

# BILLBOARD SERIES



OUTDOOR DIP





At PLEDCO, we design, manufacture, assemble and provide industry-leading BILLBOARDS, all from a single source.

Our products are designed to match the requirements of numerous environments, markets, sizes and data specifications.

PLEDCO offers a complete set of specification options, allowing us to match your precise technical requirements.

Whether you desire one of our popular standard cabinets or seek a custom solution, our international team of experts will help you choose the best product to meet your projects goal.

PLEDCO  
**THE FUTURE**  
of LED technology

## HIGH-QUALITY BILLBOARD DISPLAY

Our BILLBOARD SERIES features only the best components, all of which are tested and verified in our state-of-the-art calibration factory. With thousands of displays installed around the world, PLEDCO has a vast technical expertise in a broad range of climates and operational environments.

- ▶ High brightness for up to 6000nits and beyond
- ▶ Remarkable visibility for outdoor advertising campaigns
- ▶ Waterproof IP67 certification, applicable to any weather and season
- ▶ Data and power back-up technology for minimal display downtime
- ▶ Patented Virtual pixel technology for increased pitch flexibility and energy saving capabilities
- ▶ Section by section LED display panels for quick installation and hassle-free maintenance
- ▶ Remoted diagnostic system

### PLEDCO BILLBOARDS

Reach more people everyday while they commute by vehicle, walking downtown or just enjoy watching their hometown team play.

Our Canadian-inspired design complements surrounding environments in a way that allows our billboards to stand out from the competition.



### PRISTINE IMAGERY

Integrated with LED REFLEX Technology assists to project the clearest resolution and picture, even during direct sunlight periods of the day.

### FULLY AUTOMATED CONTROL

Our Control System technology guarantees that your Billboard is working in full capacity with minimal maintenance required. One can adjust and check the power backup backup remotely.

### CUTTING-EDGE TECHNOLOGY

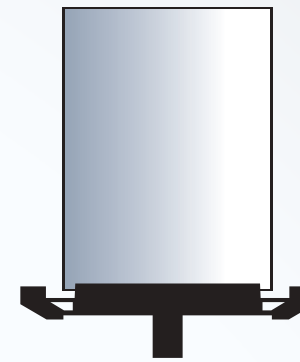
Integrated with PLEDCO's award winning LDU3000 controller, guarantees a user-friendly experience from the initial set up and throughout the life-time of the billboard.



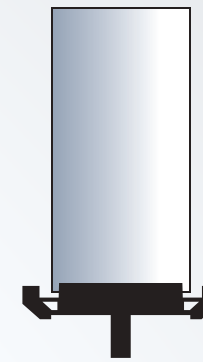
### FLEXIBLE

## OPTIONS

We offer a variety of flexible mounting options to accommodate each unique application:



WIDE SERIES  
2.88M X 9.28M



TALL SERIES  
4.8M X 3.52M



### LANDSCAPE SERIES

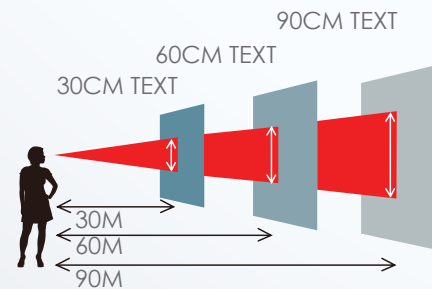
REGULAR	2.8M X 6.08M	MEDIUM	2.88M X 9.28M
LARGE	2.8M X 10.88M	X-LARGE	4.16M X 8.64M
XX-LARGE	3.5M X 14.72M	XXX-LARGE	4.16M X 14.72M
GIANT	4.8M X 7.68M	JUMBO	6.08M X 18.24M

## PRODUCT FEATURES

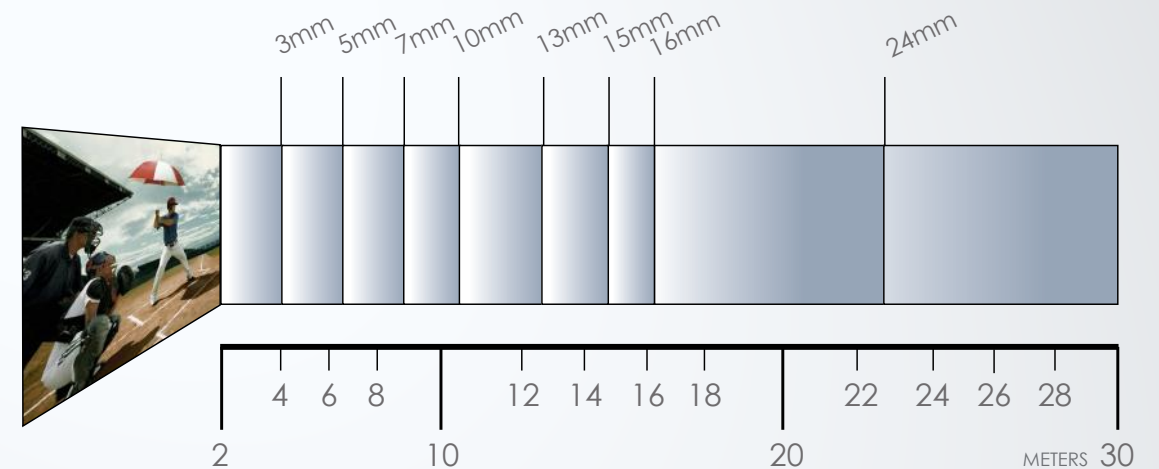
While older forms of BILLBOARD technology had the right idea, today's LED Display presents flexibility that the out-of-home advertising industry instinctively needs. People look at signs for change. They enjoy variety and a mixture of messages. The additional ad space billboards offer and their advantages over competing technologies cannot be overlooked.

### CHOOSE YOUR OWN PIXEL

We can help you decide what is the best and most suitable pixel pitch for your Billboard. We have a constant and reliable formula to compute the necessary pixels to maximize the capability of your Billboard display.



VIEWING DISTANCE IN RELATION WITH TEXT



VIEWING DISTANCE IN RELATION WITH PIXELS

# PRODUCT ADVANTAGES

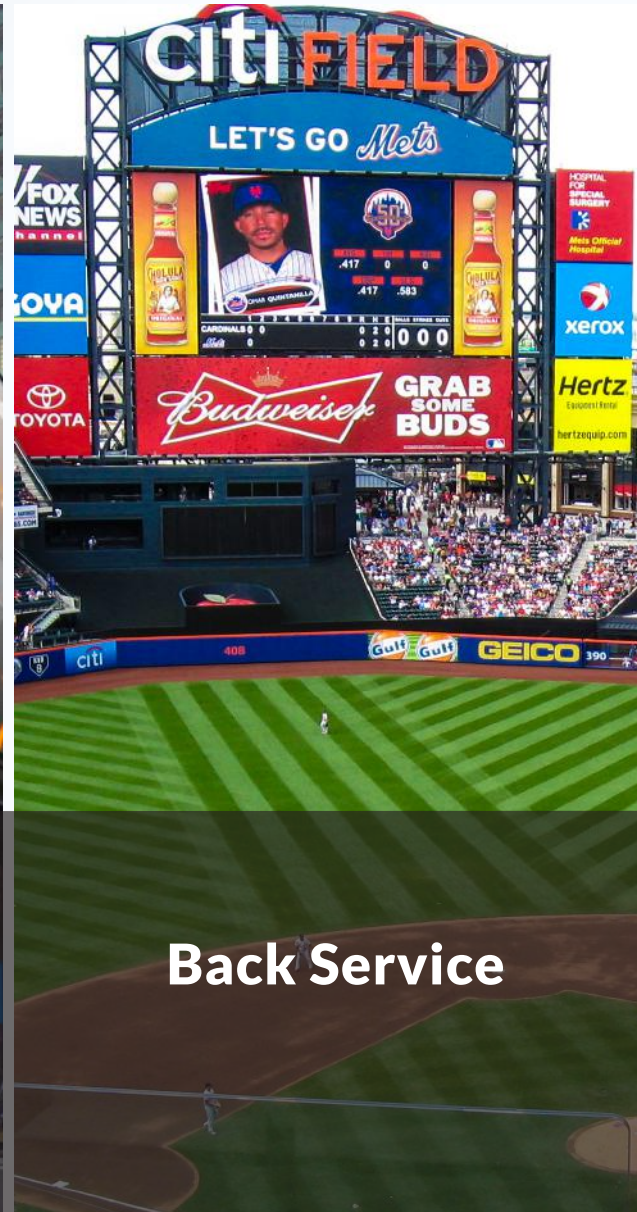
PLEDCO's Billboard Series offers a variety of cabinet sizes in both front and back service. Most companies are limited to their availability in cabinet sizes. This limitability can make it extremely difficult when trying to meet a client's dimension demands for an exact sized project request. At PLEDCO 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



Rental



Custom

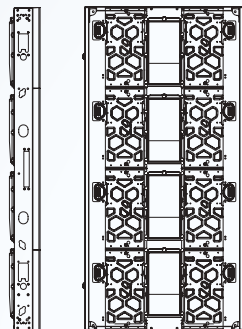


# Billboard Series **STRUCTURES**

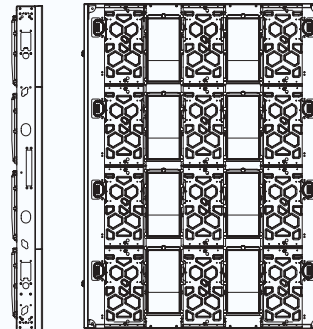


EII-TILE  
320 mm X 320 mm

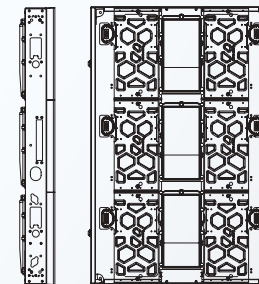
## EII-FRAME BACK SERVICE



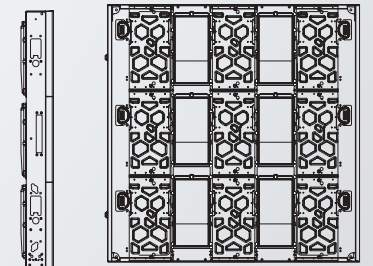
TYPE - A  
640 mm X 1280 mm



TYPE - B  
960 mm X 1280 mm

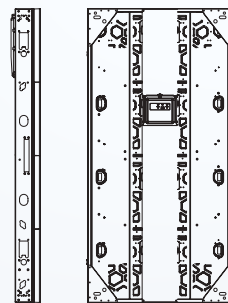


TYPE - C  
640 mm X 960 mm

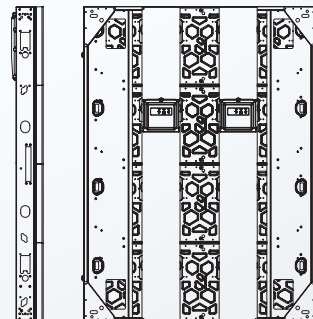


TYPE - D  
960 mm X 960 mm

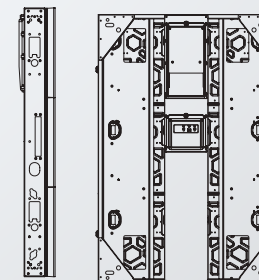
## EII-FRAME FRONT SERVICE



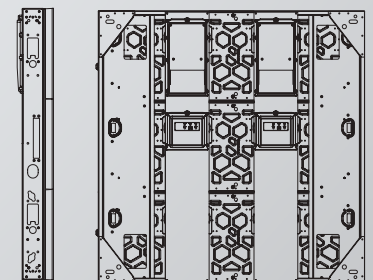
TYPE - A  
640 mm X 1280 mm



TYPE - B  
960 mm X 1280 mm

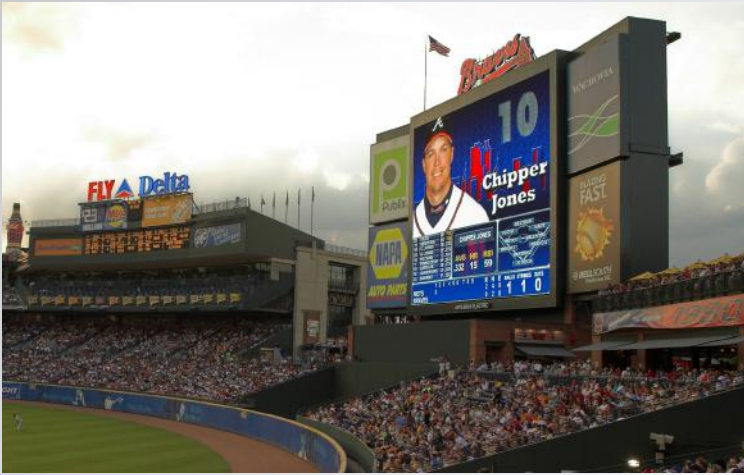


TYPE - C  
640 mm X 960 mm



TYPE - D  
960 mm X 960 mm

APPLICATIONS



STADIUMS



TRAFFIC



SIGNAGE

APPLICATIONS



ARCHITECT



DEALERSHIPS



BUILDING FACADES



## PLEDCO HD DISPLAY

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

# 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 0.01nm. Our patented control system allows users to select several different color spaces such as; 2k (REC709), 4K (REC2020) 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:

- ▶ Allows the LED display to show natural and vivid colors.
- ▶ Ensures that all LEDs have been color rendered consistently.

## 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.



# 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 unevenly 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.



# CONTROL SYSTEM 4K PROCESSING

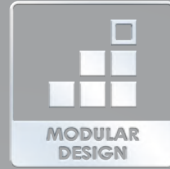


Input			
Type	Channel	Connector	Details
DisplayPort	1	DisplayPort Standard	Supports DisplayPort 1.2. Max.3840×2160@30Hz
HDMI	3	HDMI Standard	Supports HDMI 1.4 Max.3840×2160@30Hz
DVI	2	DVI-I	Analog inputs not supported. DVI1 Supports dual-link Max.2560×1600@60Hz
SDI	1	BNC	Supports SMPTE 425M-Level A(3G-SDI), SMPTE 292M(HD-SDI), SMPTE 259M-C(SDI)
VGA	1	HD-15	Max.1080P@60Hz
YPrPb	1	3.5mm jack	Max.1080P@60Hz
Genlock	1	BNC	SD bi-level and HD tri-level sync, PAL, NTSC, 720p, 1080i/p, 576i/p, 480i/p
Output			
Type	Channel	Connector	Details
DisplayPort	1	DisplayPort Standard	Supports DisplayPort 1.2. Max.3840×2160@30Hz
HDMI	1	HDMI Standard	HDMI1.4.Suports 12bit deep color
DVI	1	DVI-I	Loop out from DVI2 input
SDI	1	BNC	Loop out from SDI input
Genlock	1	BNC	Loop out from Genlock Input
SPDIF	1	RCA	Supports standard S/PDIF for stereo LPCM or compressed audio up to 192 kHz
Headphone	1	6.5mm audio jack	Stereo Audio Output
LED Datalink	6	Neutrik etherCON	1Gbps/port
Others			
Control Methods	USB, Gigabit Ethernet, IR, HMI on the Font Panel		
Power	Neutrik powerCON connector, 100-240 VAC, 50-60 Hz, Max.25W		
Temperature	-10 ~ +50 °C		
Mechanical	472×375×90 mm		
Optional			
Fiber optical direct output, single mode or multi mode MPU9000 (FM or FS)			

- Integrated with SWITCH Monitor(2x2), Video Processor, Full-HD Media Payer and LED Display Controller
- Supports SD Card and mSATA SSD Mass Storage devices (up to 256GB for SSD and 200GB for SD)
- Available in fiber version with single mode or multi mode direct fiber output
- Supports DisplayPort 1.2, HDMI 1.4, dual-link DVI and 3G SDI Inputs
- Advanced Faroudja® video processing: MADi and DCDi
- Supports daisy chaining of monitors of up to four streams
- 6GB LED Display Data Link(optional fiber output)
- 6-axis color control independent of ACC
- 4K×2K screen resolution support
- Supports Gigabit Ethernet
- Built-in 6.5mm audio jack
- SPDIF Output by coaxial
- Supports Genlock
- Built-in Monitor
- 16bits Process



# PRODUCT FEATURES



Custom designed by an industry leading Canadian engineer, our BILLBOARD SERIES is equipped with automatic brightness technology to overcome any lighting conditions while delivering HD imagery.

## SPECIFICATIONS

OVERVIEW	FEATURES	OUTDOOR SMD						OUTDOOR DIP				
MECHANICAL	Model Name	EIII 6mm	EIII 8mm	EIII 10mm	"EIII 10mm HD4K"	EIII 12mm	EIII 16mm	EII 10mm	EII 13mm	EII 16mm	EII 20mm	EII 26mm
	Structure type	EIII	EIII	EIII	EIII	EII	EII	EII	EII	EII	EII	EII
	Physical pitch	6.41mm	8mm	10.6mm	10.3mm	12mm	16mm	10.6mm	13.3mm	16mm	20mm	26.6mm
	Model Number	VFO6.4BLT	VFO8LT	VFO10.6LT	VFO10.3LTS	VFO12LT	VFO16LT	VFO10.6DLT	VFO13.3DLT	VFO16DLT	VFO20DLT	VFO26DLT
	Optional structure ref Drawing	BSxVFOxxxPL EIII / FSxVFOxxxPL EIII / RxVFOxxxPLEIII						BSxVFOxxxPL EII / FSxVFOxxxPL EII / RxVFOxxxPLEII				
	Cabinet Material	ALUMINUM, PLASTIC, STAINLESS STEEL										
	Cabinet Surface (SQM)	0.589			0.436		0.589		0.6144			
	Standard Cabinet Size (WxHxD mm)	768 x 768 x 124			660.4 x 660.4 x 124		768 x 768 x 124		640 x 960 x 124			
	Cabinet Resolution WxH (pixels)	156 X 156	96 X 96	72 X 72	64 X 64		48 x 48	72 X 72	48 x 72	40 x 60	32 x 48	24 x 36
	Cabinet Weight (KG)	24			18		24		25			
	Cabinet Flatness (mm)	<= 0.3										
	Pixel Density (SQM)	24336	15625	8789	9425	6944	3906	8789	5625	3906	2500	1406
	Tile Size (mm) L x H	384 x 192 ( 2 x 4 per panel)			330.2 x 165.1 ( 2 x 4 per panel)		384 x 192 ( 2 x 4 per panel)		320 x 320 (2 x 4 per panel)			
Tile Resolution (pixels)	60 x 30	48 x 24	36 x 18	32 X 16		24 x 12	36 x 18	24 x 24	20 x 20	16 x 16	12 x 12	
Pitch Tolerance	0.05mm											
IP Grade	Tiles IP67 PSU IP54 (optional IP65 PSU)											
Voltage	110/220VAC, 50-60HZ											
LED Type	3 in 1 SMD 3535 True Black	3 in 1 SMD 3535 Black Body ( Optional led available )					DIP 346					
Power Supply Unit	x2 - 320W Meanwell ( TDK Lamda optional )											
Power Supply Redundancy	Optional on E3 and E2 structure only (Dynamic Brightness Management)											
Data Line Redundancy	Yes (Real Time Watchdog Monitoring) data and fault log and pixel check function optional											
AV-input	DVI Dual link / HDMI 1.4 - HD4K optional on LDU9000											
Gamma	Dynamic Gama DUal Map 1.8 2.0 2.1 2.2 and custom on independant color											
Operating Humidity Range	0-90%											
Greyscale	16 bit ( Optional 20 bit for HD4K )											
Refresh Frequency	>4000HZ on MSB and LSB Grey scale and special proprietary cross scanning technology .											
Brightness Control	100 levels by manual control or scheduler / 256 levels by light sensor ( Optionnal UDP command for external control throught TCPIP )											
White Balance Brightness at 6500K after Calibration	5500 Nits	6500 Nits (optional 7500 nits)			8000 Nits	6500 Nits (optional 7500 nits)						
Operating Temp. Range	-35 to 65 °C											
Scanning Mode	1/2 Cross Scan			Static Drive		1/2 Cross Scan						
Color Temperature	3200K to 9500K (4 fix Presets and 1 Custom)											
Dot Brightness Calibration	Yes ( Using Radian Camera, Stored In Tiles with auto calibration for easy maintenance ) Real time user selectable HD2K or HD4K color space. Selft user tiles color space ajustement without calibration camera.											
Brightness Uniformity	+2%											
Color Calibration	Patented eclusive HD2K or HD4K user selectable with calibration stored in tiles.											
Chroma Uniformity	+ 0.002 ( Cx Cy )											
Frame Rate Hz	50 / 60 / 100 / 120 optional 240 and 3D active processing											
Typical lifetime	>= 100 000 hrs MTBF 25 000 hrs											
Maintainance Acces	Rear (Front Acces Optional)											
Viewing Angle	>= 170 x 170° (H +75.5 / -75.5 and +V75.5 / - 75.5)						>= 160° x 70° (H +80 / -80 and +V37.5 / - 37.5) Optional V bending					
"Directivity Angle (viewing angle at 50% brightness)"	140° x 140°						>= 140° x 55° (H +70 / -70 and +V27.5 / - 27.5) Optional V bending					
LED Binning Wavelenght	+/-1.5Nm											
LED Binning Brightness	+/-2.5%											
MAX. Thermal load BTU (per cabinet)	663			490		663		464				
Avg. Thermal load BTU (per cabinet)	211			164		211		155				
LDU2800-8000 ( Video encoder)	2-4 Gigabyte output with full redundancy between controllers , 20bit color processing. Optional Offline player built in, NTCIP, Artnet											
Control Sytem	Maximum (per cabinet)	650 Wh			552 Wh		650 Wh		455 Wh			
Power Consumption	Average (per cabinet)	250 Wh			184 Wh		250 Wh		180 Wh			



## 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's

### 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 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 knowing exactly what materials are being used and ensures the quality of our products can easily 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.



PLEDCO LTD.  
2/F Flat Roof 167 Lockhart Road  
Hong Kong

---

[pledco.com](http://pledco.com)  
[info@pledco.com](mailto:info@pledco.com)  
worldwide: 1-855-717-2606