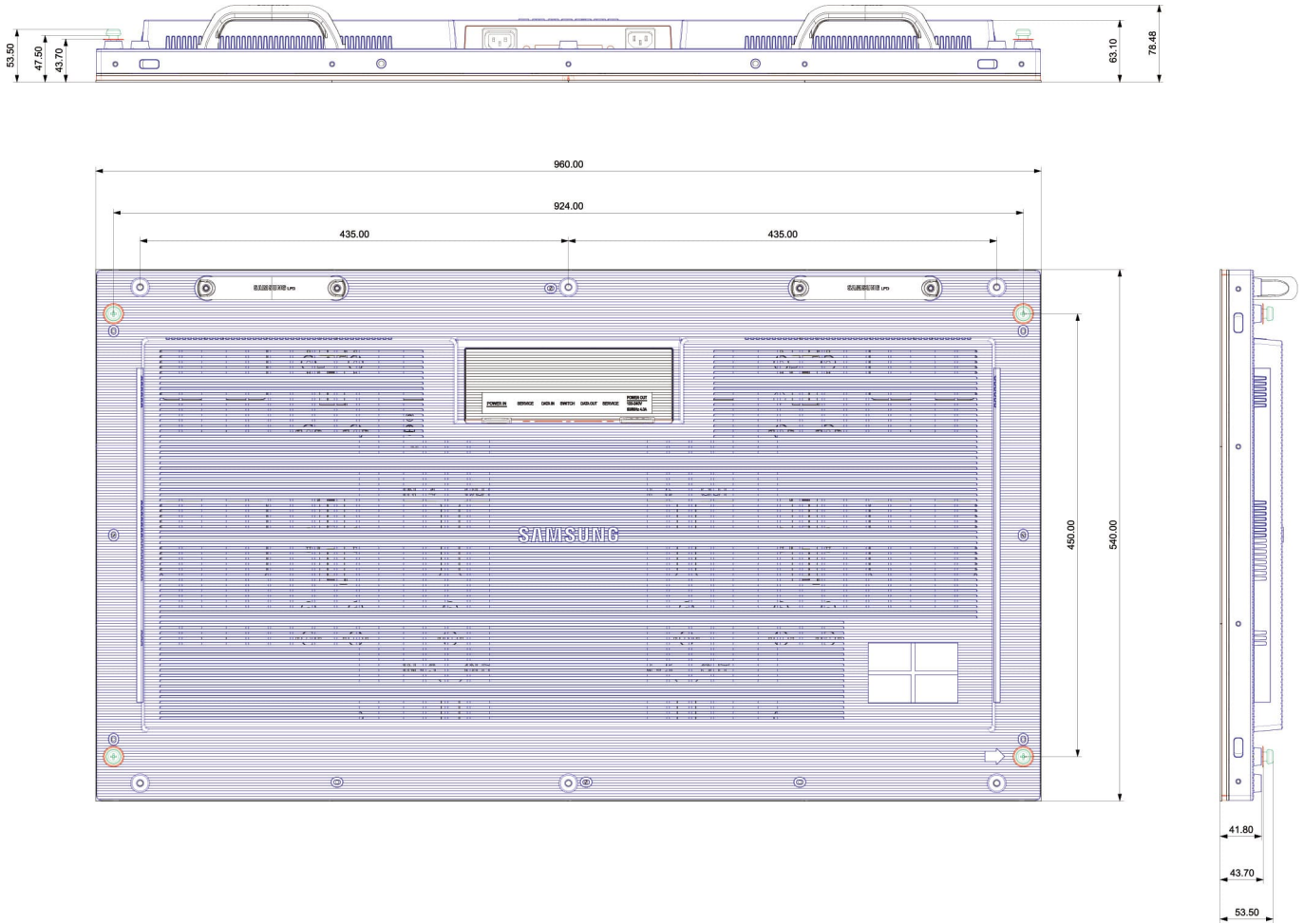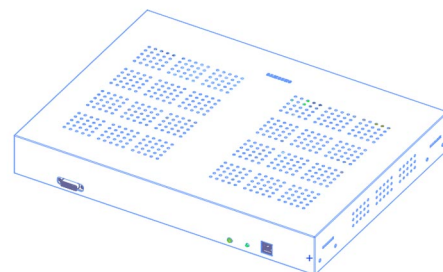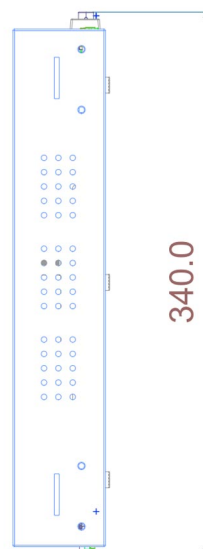Mechanical Overall Depth Drawing(Cabinet)

TOP VIEW

overall depth from wall to screen
98.50

overall distance from cabinet to wall
20.01

side distance cabinet to frame
1.91

REAR VIEW

SIDE VIEW

top distance cabinet to frame
0.80

bottom distance cabinet to frame
0.40
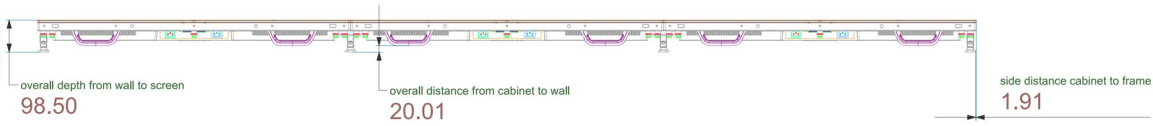
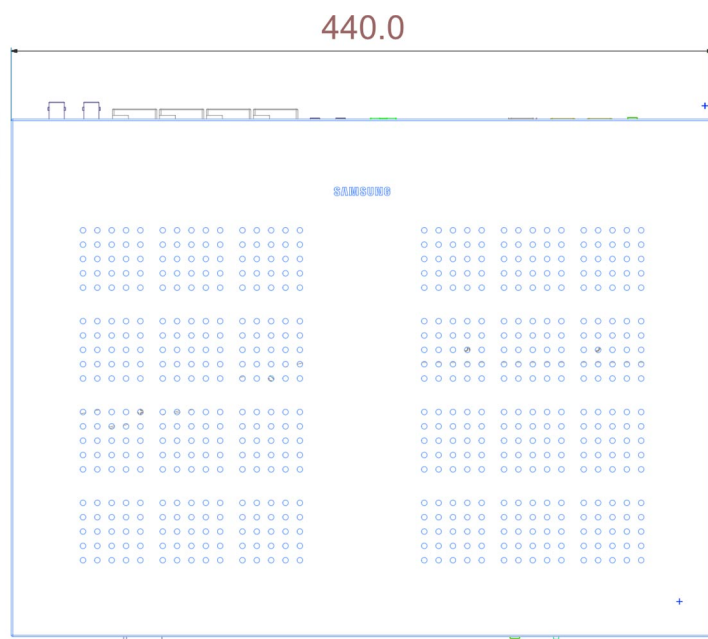## Mechanical Drawing(Cabinet)

Mechanical Drawing(CS4B)

440.0

340.0

60.5

Mechanical Drawing(IG CS4B)

I/G

75.6

228.3

23.3
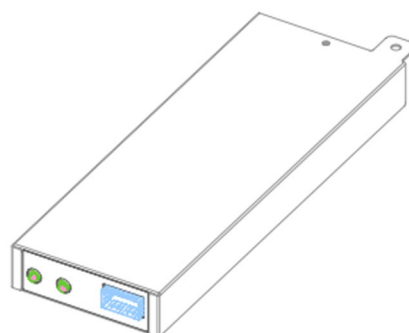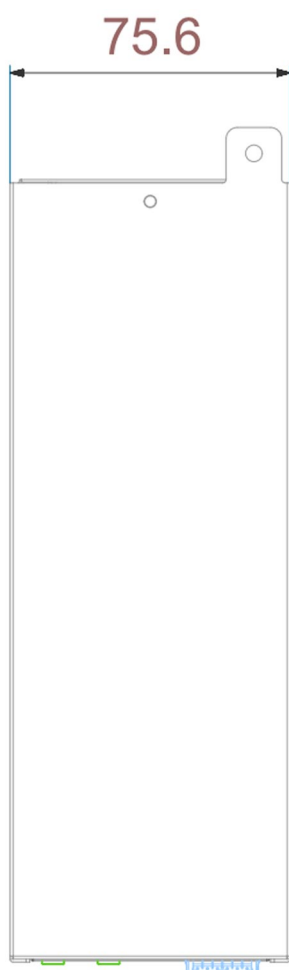
Mechanical Drawing(Frame Kit)

VG-LFR84FWL
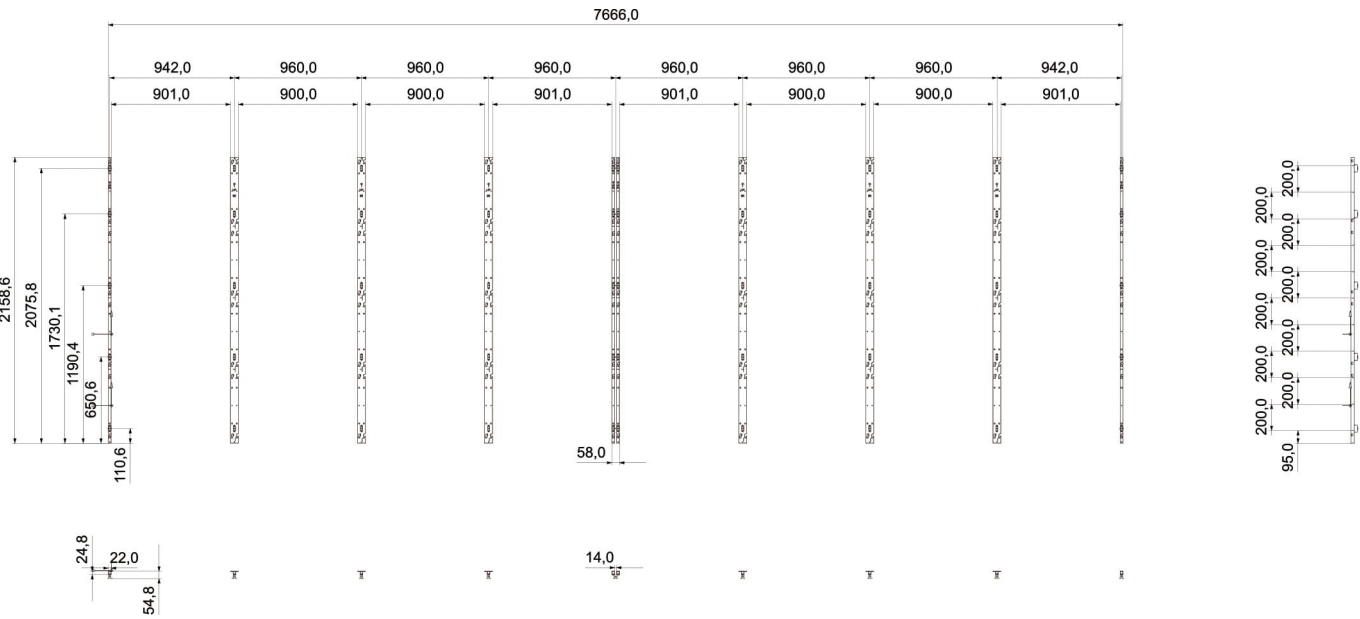
VG-LFR53FWL

VG-LFR33FWL

901.00
900.00
901.00

942.00
960.00
942.00

2866.00

1535.90
1618.50
110.50

200.00
200.00
200.00
200.00
200.00
200.00
200.00
95.00

Mechanical Drawing(Frame Kit)

(mm)

6720.0

960

540

3780.0
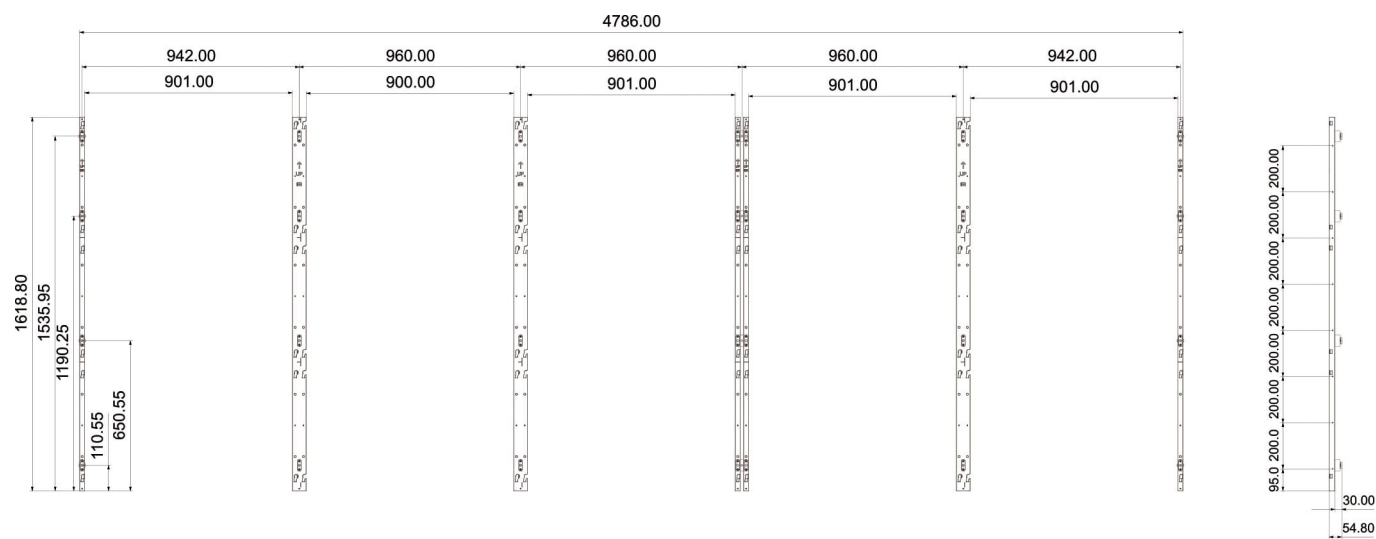
7*4 Frame Kit
Part of 8*4 Frame Kit
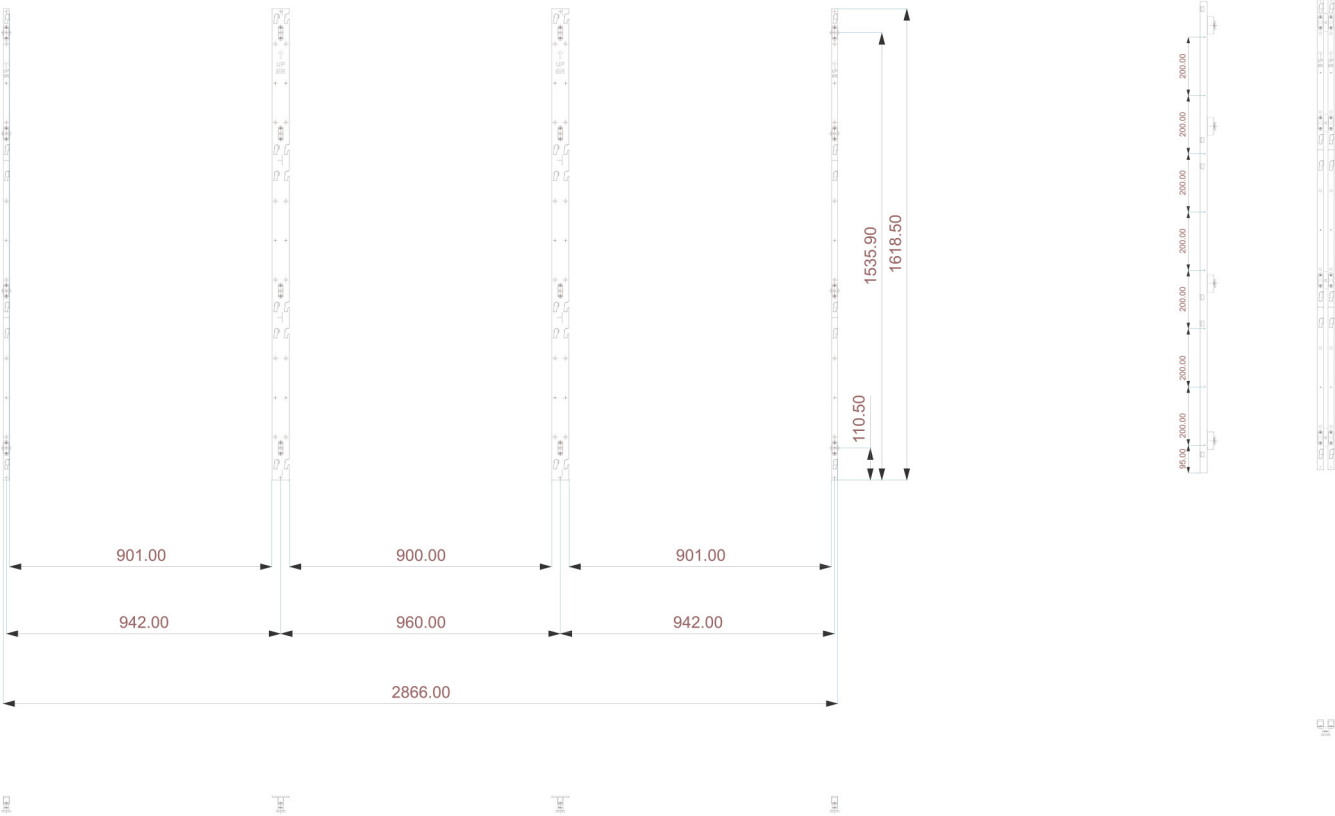
5*3 Frame Kit

2*3 Frame Kit
Part of 3*3 Frame Kit
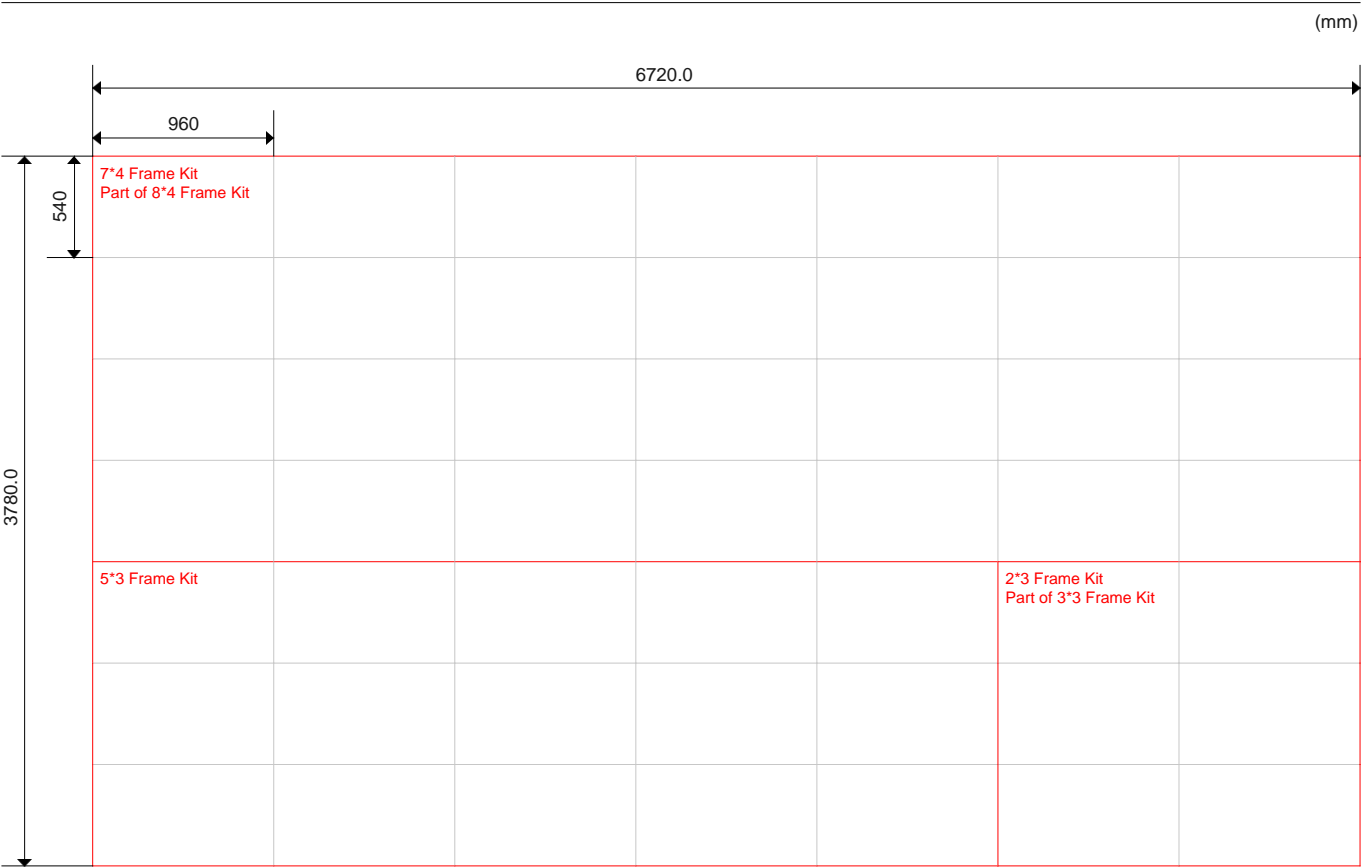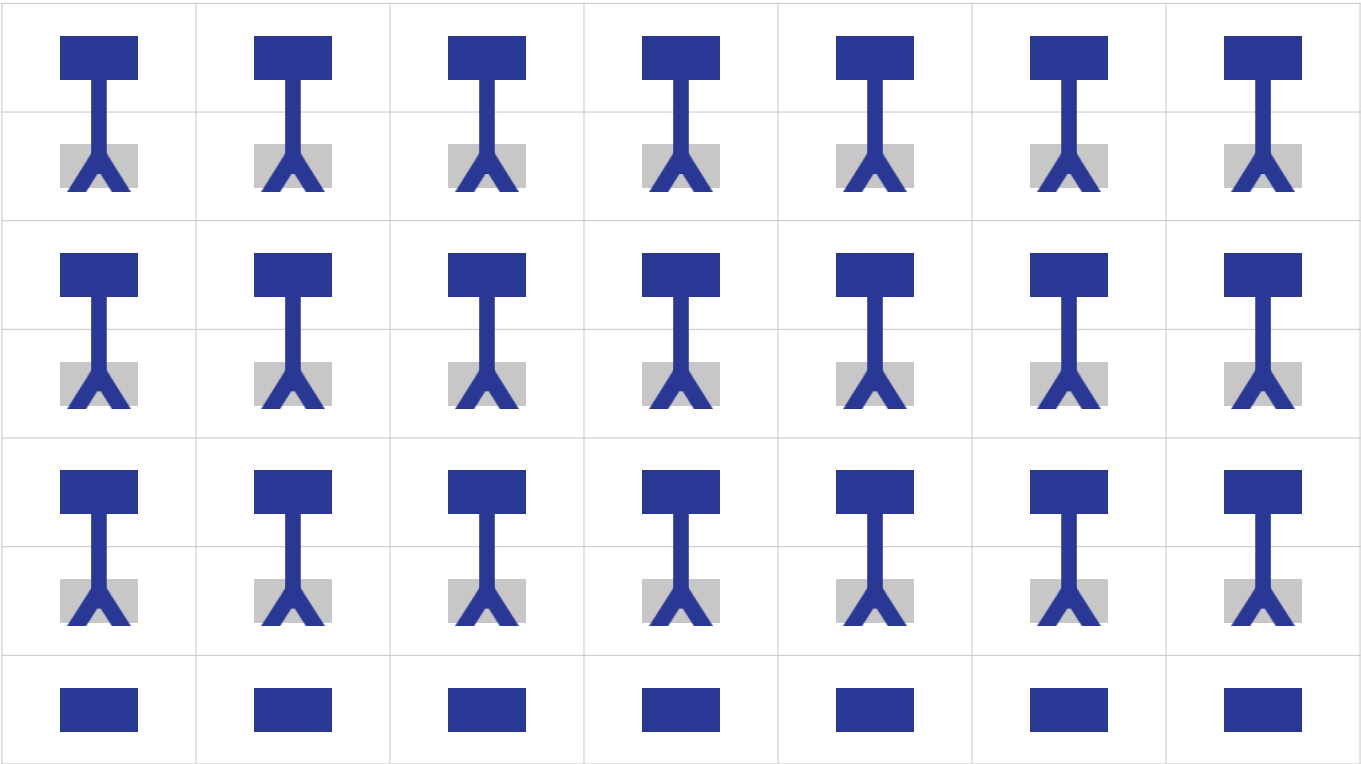
This figures below is the cabinet length on mounted position

Power Flow Diagram(110V, Front View)

* The number of primary power cables doesn't pertain to the number of external circuits. The number of external circuits depends on power consumption. For more detail, please contact your sales partner from Samsung Electronics.

▬ Power Interconnect Cable

▬ Power Cable Input/Output

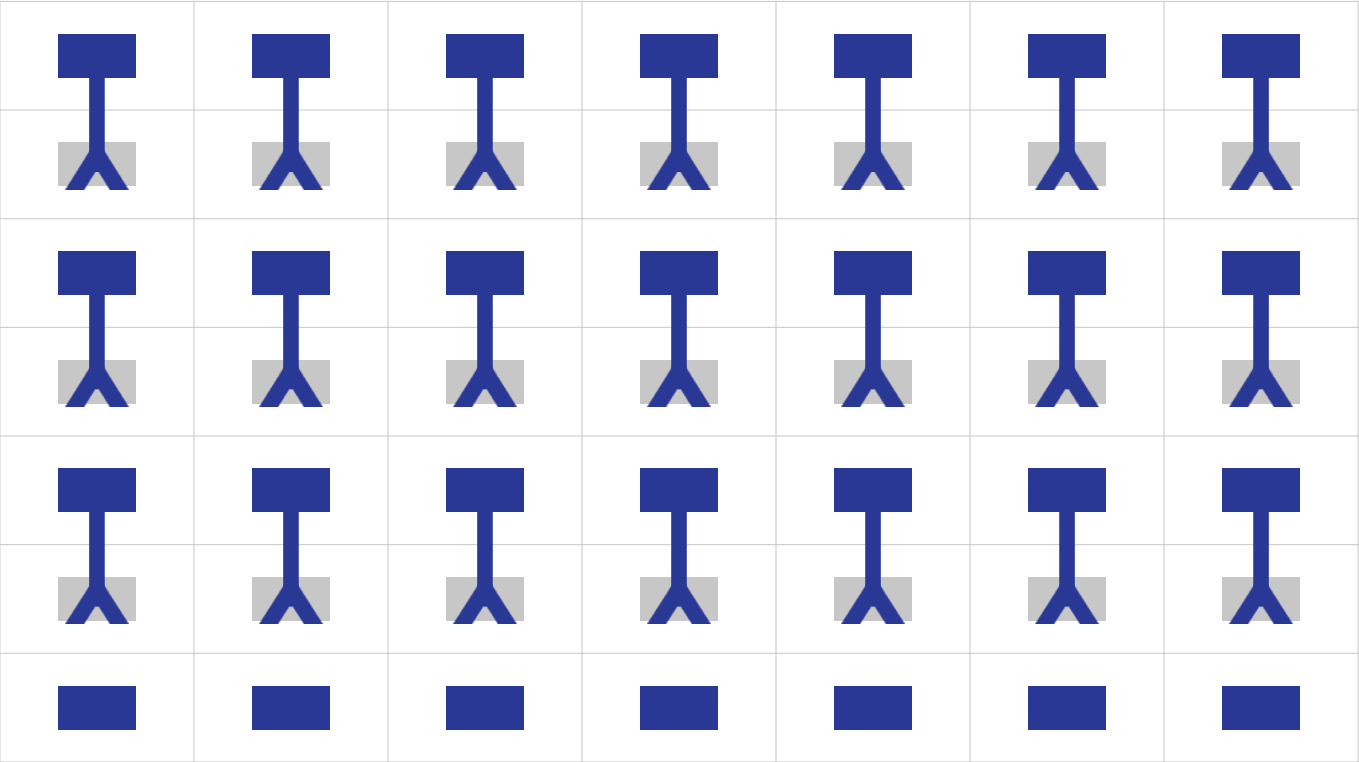▬ Primary Cable Routing End Point

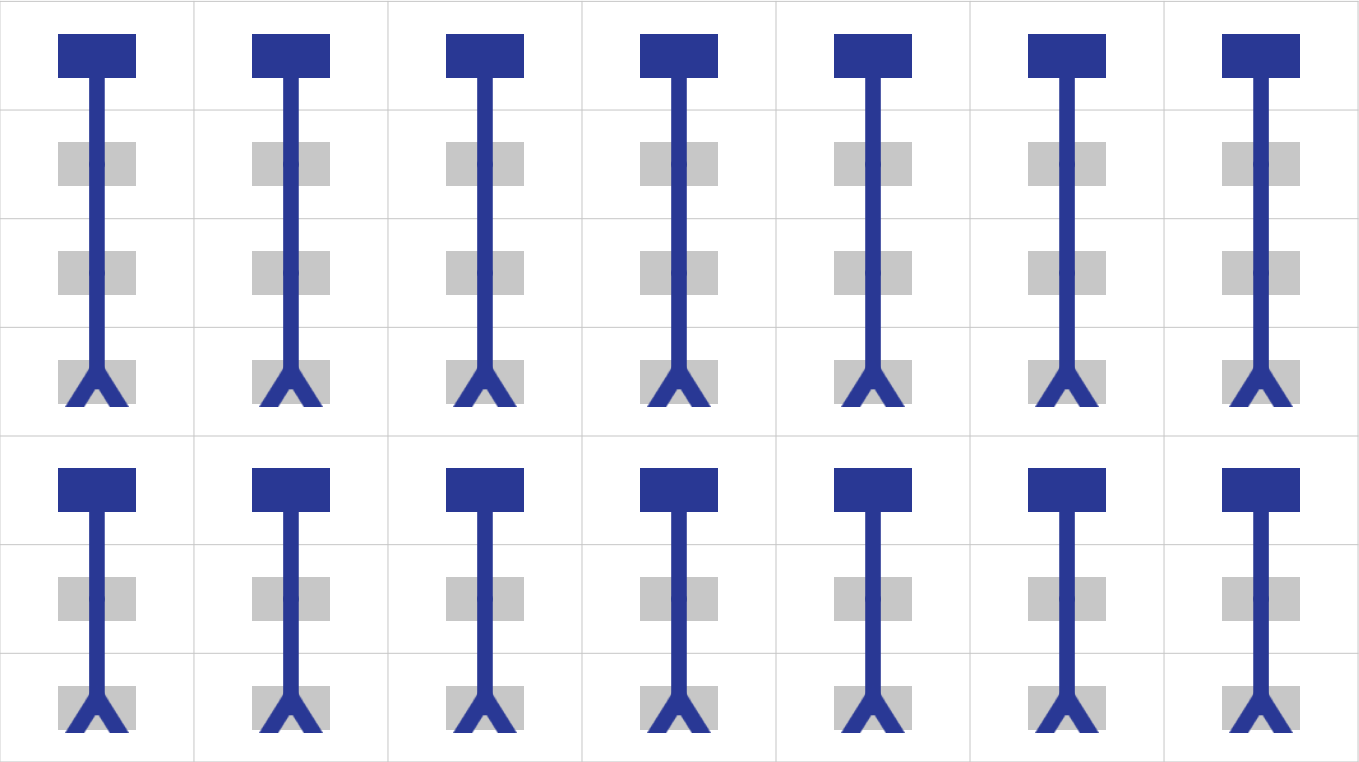▲ Primary Power Cable Input

Power Flow Diagram(110V, Rear View)

The number of primary power cables doesn't pertain to the number of external circuits. The number of external circuits depends on power consumption. For more detail, please contact your sales partner from Samsung Electronics.

Power Interconnect Cable

Power Cable Input/Output

Primary Cable Routing End Point

Primary Power Cable Input

Power Flow Diagram(220V, Front View)

* The number of primary power cables doesn't pertain to the number of external circuits. The number of external circuits depends on power consumption. For more detail, please contact your sales partner from Samsung Electronics.

— Power Interconnect Cable

▪ Power Cable Input/Output

▪ Primary Cable Routing End Point

▲ Primary Power Cable Input

Power Flow Diagram(220V, Rear View)

* The number of primary power cables doesn't pertain to the number of external circuits. The number of external circuits depends on power consumption. For more detail, please contact your sales partner from Samsung Electronics.

▬ Power Interconnect Cable

▪ Power Cable Input/Output

▪ Primary Cable Routing End Point

▲ Primary Power Cable Input

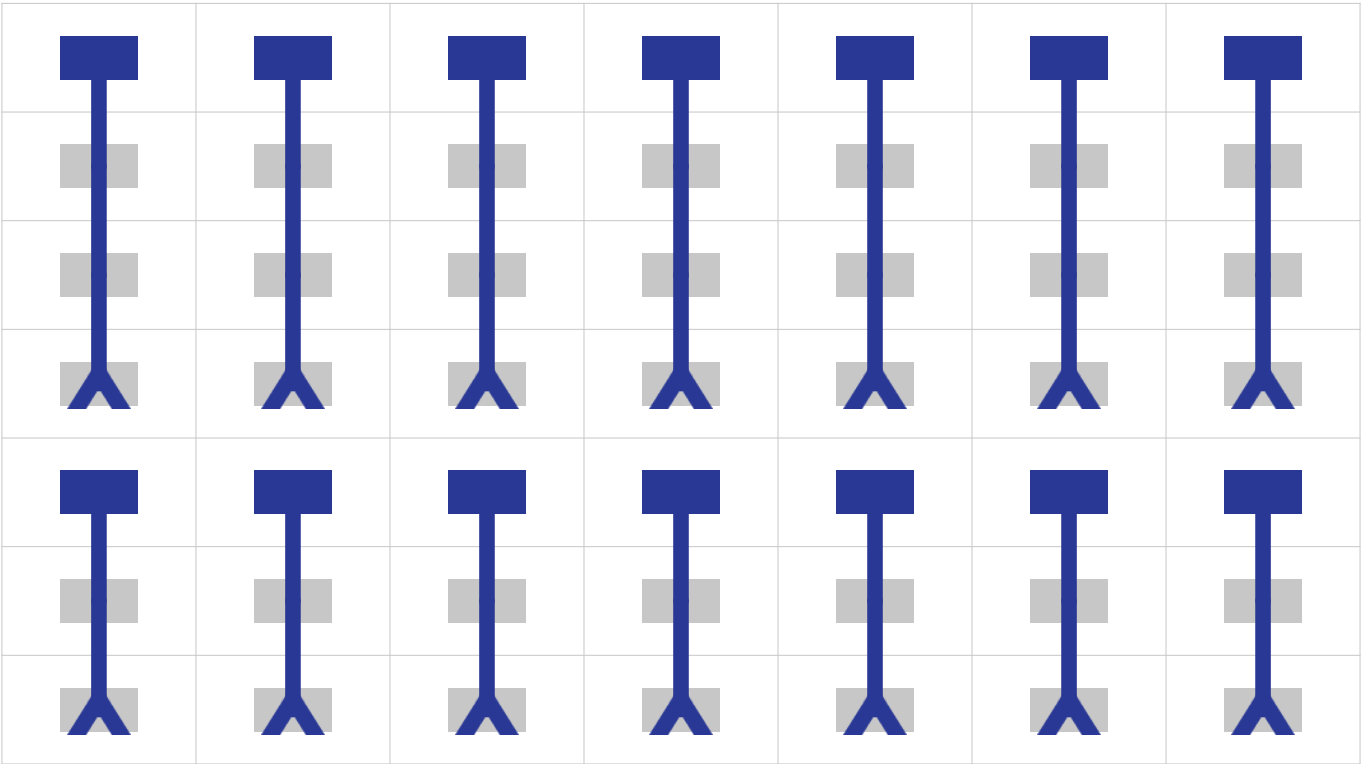## Data Flow Diagram(Front View)
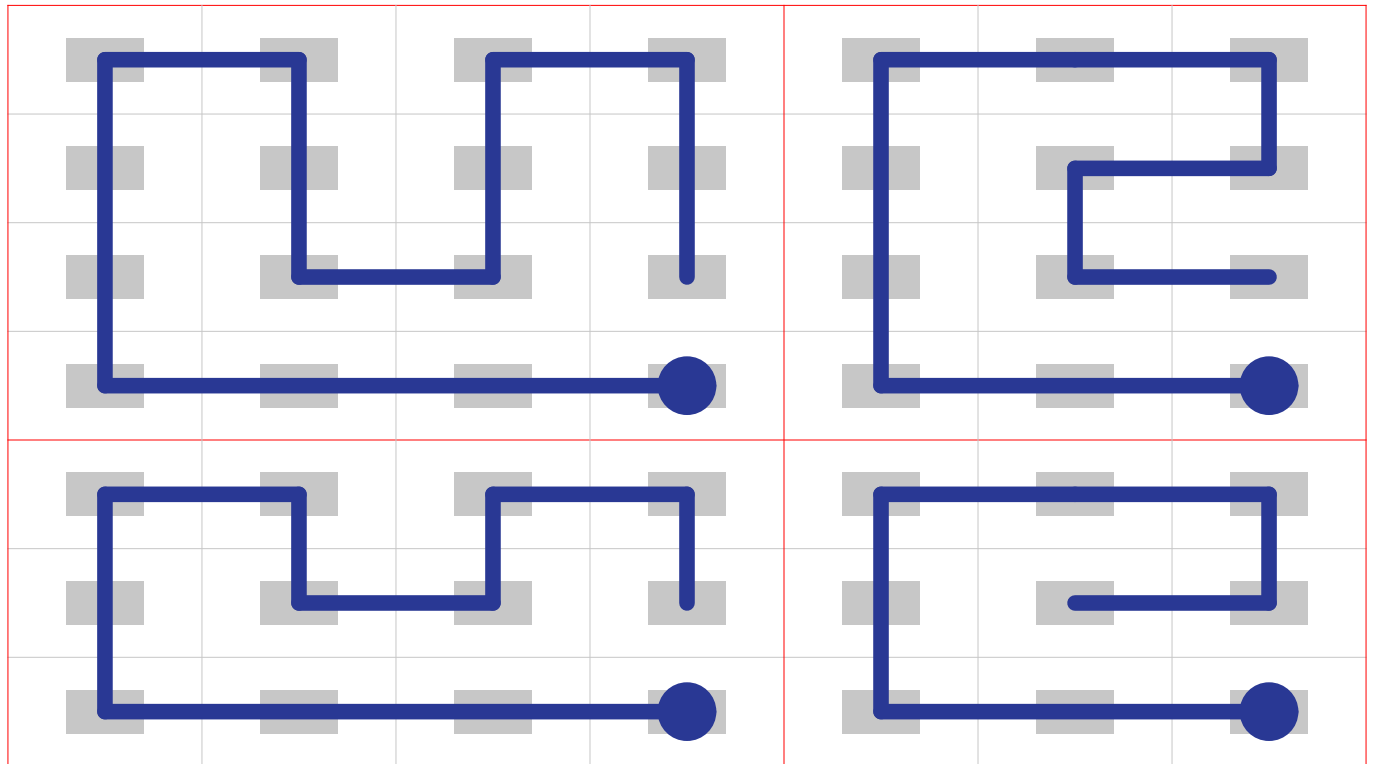
●   Primary Video Cable Input

▢   Video & Communication Input

━   Video & Communication Cables

Data Flow Diagram(Rear View)
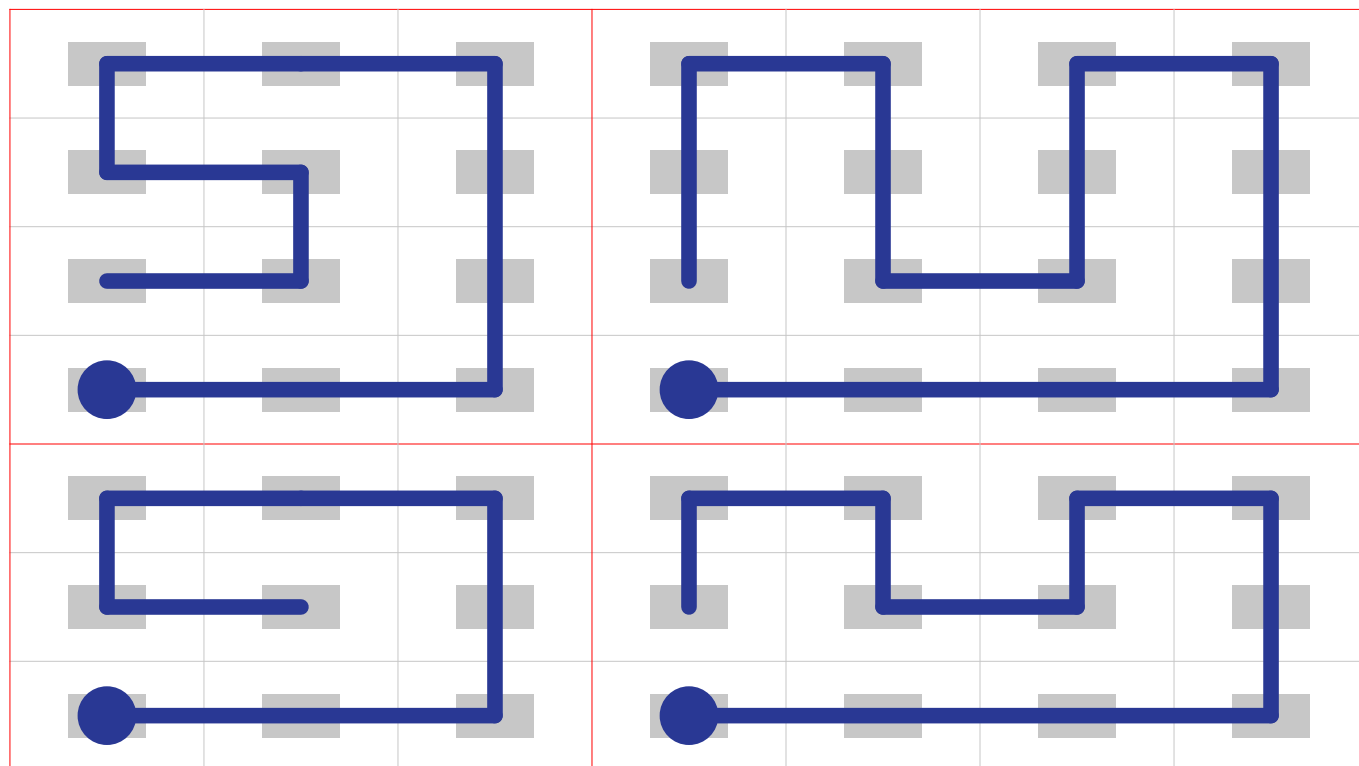
● Primary Video Cable Input

▢ Video & Communication Input

▬ Video & Communication Cables

Industry trend

Digital signage has become an important targeting tool in both public and business indoor environments. In indoor spaces often flooded by natural sunlight, it is important to choose the right technology to engage potential customers. LED signage is ideally suited to locations flooded by natural sunlight, providing brilliant picture quality regardless of direct sunlight and glare. LED signage is constantly evolving and well-suited to corporate lobbies, hospitality venues and busy transportation hubs such as airports and railways – providing eye-catching displays whether greeting customers at reception or providing critical information throughout their travels. LED signage is now seen as an integral part of any modern business and as a result, the market is growing fast. Regardless of size, light or configuration, LED signage has the advanced visual capability and flexibility to enhance any business environment.

Why Samsung IFR Series

Samsung's IFR series is almost perfectly engineered for public and business environments, providing high picture quality, efficient operation and design flexibility. Best-in-class LED display is partnered with advanced HDR technology for up to 8K resolution, creating a truly immersive viewing experience. This is enhanced by rigorous factory calibration and easy mobile calibration for seamless viewing on a fully uniform screen. The IFR series enables smooth viewing, eliminating screen tearing without the need for any additional video processor. A redundancy system is also embedded within the IFR series to prevent any screen failures or downtime for a business' messaging and promotions. The IFR series supports two kinds of cabinets with landscape, portrait, curved and L-shaped installation options, allowing businesses to utilize a flexible design regardless of any environmental constraints.

Brilliant picture quality	Efficient operation	Flexible design

Key features

Best-in-class LED picture quality

Drawing on Samsung's industry leadership experience, technical knowhow and years of innovation in visual display technology, Samsung has developed LED signage with visual clarity that is second to none. The IFR series provides an impressive viewing experience with best-in-class picture quality for LED, producing images with exact color expression, reduced noise and a full range of grays and blacks.

Key features

Pin-sharp clarity, bright or dark

Discover the true beauty no matter how bright or dark a scene is. The IFR series supports HDR10+ which optimizes brightness and contrast ratio scene-by-scene to ensure each frame looks exactly as intended. With conventional displays, some scenes may look saturated or too dark, but with HDR10+ tone is fine-tuned continuously as content plays, making the picture is as detailed as it is in the real world.
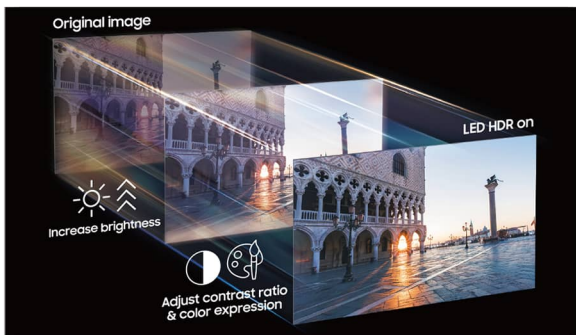
Clearly refined visuals

Utilizing a propriety algorithm, LED HDR creates true-to-life images, turning any content into HDR-level quality without requiring any special metadata. Dynamic Peaking and Inverse Tone Mapping ensure content is always being delivered at optimal peak brightness levels while avoiding glare. Additionally, in-depth Color Mapping prevents color distortion delivering refined and accurate color presentation.

HDR experience in large scale

With Multi-link HDR technology, IFR series delivers more impactful content than ever before, providing HDR quality content up to 8K resolution. Using Samsung's proprietary algorithm, Multi-link HDR turns any content into HDR level without needing any special meta-data. Multi-Link HDR is also a flexible solution that can be applied to various layouts and screen sizes with less cabling.

Built for the studio

Samsung's IFR series is built for studio shooting. Supporting frame rate synchronization and a high refresh rate to minimize flicker lines, the display helps producers create incredibly engaging and immersive content, with levels of detail like never before.

Key features

Screen uniformity all the time

Samsung's complete and comprehensive calibration solution ensures LED displays continuously maintain picture quality. While all LED screens undergo multi-step factory calibration process to tune individual pixels to uniform brightness and color, users can also easily manage brightness and color uniformity to meet their needs with their mobile devices throughout the lifetime of their display.

Seamless, smooth content playback

Frame rate synchronization, available on Samsung's MagicINFO™ content management platform, guarantees smooth content playback without screen tearing when multiple S-boxes are connected – even when combining or splitting content across cabinets. Additionally, thanks to Samsung's MagicINFO™ platform, no additional video processor is required, reducing operation costs.
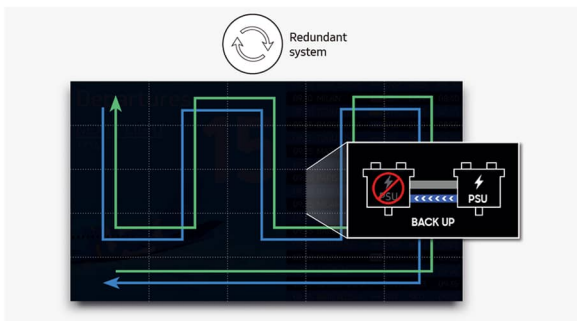
Operational safeguards to minimize downtime

IFR series features multiple operational safeguards intended to minimize screen failures including embedded dual power units and forward and reverse signal redundancy. These redundant systems help to ensure content interruptions are reduced as much as possible, keeping your message front and center.
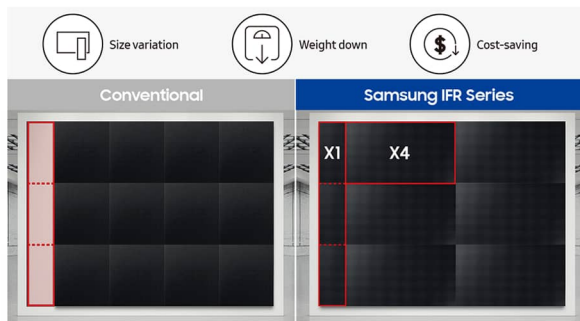
Flexible design for any location

IFR series features two cabinet types of differing sizes to provide more flexibility in design. With support of portrait, landscape, curved, L-shaped and ceiling installations, businesses can have ultimate control to create the ideal display for their space.

Specifications

Model	IFR					
	Basic				Gold	
	IF015R	IF020R	IF025R	IF040R	IF015R	IF025R
	LH015IFRCLS	LH020IFRCLS	LH025IFRCLS	LH040IFRCLS	LH015IFRTLS	LH025IFRTLS
Physical Parameter — Pixel Pitch	1.5 mm	2.0 mm	2.5 mm	4.0 mm	1.5 mm	2.5 mm
Pixel Configuration	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue
Configuration (LxH, per cabinet)	640 x 360 pixels	480 x 270 pixels	384 x 216 pixels	240 x 135 pixels	640 x 360 pixels	384 x 216 pixels
Diode Type	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)
Dimensions (mm, LxHxD, per cabinet)	960 x 540 x 79.5 mm	960 x 540 x 79.5 mm	960 x 540 x 79.5 mm	960 x 540 x 79.5 mm	960 x 540 x 79.5 mm	960 x 540 x 79.5 mm
Dimensions (inch, inchxD, per cabinet)	43.3 x 3.13 inch	43.3 x 3.13 inch	43.3 x 3.13 inch	43.3 x 3.13 inch	43.3 x 3.13 inch	43.3 x 3.13 inch
No. of Modules (WxH, per cabinet)	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Weight (per cabinet/per m²)	12.4 kg / 23.9 kg	12.4 kg / 23.9 kg	12.4 kg / 23.9 kg	12.4 kg / 23.9 kg	12.4 kg / 23.9 kg	12.4 kg / 23.9 kg
Optical Parameter — Brightness (Peak/Max) [1]	1,600 nit / 800 nit	1,600 nit / 1,000 nit	2,000 nit / 1,000 nit	1,500 nit / 900 nit	1,600 nit / 800 nit	2,400 nit / 1,200 nit
Contrast Ratio [2]	12,000:1	7,200:1	8,000:1	8,300:1	12,000:1	12,000:1
Viewing Angle - Horizontal	160°	160°	160°	160°	160°	160°
Viewing Angle - Vertical	160°	160°	160°	160°	160°	160°
Bit Depth	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)
Color Temperature - Default	6,500K	6,500K	6,500K	6,500K	6,500K	6,500K
Color Temperature - Adjustable	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)
Electrical Parameter — Video Rate	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input Power Range	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz
Power Consumption - Max	694 (W/m²) / 360 (W/Cabinet)	502 (W/m²) / 260 (W/Cabinet)	502 (W/m²) / 260 (W/Cabinet)	502 (W/m²) / 260 (W/Cabinet)	694 (W/m²) / 360 (W/Cabinet)	502 (W/m²) / 260 (W/Cabinet)
Power Consumption - Typ	226 (W/m²) / 117 (W/Cabinet)	168 (W/m²) / 87 (W/Cabinet)	168 (W/m²) / 87 (W/Cabinet)	168 (W/m²) / 87 (W/Cabinet)	226 (W/m²) / 117 (W/Cabinet)	168 (W/m²) / 87 (W/Cabinet)
Heat Generation - Max (BTU/SF)	219.9 BTU/SF per hour	159.1 BTU/SF per hour	159.1 BTU/SF per hour	159.1 BTU/SF per hour	219.9 BTU/SF per hour	159.1 BTU/SF per hour
Refresh Rate [3]	7,680Hz	6,480Hz	6,480Hz	6,480Hz	7,680Hz	6,480Hz
Operational Parameter — Power Redundancy	Yes	Yes	Yes	Yes	Yes	Yes
Working Temperature / Humidity	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH
Storage Temperature / Humidity	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH
IP Rating	IP20	IP20	IP20	IP20	IP20	IP20
LED Lifetime	100,000 hours	100,000 hours	100,000 hours	100,000 hours	100,000 hours	100,000 hours
Certification — Safety	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1
EMC	Class A	Class A	Class A	Class A	Class A	Class A
Service — Service	Front	Front	Front	Front	Front	Front
Package — Box Dimension (mm, WxHxD)	1,119 x 206 x 699mm	1,119 x 206 x 699 mm	1,119 x 206 x 699 mm	1,119 x 206 x 699 mm	1,119 x 206 x 699 mm	1,119 x 206 x 699 mm
Package Weight (kg, per cabinet)	17.5 kg	18.1 kg	18.1 kg	18.1 kg	17.5 kg	18.1 kg
Special Installation — Curve (Concave)	12000R	12000R	12000R	12000R	12000R	12000R
Curve (Convex)	N/A	N/A	N/A	N/A	N/A	N/A
Rotation	N/A	Yes (90 degree clockwise)	Yes (90 degree clockwise)	Yes (90 degree clockwise)	N/A	Yes (90 degree clockwise)
Ceiling / Incline [4]	Yes	Yes	Yes	Yes	Yes	Yes
L-shape	N/A	N/A	N/A	N/A	N/A	N/A

(1) Peak value according to IDMS (Information Display Measurement Standard)
(2) Measured under 10lux light. Contrast in darkroom exceeds 1000000:1
(3) Referring to visual refresh rate
(4) For ceiling installation, screen should be installed at least 1.8m height with no vibration

Production Information

Specifications

Model	IFR-F					
	Basic				Gold	
	IF015R-F	IF020R-F	IF025R-F	IF040R-F	IF015R-F	IF025R-F
	LH015IFRCFS	LH020IFRCFS	LH025IFRCFS	LH040IFRCFS	LH015IFRTFS	LH025IFRTFS
Physical Parameter — Pixel Pitch	1.5 mm	2.0 mm	2.5 mm	4.0 mm	1.5 mm	2.5 mm
Pixel Configuration	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue	1 red, 1 green, 1 blue
Configuration (LxH, per cabinet)	160 x 360 pixels	120 x 270 pixels	384 x 216 pixels	60 x 135 pixels	160 x 360 pixels	96 x 216 pixels
Diode Type	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)
Dimensions (mm, LxHxD, per cabinet)	240 x 540 x 81 mm	240 x 540 x 81 mm	240 x 540 x 81 mm	240 x 540 x 81 mm	240 x 540 x 81 mm	240 x 540 x 81 mm
Dimensions (inch, inchxD, per cabinet)	23.3 x 3.18 inch	23.3 x 3.18 inch	23.3 x 3.18 inch	23.3 x 3.18 inch	23.3 x 3.18 inch	23.3 x 3.18 inch
No. of Modules (WxH, per cabinet)	1 x 3	1 x 3	1 x 3	1 x 3	1 x 3	1 x 3
Weight (per cabinet/per m²)	3.2 kg / 24.7 kg	3.2 kg / 24.7 kg	3.2 kg / 24.7 kg	3.2 kg / 24.7 kg	3.2 kg / 24.7 kg	3.2 kg / 24.7 kg
Optical Parameter — Brightness (Peak/Max) [1]	1,600 nit / 800 nit	1,600 nit / 1,000 nit	2,000 nit / 1,000 nit	1,500 nit / 900 nit	1,600 nit / 800 nit	2,400 nit / 1,200 nit
Contrast Ratio [2]	12,000:1	7,200:1	8,000:1	8,300:1	12,000:1	12,000:1
Viewing Angle - Horizontal	160°	160°	160°	160°	160°	160°
Viewing Angle - Vertical	160°	160°	160°	160°	160°	160°
Bit Depth	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)	16 bit (Internal processing 18bit)
Color Temperature - Default	6,500K	6,500K	6,500K	6,500K	6,500K	6,500K
Color Temperature - Adjustable	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)	2,800 ~ 10,000K (use S/BOX)
Electrical Parameter — Video Rate	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input Power Range	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz	100~240 VAC, 50/60 Hz
Power Consumption - Max	733 (W/m²) / 95 (W/Cabinet)	617 (W/m²) / 80 (W/Cabinet)	617 (W/m²) / 80 (W/Cabinet)	617 (W/m²) / 80 (W/Cabinet)	733 (W/m²) / 95 (W/Cabinet)	617 (W/m²) / 80 (W/Cabinet)
Power Consumption - Typ	309 (W/m²) / 40 (W/Cabinet)	208 (W/m²) / 27 (W/Cabinet)	208 (W/m²) / 27 (W/Cabinet)	208 (W/m²) / 27 (W/Cabinet)	309 (W/m²) / 40 (W/Cabinet)	208 (W/m²) / 27 (W/Cabinet)
Heat Generation - Max (BTU/SF)	232 BTU/SF per hour	195.5 BTU/SF per hour	195.5 BTU/SF per hour	195.5 BTU/SF per hour	232 BTU/SF per hour	195.5 BTU/SF per hour
Refresh Rate [3]	7,680Hz	6,480Hz	6,480Hz	6,480Hz	7,680Hz	6,480Hz
Operational Parameter — Power Redundancy	N/A	N/A	N/A	N/A	N/A	N/A
Working Temperature / Humidity	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH	0°C~40°C / 10~80%RH
Storage Temperature / Humidity	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH	-20°C~45°C / 5~95%RH
IP Rating	IP20	IP20	IP20	IP20	IP20	IP20
LED Lifetime	100,000 hours	100,000 hours	100,000 hours	100,000 hours	100,000 hours	100,000 hours
Certification — Safety	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1	62368-1, 60950-1
EMC	Class A	Class A	Class A	Class A	Class A	Class A
Service — Service	Front	Front	Front	Front	Front	Front
Package — Box Dimension (mm, WxHxD)	653 x 148 x 354 mm	653 x 148 x 354 mm	653 x 148 x 354 mm	653 x 148 x 354 mm	653 x 148 x 354 mm	653 x 148 x 354 mm
Package Weight (kg, per cabinet)	4.9 kg	4.9 kg	4.9 kg	4.9 kg	4.9 kg	4.9 kg
Special Installation — Curve (Concave)	3000R	3000R	3000R	3000R	3000R	3000R
Curve (Convex)	3000R	3000R	3000R	3000R	3000R	3000R
Rotation	Yes (90 degree clockwise)	Yes (90 degree clockwise)	Yes (90 degree clockwise)	Yes (90 degree clockwise)	Yes (90 degree clockwise)	Yes (90 degree clockwise)
Ceiling / Incline [4]	Yes	Yes	Yes	Yes	Yes	Yes
L-shape	Yes	Yes	Yes	Yes	Yes	Yes

(1) Peak value according to IDMS (Information Display Measurement Standard)
(2) Measured under 10lux light. Contrast in darkroom exceeds 1000000:1
(3) Referring to visual refresh rate
(4) For ceiling installation, screen should be installed at least 1.8m height with no vibration

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