



DATA & POWER
REDUNDANCY



EASY
ALIGNMENT



HIGH
BRIGHTNESS



LIGHT-WEIGHT



HIGH REFRESH
RATE



Phoenix Series

Extremely Low Heat Release Rate

PRODUCT ADVANTAGES

PLEDCO's Phoenix Series offers a variety of cabinet sizes in both front/back service. Most companies are limited to their availability in cabinet sizes. This limitability can make it extremely difficult when trying to meet a client's dimension demands for an exact sized project request. At PLEDCO we are able to produce any size of LED display requested based on our versatile cabinet structure size availability.



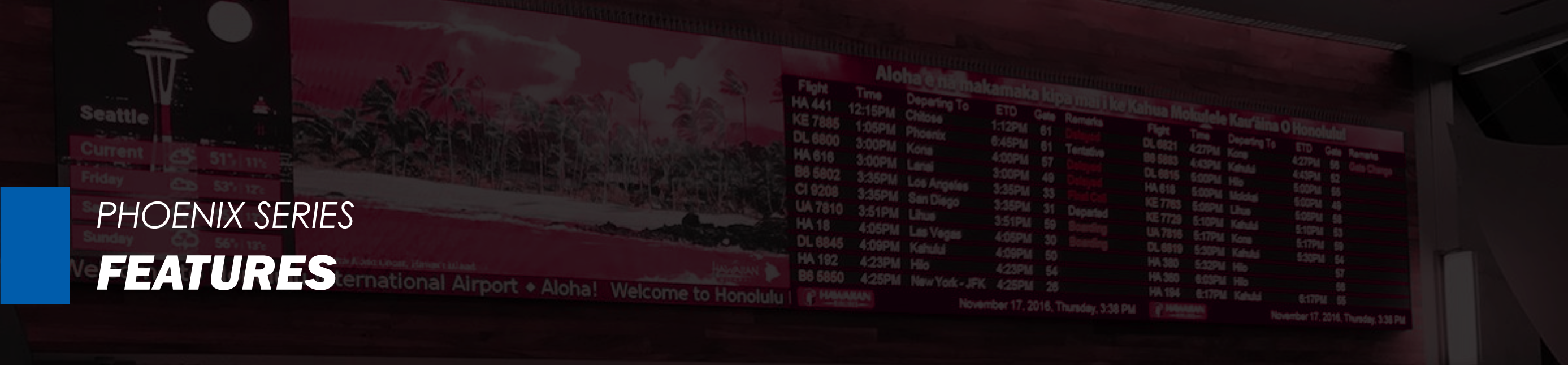
CABINET INSTALLATIONS



Front Service



Back Service



PHOENIX SERIES FEATURES

Power Backup

Specifically, for LED display advertising applications, the most critical issue that could occur would be media down-time. Our proprietary power backup function ensures that every displays' cabinets are equipped with two (2) independent power supplies, which guarantees zero content down-time in case there is any hardware malfunctions. Also, our watchdog system will immediately notify your chosen service center if there are any hardware failures and can help schedule a parts replacement for your next maintenance service call.

Data Backup

Over the past few years LED displays have been in high demand for high resolution products, which require a massive quantity of pixels to be managed directly for the control system. One of the most detrimental issues that could arise is a bad data connection or hardware failure on the bus lines and this in turn could result in partial or 100% content down-time.

Pledco has developed a state-of-art monitoring system with a fully redundant data line to ensure this issue cannot occur. Our main goal is to guarantee zero down-time and provide an immediate notification to your service centre to schedule a service call for urgent maintenance.



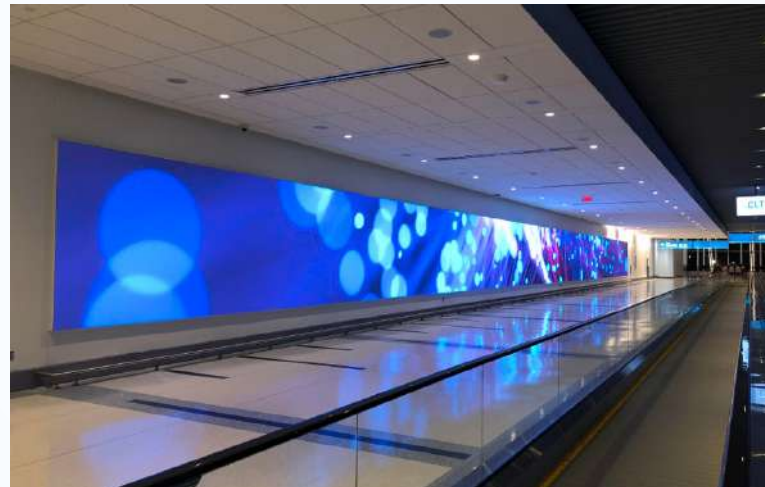
High Refresh Rate

The new generation of broadcasting cameras, including high-end mobiles to professional cameras, the refresh rate is the most important factor to ensure that your LED display will not generate any type of unusual effects. We have developed several technologies to guarantee perfect imagery when your display is being photographed or video recorded. Our displays are using scanning mode at +4000Hz and we using lowest scanning technology available to be able to display your content. Our proprietary 20-bit true view and dynamic gamma table feature ensures our displays deliver a stunning performance for any type of environment or conditions.



LOW HEAT RELEASE RATE TESTED

A high-performance indoor LED display solution, the Phoenix Series has been specially designed for applications such as; airports, hospitals, train stations, major retailers and many other. Designed entirely with aluminum, integrated with an external VDC power supply and a minimal amount of plastic within the LEDs. The Phoenix Series had been tested, approved and certified by SGS for CA TB133 Heat Release Rate.



LOW BRIGHTNESS & HIGH GREY LEVELS

The Phoenix Series' Indoor LED Display cabinet has the ability to project high levels of Grey while maintaining low brightness. The grayscale comparison can be seen below to prove our technology's pristine imagery. Standard LED display cabinets fail to reach high levels of grey scale due to low quality engineering from their software and calibration, however Pledco's advanced software, control system and calibration enables us to reach these picturesque levels while maintaining low brightness.

HD BROADCAST COMPATIBLE

The Phoenix Series' Indoor LED Display cabinet is HD Broadcast compatible for television recording. Our ultra-high refresh rates ensure when broadcasting live television the LED display stays flicker free but more importantly continues to project pristine imagery. In addition all our HD LED display are fully equipped with a full redundancy control system to ensure zero downtime during a live event.





PLEDCO HD DISPLAY

Our calibration technology reaches all possible X & Y coordinates ensuring you HD broadcasting experience is crystal clear.

SYSTEM CALIBRATION

All X & Y coordinates are kept in our client project database. When you order new tiles for an existing project we retrieve the original X & Y coordinates. This ensures during calibration all colors are matched properly. Typically, in video mode, no color differences are visible, however, if white has been set at 50% brightness, the user may see a slight difference in color.

1 COLOR ENHANCING

After calibrating with our Radiant PM-1400F Calibration System in a dark room, the wave length difference for each color will only be less than 0.1nm. Our patented control system allows users to select several different color spaces or create your own color space by using our user-friendly software.

2 COLOR COORDINATION PROCESS

The same batch of LED's with discrete distribution are all moved to PAL Mode Chroma Area through color coordinate calibration Technology.

Since each LED batch produced has different coordinates this requires precise color calibration, which in turn allows:

- ▶ The LED display to show natural and vivid colors.
- ▶ All LEDs have been color rendered consistently.
- ▶ Color Spaces Available: ADOBE RGB, REC-709, and DCI-P3 as optional.

3 DIGITAL DATA REVISION

If a single pixel fails, the data will be read-out from the EEPROM and then re-wrote to the replacement chip. After this process the brightness value is calibrated again to ensure the uniformity of the entire system, thus providing easy and fast maintainability.

At the same time, the system records every displays' initial calibration data to avoid uneven brightness caused by led attenuation. The updated screen brightness calibration data and recorded data, both ensure the uniformity of the display's brightness over a period of time.



PHOENIX SERIES

SPECIFICATIONS

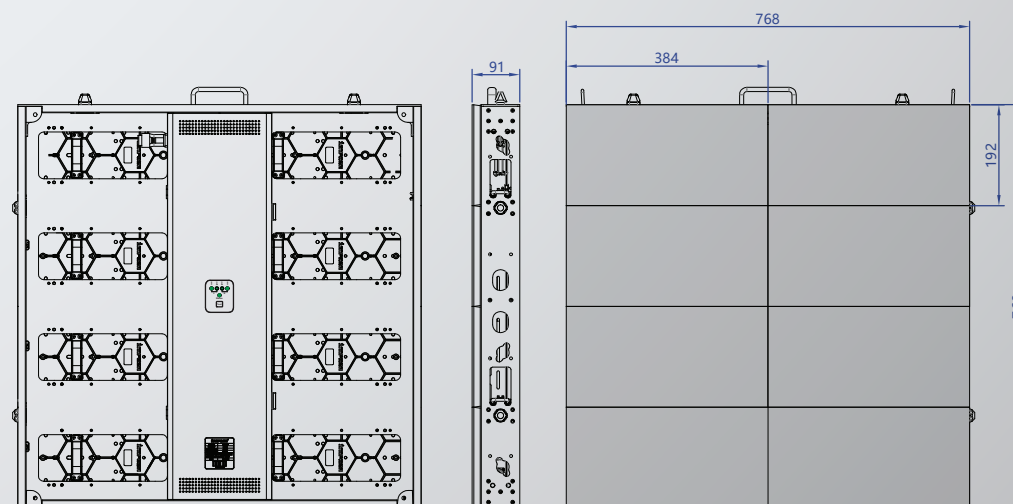
Physical pitch (mm)	P4.36mm	5.33mm	6mm
Voltage	110/220VAC, 50-60HZ		
LED Type	SMD up to 2500nits		
Power Supply Unit	Remote Power unit within 30m - using hot swappable PSU 3KW x3 for each 2 Unit rack. (Optional : Inside cabinet PSU without power redundancy and higher fuel rate.)		
Power Supply Redundancy	Standard feature - zero down time with real time watchdog and notification service.		
Data Line Redundancy	Standard feature - zero down time with real time watchdog and notification service. Including dual controller for 100% redundancy.		
Controller	MPU9000 4K, HDR10, Dolby Vision, internal HD player, internal HD scaler. All standard inputs fully supported / UDP or Artnet remote for all functions, including input selection. Up to 12-bit color depth / 6 GB output port and up to 4 million pixels can be controlled per controller.		
Gamma	Dynamic gamma management for perfect consistency on each brightness level and excellent performance on low grayscale.		
Operating Humidity Range	0-90%		
Grayscale	16 bit		
Refresh Frequency	>4800HZ on MSB and LSB Grey scale (Adjustable)		
Brightness Control	100 levels by manual control or scheduler / 256 levels by light sensor (Optional UDP command for external control over network)		
White Balance Brightness @ 6500K (After Calibration)	Up to 2500 nits		
Operating Temp. Range	-40 to 55°C		
Scanning Mode	1/12	1/5	1/3
Color Temperature	3200K to 9500K (Adjustable - 4 fixed presets and 1 custom)		
Dot Brightness Calibration	Color and brightness adjustment and pixel by pixel with second layer for tile edging line brightness adjustment. Calibration data saved on tiles for instant replacement. All calibration data is stored on our server and can be reloaded by an automatic function (authorized service technicians only).		
Brightness Uniformity	+-1%		
Color Space	Standard REC-709 / Factory ADOBE RGB REC-2020 and DCI-P3 optional. Color gamut can be recalled instantly through our software in real-time or via UDP command.		
Chroma Uniformity	+- 0.002 (Cx, Cy)		
Frame Rate Hz	50 / 60 / 100 / 120		
Typical lifetime	>= 100 000 hrs. MTBF 25 000 hrs.		
Maintenance Access	Rear (Front Access Optional)		
Viewing Angle	>= 170° x 170°		
Directivity Angle (viewing angle @ 50% brightness)	140° x 140°		
LED Binning Wavelength	+/- 1.5Nm		
LED Binning Brightness	+-2.5%		
MAX Non visible Heat load BTU/hr. (per cabinet)	491		
AVG Non visible Heat load BTU/hr. (per cabinet)	163		
MAX for remote PSU units Heat load BTU/hr. +-10% (per cabinet)	71 (optional feature if requested by client)		

Physical pitch (mm)	P4.36mm	5.33mm	6mm
Model Numbers	PLEDCO-VFI4.36LI2-176x176-RGB-SFP	PLEDCO-VFI5.33LI2-144x144-RGB-SFP	PLEDCO-VFI6LI2-128x128-RGB-SFP
Cabinet Material	Aluminum / Stainless Steel		
Cabinet Surface (sqm)	0,589		
Standard Cabinet Size (w x h x d - mm)	768 x 768 x 92 (2x4 tiles per cabinet) Customizable to meet specific requirements - upon request		
Cabinet Resolution (w x h - pixels)	176 x 176	144 x 144	128 x 128
Cabinet Weight (kg)	13		
Cabinet Flatness (mm)	<= 0.2		
Pixel Density (sqm)	52 517	35 200	27 776
Tile Size (w x h - mm)	384 x 192		
Tile Resolution (pixels)	88 x 44	72 x 36	64 x 32
Pitch Tolerance	0.05mm		
IP Grade	Back panel central section IP54 Standard nano-coating treatment IP63 on LED Tiles		
Manufacturer	Standard 6 year or optional 9 year on all parts following Pledco's warranty policy.		
Maximum (per cabinet)	360 Watts		
Average (per cabinet)	120 Watts		

* Confirmed by SGS accredited labs, Pledco meets the CA TB133 Heat Release Rate.

** Certifications with ISO90001, ISO14001 and EMC - EN61000-6-1 & EN61000-3.

*** ** Subject to change based on installation specifics. All specs as of 01/15/2019



* Customizable cabinets available to match specific requirements or upon request.





CUSTOMER SERVICE

At PLEDco, we strongly emphasize the importance of customer relationships, and their trust in our products. Our key to lasting relationships focuses on delivering world-class LED products, while promising exceptional customer service and reliability, ensuring our clients a relaxing experience. PLEDco is recognized as an industry leading LED total solution provider, from initial inquiry to after sales, our heavily trained team will guide you step-by-step through the entire process of your LED project.

Installation Support

Our skilled technicians can professionally install your LED Displays without disturbing your projects schedule. Mitigation and problem-solving are inevitable during the installation process, and PLEDco's installation "Gurus" have the experience, know-how, and technical expertise to handle nearly any situation. We are able to provide you with all the required documents including; specification sheets, system diagrams, complete display and structure elevation drawings, and 3D rendering if required. As your dedicated total solution provider, we promise to be there step-by-step guiding you through your project, from initiation to closing.

24/7 Technical support via online or phone

Our phone and online live support systems enable us to provide 24/7 technical assistance. If you require urgent assistance, our skilled technicians are always ready to help, regardless of difficulty. Technicians are required to pass intensive training and testing to ensure issues are dealt-with professionally and accurately, while emphasizing the importance of your project schedule.

Warranty & Maintenance

With over 20 years of combined professional experience, our internationally exposed engineers have specially designed and developed LED Display solutions to cope with harsh environments and withstand extreme temperatures. However, in the event of a problem, our highly experienced technical support team promises minimal display downtime by utilizing our bullet-proof troubleshooting expertise. Nearly all of Pledco's products include a 5-year warranty, with optional extensions available upon request.

Parts Availability for the Next 15 Years

Our manufacturing facility produces all the parts used to assemble our LED displays. More importantly, we own all the technology, molds and PCB layout designs that are used to develop these parts. This provides us with the reliability of knowing exactly what materials are being used and ensures the quality of our products and can be managed directly from the production level. One of the biggest after-sales issues a client could have is being able to receive replacement LEDs that have been recalibrated exactly the same as the display when first produced. PLEDco is one of the few companies in the world who utilizes the international HD NTSC REC-709 calibration in LED display, thus making it possible for us to provide our clients the exact same LEDs to match their display by using Radiant's camera technology.



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