Long Life. Brilliant Color. Compatible and Easy.

Planar's Clarity® LED3 Series is a complete line of LED-illuminated rear projection video wall displays that deliver superb image quality, industry-leading power-efficient performance, reliable long life and ease of operation. Designed to fully exploit the latest generation LEDs, DLP® systems, optics, image electronics and quality screens, Clarity LED3 Series displays maintain a stable image and worry-free operation for many years.

With crisp, clear images, Clarity LED3 Series displays deliver outstanding brightness of up to 800+ nits, illumination life up to 100,000 hours and high display reliability. Planar's proprietary Set it and Forget it (SiFi3™) technology ensures every Clarity LED3 Series display in a video wall operates at user-defined power or brightness level over the lifetime of the video wall, and in concert with the other displays in the video wall. The rugged Clarity LED3 Series is engineered for easy set up and commissioning with quiet, worry-free operation and a low cost-of-ownership.

Reliable Displays Built for the Long Run

Control room video walls are often intended to operate around the clock for years. Planar displays are uniquely designed for the most demanding mission-critical environments.

High Quality DLP® Imaging

Planar employs the latest Texas Instruments Digital MicroMirror Devices in Clarity LED3 Series rear projection video wall displays. These worry-free semiconductor-based imaging chips last well beyond 100,000 hours of continuous use.

Redundant LED Illumination

Planar illuminates the DLP® chip with highly-efficient and cooler-running red, green and blue LED light sources. Individual colors are driven by a separate LED driver circuit. On each color die are six parallel LEDs ensuring another layer of redundancy and color stability over time.

Long Illumination Lifetime

Illumination systems are the most important element of rear projection displays. Clarity LED3 Series provides industry-leading illumination lifetime up to 100,000 hours in Eco mode. and 60,000 hours of operation in normal, full power mode.

Single, All-in-one Chassis

Instead of assemble-at-the-site kits, Planar employs a single body chassis design that fully surrounds and protects the displays' internal components. It has the strength to stack video walls of up to eight rows high and interconnects to adjacent display with precision. Cable runs are designed not to hinder or interfere with the display's operation. It has all the needed accurate mounting points for a permanent set up with bases and screens, maintaining the screen's important flatness. Inside each component bolts to the chassis for vibration-free operation.

Superior Quality by Design

Compatible Base Structures Deliver Stability

Clarity LED3 Series includes a full set of bases custom designed to fit properly and keep the video wall flat and stable on the floor. An added structure is available for taller video walls. Video wall processing equipment is mounted in the bases for close proximity and cool operation. Planar provides highly-machined bracketry for permanent video wall installation.

Modular Design Keeps Temperatures Down

Excessive heat has a negative effect on electronic components. Clarity LED3 Series displays are designed so all internal components are separated on the chassis. This lowers the ambient heat, which ensures consistent, reliable and long-lasting video wall performance so you can be concerned about what's on the video wall and not what's inside.

Built for Different Environments

Planar's multi-layer screens are pre-acclimatized so they remain stable for years. The chassis is all aluminum and properly coated so no oxidation will affect internal components. All components are shielded from one another. These positive-pressure displays also keep all dust out of the chassis for clear and clean imagery.

Brilliant, Colorful Images

Precise Professional Optics

Planar uses only the best commercial glass in manufacturing its optical lens stacks for the internal projectors. Designed for 24 hours of continuous use, these lenses provide stunningly sharp and uniform imagery across the screen.

Broad Color Gamut LEDs

Clarity LED3 Series displays have bright, wide color gamut LEDs tuned for luminance and chromicity, provide a stunning colorful array of light to the screen. The LEDs are perceived by the human eye to be brighter than what is measured. These LEDs create very dark blacks and great contrast between colors. Multiple colors are projected simultaneously. Secondary colors are employed (cyan, yellow, and magenta) to improve the perceived color range, displaying 16 million colors at 10 bits deep.

Large, Full-size DLP® Chips

DLP® semiconductor technology provides superior contrast, clear and sharp pixel definition, color consistency, and accurate reprensentation of content. This eliminates blur, burn in, dark spots, aging and other image challenges.

Planar Natural Color Improves Visualization

To counter common issues with overly saturated LED colors, Planar employs a unique proprietary color space tuning technique, called Planar Natural Color that intelligently maps a broader color palette to content, producing saturated and life-like colors.
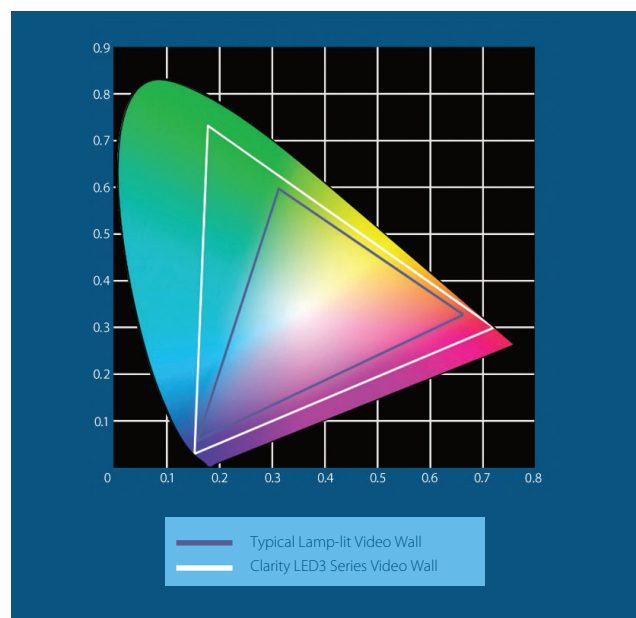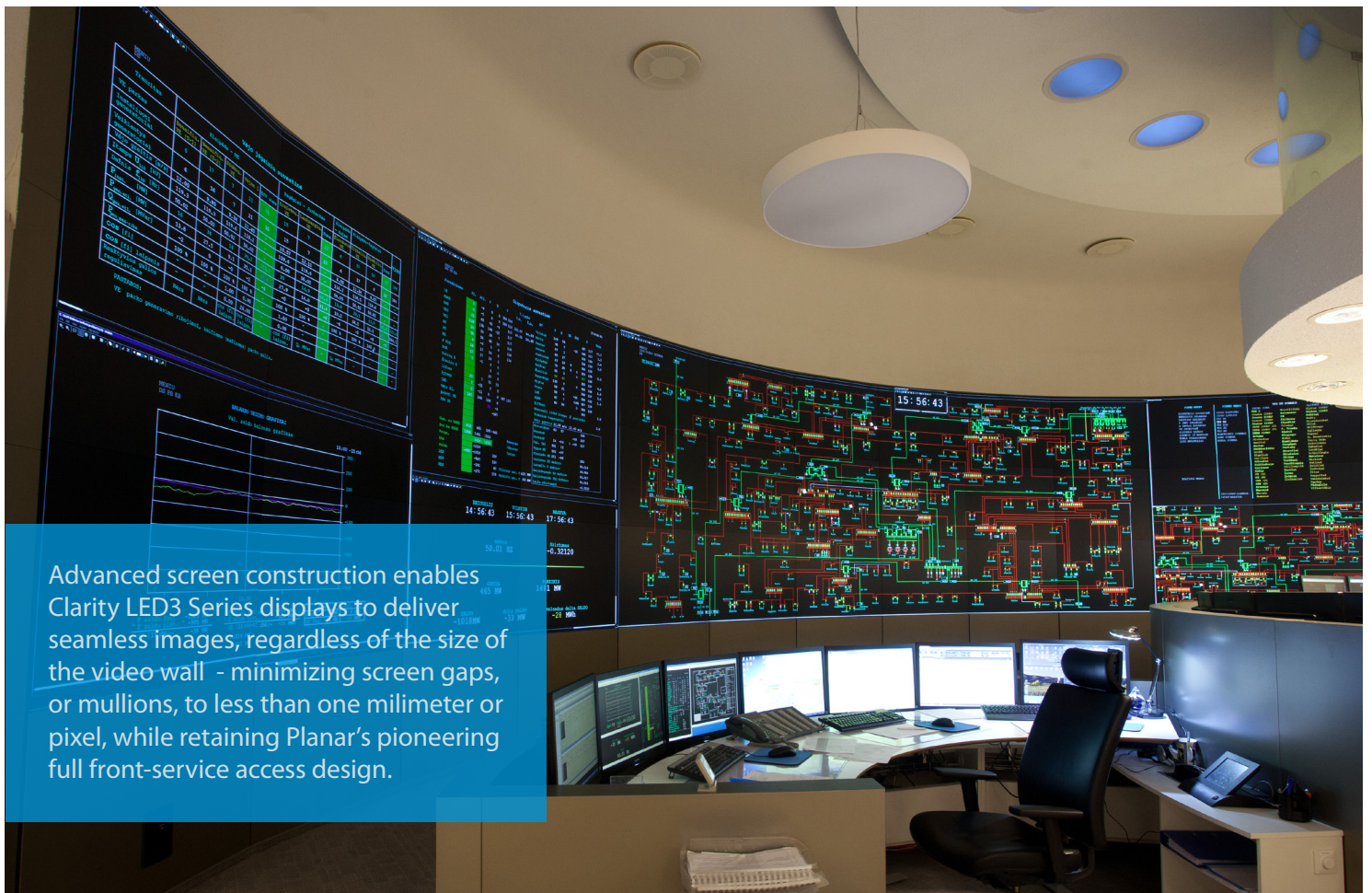
Seeing More with Near-Seamless Screens

Precision Screen Design Ensures Clear and Sharp Images

Clarity LED3 Series screens are multi-layered for strength and functionality, with the tightest tolerances for fit, flatness and viewing. The fresnel is optically accurate, consistent and sourced from the best materials, as is the outer screen itself. Both are designed for clear and clean use over 10 years without aging, coloring or flexing. Both are assembled into the metal frame without staples, stitches, clamps or other visible items that would block the image. Screens are designed to be no more than .1mm apart when fixed to the display chassis, or .7mm apart with front-removable screens, making gaps between the screens almost invisible.

Choices of Screens Improves Perception

The Clarity LED3 Series screens come in two choices: a standard viewing-angle screen offering a bright image and a wide viewing-angle screen offering a slightly less bright image but more consistent image across a wide viewing angle. The standard viewing-angle model is best for modest video walls or curved video walls. The wide viewing-angle model is ideal for larger, more flat video walls. Clarity LED3 Series video walls can be designed with a concave curve, or facets, to improve the ergonomic visibility of the content to a room of users. Arcs of these curves can be as large as 25°.

Wide Choice of Distinct Resolutions

Clarity LED3 Series displays come in three basic resolutions and two different aspect ratios to serve a wide range of applications or budgets. Screen diagonals range from 50-inches to 80-inches. Pixel pitches vary from .13mm between pixels to as small as .06mm between each pixel. The pixel density provides an enormously detailed image for any application.

Designed for Easy Operation

Assurance at Your Site Starts With Full Factory Testing

Planar builds each Clarity LED Series display to order. Each video wall is configured with all the needed components for quick assembly at the site.

Worry-free Operation

Clarity LED3 Series displays include all the necessary cable runs, cable connections and rack options for video wall-based processing needs and bases in many height choices that are accurate to-the-fraction-of-a-millimeter connection brackets.

Time-Saving Advanced Motorized Optical Alignment

With the ease of using a remote control, a single technician can quickly and easily align the optics on the video wall. Optics can also be easily adjusted later, if needed, without the need for manual set screws.

Display Profiles

By utilizing advanced color management techniques and extensive experience with different video wall applications, Planar created Clarity Display Profiles. These preset and customizable color spaces have been optimized for a range of specific video wall applications, harnessing the power of the LED illumination and producing a better visual experience for leading video wall applications, Including:

- Control Room
- Low Ambient Light
- Security

Set it and Forget it Automatic Color Balance

A key feature a display's visual optimization is its capacity to achieve consistent color and brightness across displays in a video wall. A video wall lacking this capability is likely to offer a compromised image quality, potentially drawing attention to a mismatch between the displays rather than attention to the content on the displays. Planar's SiFi3™ technology allows operators to realize superior brightness and color balance at the touch of a button. SiFi3 includes both an internal-to-one cube automatic brightness balance function and the ability to do the less frequently-needed video wall color balance. A proprietary algorithm calculates the optimal color and brightness across the video wall and adjusts each display accordingly. SiFi3 completes this process - measuring, calculating and balancing - in about one minute, saving time, especially for larger video walls. SiFi ensures every Clarity LED3 Series display in the video wall operates at a user-defined power or brightness level over the lifetime of the video wall, and in concert with the other displays in the wall.
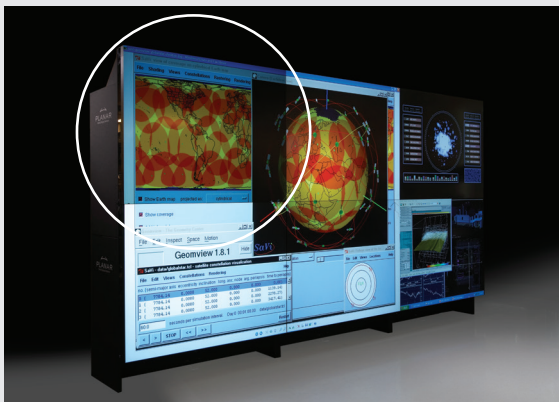
Unbalanced video wall
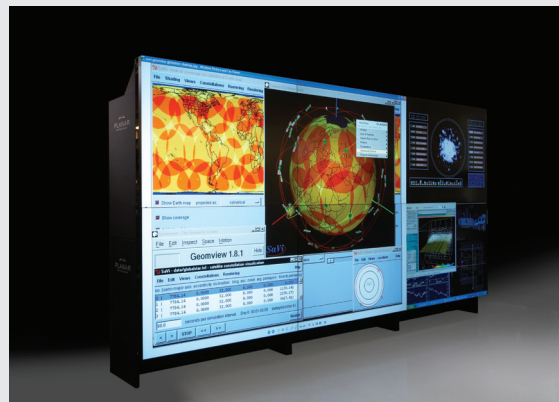
Balanced video wall with SIFI technology

Displays Configured for Your Environment

For video wall environments with critical power or ambient light requirements, the Clarity LED3 Series with SiFi3 technology and Planar WallNet can easily adapt to these challenging environments. The Clarity LED3 Series is fully configurable for video wall operation at either a fixed power level or a fixed brightness over its lifetime.

Fixed Power Operation

When video wall power distribution is limited, a Clarity LED3 Series video wall can be set to an operator-defined, constant power level. Over time, LED illumination diminishes but, by defining lower power levels, it extends the life of the illumination module- up to 100,000 hours running at a continuous power level.

FIXED POWER OPERATION

Illumination Hours
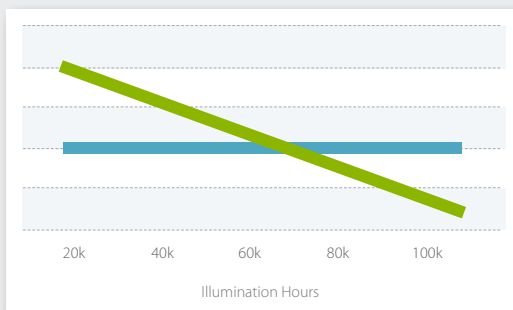
- Operates at a fixed power level over LED lifetime
- Brightness decreases over time
- Illumination lifetime of up to 100,000 hours

Power	Brightness

Fixed Brightness Operation

The Clarity LED3 Series is an ideal solution for video wall operators requiring a constant, fixed brightness level. Once the brightness level is set, SiFi3 and Planar® WallNet™ software self-regulates, maintaining a specific brightness level at the most power-efficient setting. power level.

FIXED BRIGHTNESS OPERATION

Illumination Hours
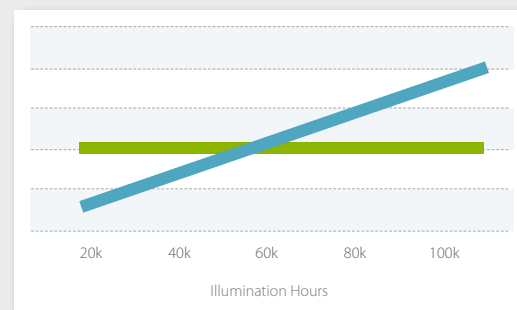
- Adjusts power to drive a consistent brightness
- Brightness stays constant over LED lifetime
- Illumination lifetime of 100,000 hours in eco mode

Power	Brightness

EASE OF INSTALLATION & SERVICEABILITY

Planar Clarity LED3 Series displays are designed for easy installation and service. In new or retrofit situations, Clarity LED3 Series displays can be set-up in hours, rather than the days required for most other systems.
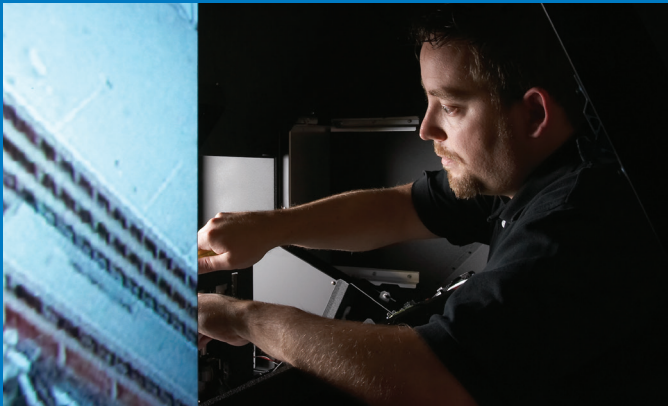
Each Clarity LED3 Series display is front and rear accessible, eliminating the need to select a specific display model.
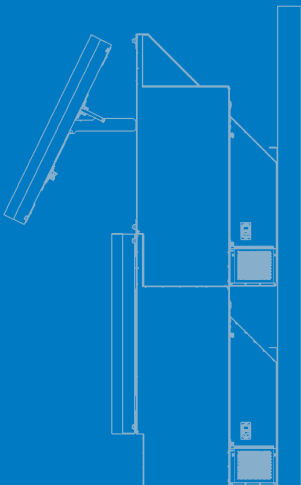
Front access allows for full service with zero rear clearance.

Quiet and Cool Operation

With highly efficient LEDs, separated components and low power operation, less fan cooling is needed for Clarity LED3 Series displays, making the displays quieter than ever. With less power use and power waste, video walls stays cool and so do operators.

Network Control

Planar WallNet and or Indisys™ Video Wall Processing allows operators to use a web-based interface to monitor and control Planar displays, automatically sending email alerts if a problem is detected. Configuration is simple and gives users easy access to multiple display status views, network features and video wall administration tools. Software updates are available with the click of a mouse.

Designed for Easy Maintenance

Easy-to-read diagnostic lights and screens on the main input electronics boards give early and specific notice of any issues. Planar WallNet and Indisys Processing can do the same over a network. Planar introduced both rear and front service displays to allow easy and comfortable access for maintenance from the front of the video wall or the rear. With a modular design, all internal components are easy to reach, adjust or replace in the rare case this is needed. The single consumable part in these modern displays is an air filter, which can be changed from outside the display.

Multiple Processing Choices Adapt Each Video Wall to Your Needs

Planar provides a full range of image processing solutions that set the industry standard for performance, power and versatility - whether you want to broadcast a single image across multiple screens, a single image across a single display or display several different feeds within a single display. From Planar's robust Indisys Extensity Video Wall Processing for larger, more demanding applications to the easy-to-use Clarity® VCS Video Wall Processor for medium-size systems, Planar provides a choice of world-class content management solutions to best fit your application needs and requirements.

Front

W

HS H

Side

D

Base

F-T-S

CLARITY LED3 SERIES SPECIFICATIONS

Model	c50HD-LED3	c70HD-LED3	c50RP-LED3	c67RP-LED3	c80RP-LED3	c50RX-LED3	c67RX-LED3
Diagonal	50"	70"	50"	67"	78"	50"	67"
Resolution	Full HD 1920 x 1080	Full HD 1920 x 1080	SXGA+ 1400 x 1050	SXGA+ 1400 x 1050	SXGA+ 1400 x 1050	XGA 1024 x 768	XGA 1024 x 768
Engine Output	1150 lumens	1150 lumens	1200 lumens	1200 lumens	1200 lumens	900 lumens	900 lumens
PrecisionView - 2 (PV2) Brightness - cd/m2 Viewing Angle (1/2 gain) Viewing Angle 1/5 gain Viewing Angle 1/10 gain	Gain: 1.7 Opt: 840; Typ: 765; Eco: 520 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°	Gain: 1.7 Opt: 430; Typ: 390; Eco: 265 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°	Gain: 1.7 Opt: 775; Typ: 710; Eco: 480 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°	Gain: 1.7 Opt: 435; Typ: 395; Eco: 265 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°	Gain: 1.7 Opt: 285; Typ: 260; Eco: 175 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°	Gain: 1.7 Opt: 580; Typ: 535; Eco: 360 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°	Gain: 1.7 Opt: 325; Typ: 300; Eco: 200 H = 37°; V= 32° H = 51°; V= 48° H = 60°; V= 58°
PrecisionView - 1(PV1) Brightness - cd/m2 Viewing Angle (1/2 gain) Viewing Angle 1/5 gain Viewing Angle 1/10 gain	Gain: 1.0 Opt: 454, Typ: 408, Eco: 280 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°	Gain: 1.0 Opt: 232, Typ: 211, Eco: 143 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°	Gain: 1.0 Opt: 419, Typ: 383, Eco: 259 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°	Gain: 1.0 Opt: 235, Typ: 213, Eco: 143 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°	Gain: 1.0 Opt: 154, Typ: 140, Eco: 95 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°	Gain: 1.0 Opt: 313, Typ: 289, Eco: 194 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°	Gain: 1.0 Opt: 108, Typ: 162, Eco: 108 H= 34°, V= 38° H= 62°, V= 60° H= 76°, V= 78°
Performance Efficiency (nits/watt)	Opt: 3.11; Typ: 3.40 Eco: 3.47	Opt: 1.59; Typ: 1.73 Eco: 1.77	Opt: 2.87; Typ: 3.16 Eco: 3.20	Opt: 1.61; Typ: 1.76 Eco: 1.77	Opt: 1.06; Typ: 1.16 Eco: 1.17	Opt: 2.15; Typ: 2.38 Eco: 2.40	Opt: 1.20; Typ: 1.33 Eco: 1.33
Contrast Ratio* Contrast Ratio - Dynamic **	1650:1 20,000:1	1650:1 20,000:1	1750:1 20,000:1	1750:1 20,000:1	1750:1 20,000:1	1200:1 15,000:1	1200:1 15,000:1

Screen Dimensions
    Width (W)
    Height (HS)
	43.6" (110.8 cm)
	24.5" (62.3 cm)
		61" (154.9 cm)
		34.3" (87.0 cm)
			40" (101.6 cm)
			30" (76.2 cm)
				53.5" (135.9 cm)
				40.2" (102 cm)
					62.5" (158.8 cm)
					46.9" (119.1 cm)
						40" (101.6 cm)
						30" (76.2 cm)
							53.5" (135.9 cm)
							40.2" (102 cm)

Cabinet Dimensions
    Width (W)
    Height (H)
    Depth (D)
	43.6" (110.8 cm)
	31.3" (79.5 cm)
	28.5" (72.6 cm)
		61" (154.9 cm)
		44.7" (113.5 cm)
		30.9" (78.6 cm)
			40" (101.6 cm)
			37.8" (96 cm)
			27.5" (69.9 cm)
				53.5" (135.9 cm)
				49.1" (124.8 cm)
				33.7" (85.6 cm)
					62.5" (158.8 cm)
					46.9 (119.0 cm)
					46.2" (117.3 cm)
						40" (101.6 cm)
						37.8" (96 cm)
						27.5" (69.9 cm)
							53.5" (135.9 cm)
							49.1" (124.8 cm)
							33.7" (85.6 cm)

Weight	63.2 kg, 139.5 lbs	94.4 kg, 209 lbs	72.8 kg, 106.5 lbs	111 kg. 244.5 lbs	119.5 kg, 263.5 lbs	72.8 kg, 106.5 lbs	111 kg. 244.5 lbs
Power Consumption (Opt./Typ./Eco) - Watts	270/225/150	270/225/150	270/225/150	270/225/150	270/225/150	270/225/150	270/225/150
Display Square Meters	0.69	1.35	0.77	1.45	1.98	0.77	1.45
Total Pixels	2,073,600	2,073,600	1,470,000	1,470,000	1,470,000	786,432	786,432
Pixels per square meter	3,008,880	1,536,149	1,898,753	1,014,020	741,315	992,599	530,072
Pixel Pitch	0.6 mm	0.8 mm	0.7 mm	1.0 mm	1.1 mm	1.0mm	1.3mm

Wall Bases	c50HD Base	c70HD Base	c50RP Base	c67RP Base	c80RP Base	c50RX Base	c67RX Base
Standard Height (F-T-S)	Adjustable 885mm to 915mm	Adjustable 940mm to 1000mm	Adjustable 885mm to 940mm	Adjustable 905mm to 965mm	Adjustable 696mm to 756mm	Adjustable 885mm to 940mm	Adjustable 905mm to 965mm
Custom Order Height	390mm to 1500mm	470mm to 1500mm	410mm to 1500mm	440mm to 1500mm	220mm to 1500mm	410mm to 1500mm	440mm to 1500mm
Screen Brace	Included	Included	Included	Included	NA	Included	Included
Screen Brace (Recessed)	Optional	Optional	Optional	Optional	NA	Optional	Optional
Curved Wall support	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internal Equip. Rack	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Front, Side, and Rear Panels	Optional	Optional	Optional	Optional	Optional	Optional	Optional

CLARITY LED3 SERIES SPECIFICATIONS CONTINUED

Imaging Technology	DLP®
Illumination System Lifetime	Clarity LED 6x redundant 60,000 Hrs / 100,000 Hrs in Eco Mode
Screen Type Border (typical) Screen Gap Flat Wall Screen Gap Facetted (Curved) Wall	PrecisionView™ - 2 or PrecisionView™ - 1 0 mm FS: <0.7 mm; RS <0.1 mm FS: 2.5mm; RS 1.0mm
Color and Brightness Control	Automatic RGBCYMW Brightness and Color via SiFi3™ for LED
Brightness Uniformity - ANSI 9	> 96%
Colors	16.7 million
Color Gamut	118% IBU
Color Spaces	Native LED, Clarity NaturalColor™, Rec 709
Application-Specific Display Profiles	Control Room, Simulation, Security, Low Amibient Light Studio Monitor, On-Camera, Eco
Image Alignment	Integrated 6-axis motorized alignment
Maximum Stacking	6 high (4 high with c80RP-LED3)
Temperature Range	5-40° C for Eco & Low ambient modes (20° +/− 3° C for optimal screen performance)
Humidity Range	20 to 80% RH non-condensing
Serviceability	Full front and rear access (Rear access only for c80RP-LED2)
Safety Regulations	FCC Class A, EN55022/CISPR22, ICES-003, CNS 13438, EN55024, CCC, KC
Texas Instruments DLP Chip	XGA - .7", DarkChip2 SXGA+ - .95", DarkChip3 FHD - .95", DarkChip4
Color Depth	32 bit
Ambient Noise	40 db/ 32 db in Eco Mode, 1 meter from front of display
BTU/Hours	922 BTU/Hour Maximum 768 BTU/Hour Typical 512 BTU/Hour Eco
Recommended filter change frequency	Six months
Interior and exterior surfaces	Anti-reflective flat black
Input Electronics	Open, Indisys HD or Indisys Extensity (See below)

REQUIRED CLARITY LED3 SERIES INPUT OPTIONS

	Open	Indisys High Definition	Indisys Extensity
Capabilities	Single Input or Big Picture	Single or Dual Input, PIP, Resize, Pan, Scale, Zoom, Snapshot, Crop, Recolor, etc.	Single or Quad Input, PIP, Resize, Pan, Scale, Zoom, Snapshot, Crop, Recolor, etc.
Inputs	VGA to FHD (1920 x 1080) DSUB 15 pin connector x2, Single Link DVI-D	2x Dual Link DVI-D, 330 Mhz Pixel Frequency	4x DisplayPort, 330 Mhz Pixel Frequency
Optional Inputs	SDI, Composite, S-Video, Component HD	(See Indisys HD Brochure)	(See Indisys Extensity Brochure)
Typical Maximum Resolution	1920 x 2160 (with Big Picture option) at 60 frames	3096 x 2160 at 30 frames	3096 x 2160 at 30 frames
Loop Through	Analog, Digital, and Video	2x Dual Link DVI-D, 330 Mhz Pixel Frequency	4x DisplayPort, 330 Mhz Pixel Frequency
Active Inputs at one time per display	One input, can be optionally looped through to other displays	Up to two inputs, can be optionally looped through to other displays	Up to four inputs, can be optionally looped through to other displays
Cube Control	IR Remote, RS-232, RS-485 with loop through WallNet 2	IR Remote, RS-232, Indisys Management Suite S/W vis Ethernet TCP/IP	IR Remote, RS-232, Indisys Management Suite S/W vis Ethernet TCP/IP

OPTIONAL PLANAR VIDEO WALL PROCESSING

	Planar Imager (PLI)	Visual Control Station (VCS)	Indisys High Definition	Indisys Extensity
Capabilities	Full Resolution Wall workstation running various applications.	Full source selection and wall layout capability	Full source selection and wall layout with screnario managers. Allows background full wall resolution applications via PLI	Full source selection and wall layout with screnario managers. Allows background full wall resolution applications via PLI
Video Inputs	not applicable	Various analog, VGA, and DVI,a nd DisplayPort inputs	Various analog, VGA, and DVI inputs	Various analog, VGA, and DVI,a nd DisplayPort inputs
Ouput Capability	48 FHD Displays	60 FHD Displays	Varies, > 60 Displays	Varies, > 80 Displays
Control	Windows 7 or Indisys Management Suite	Video Wall Manager	Indisys Management Suite	Indisys Management Suite
Notes	Additional Desktop sharing capability		Additional Desktop sharing capability	Additional Desktop sharing capability
Cube Input Electronics Compatibility	Open, Indisys HD, Indisys Extensity	Open	Indisys HD	Indisys Extensity

PLANAR
WORLDWIDE **SERVICE & SUPPORT**

Planar is a global company and proud of the role its products play in mission-critical environments around the world. With thousands of installations in operation across the globe, Planar supports its customers with a 24x7 worldwide service line and a global network of highly trained service technicians.

PLANAR

When image experience matters.

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