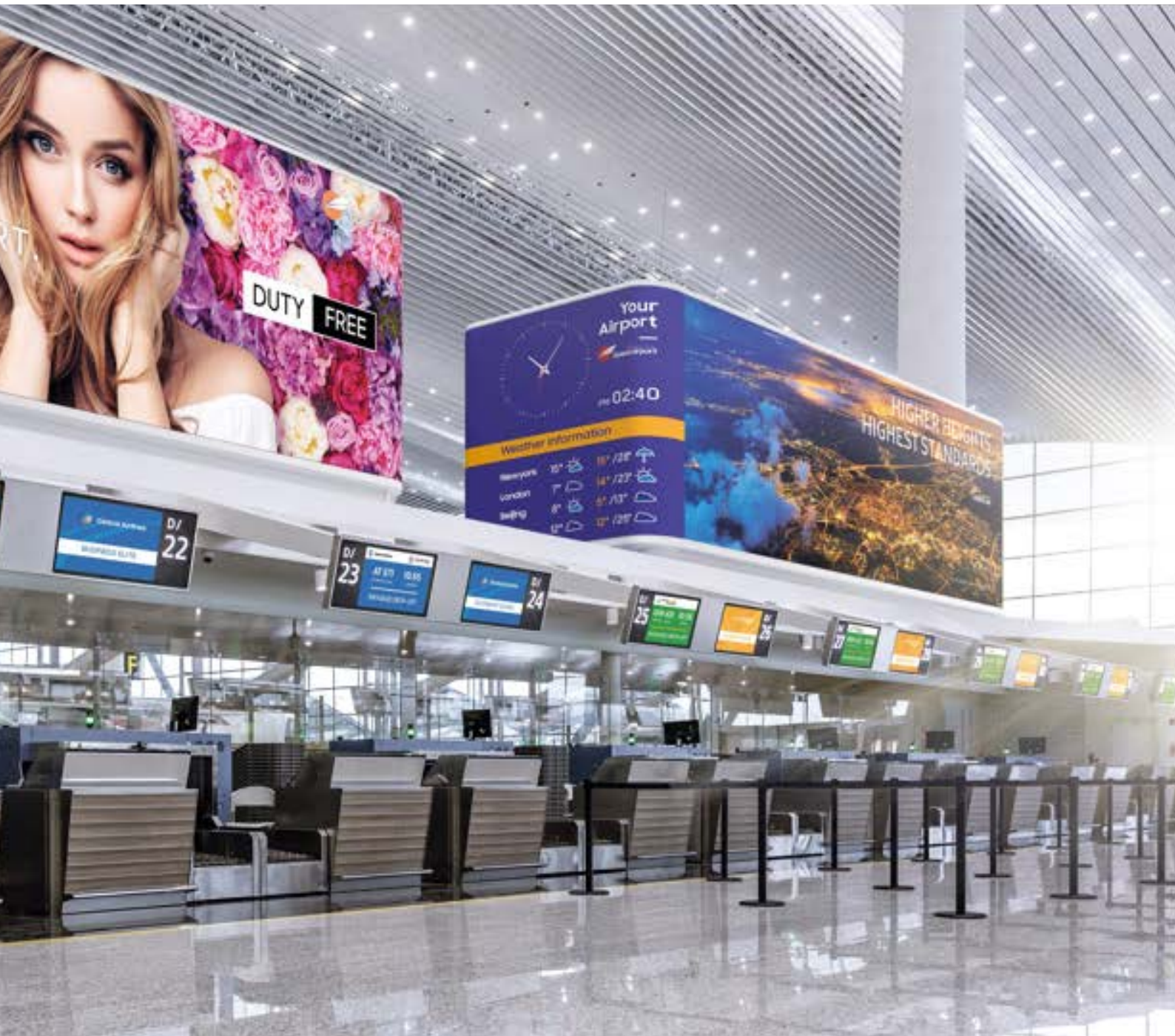# Indoor LED Signage

IFR Series
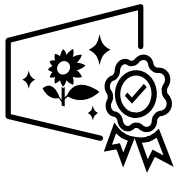
Completely captivating. Fully flexible.
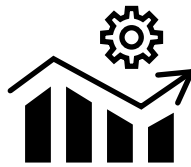
Industry trend

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.
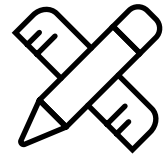
Why Samsung IFR Series

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

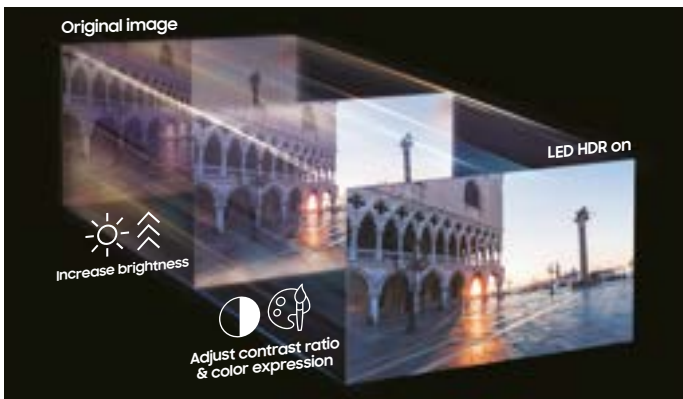Drawing on Samsung's industry leadership experience, technical knowhow and years of innovation in visual display technology, Samsung has developed LED signage with visual clarity that is second to none. The IFR series provides an impressive viewing experience with best-in-class picture quality for LED, 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

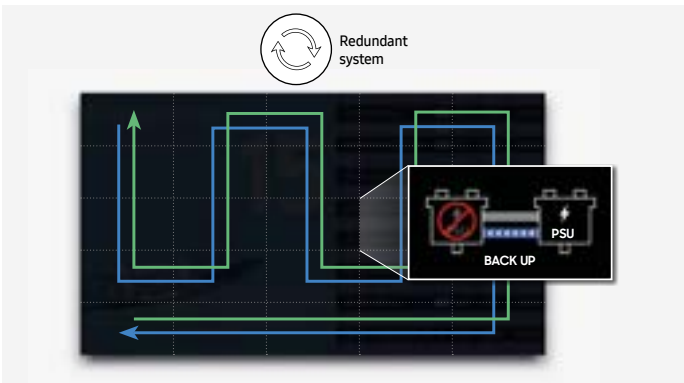Factory Calibration   Color Expert LED   Color Expert LED Mobile

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.

Frame rate sync off
Frame rate sync on

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.

Redundant system

PSU
BACK UP

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.

Size variation   Weight down   Cost-saving

Conventional	Samsung IFR Series
	X1 X4

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.

Curved   L-Type   Ceiling

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 x135 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

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

About Samsung Electronics Co., Ltd.

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LED Signage

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