eW Flex Compact

Flexible strands of high-intensity LED nodes with solid white light

PHILIPS

COLOR KINETICS

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eW Flex Compact is a versatile strand of 50 individually controllable LED nodes. The flexible form factor allows dynamic points of white light to be installed across nearly any interior or exterior surface, including walls, ceilings, floors, three-dimensional sculptures, and set pieces. eW Flex Compact can also light tight alcove spaces and signage, and in certain cases, can even display video.

- Daylight visible — At full brightness, each node produces light output of up to 31.5 candela and 47679 nits.
- Adaptable mounting — Strands can be mounted directly to a surface, like traditional string lights. Detachable leader cables in multiple lengths allow you to install strings at the appropriate distance from power/data supplies. Optional mounting tracks ensure straight linear runs, while snap-on spacers hide cabling and mounting hardware. Single node mounts can be positioned individually as anchor points for installations with uneven node spacing or complex geometries.
- Outdoor rated — Fully sealed for maximum fixture life and IP66-rated for outdoor applications.
- Supports cost-effective video displays — Flexible form factor, offering maximum lighting control at 50 W per strand, accommodates unique lighting installations, including two- and three-dimensional video displays. White nodes enable classic black and white video or reverse (shadow) video.
- Multiple lens options — Standard clear flat and translucent dome lenses. Optional translucent flat, clear dome, semi-frosted flat, and semi-frosted dome lenses are available.
- Standard and custom lengths and node spacing — eW Flex Compact strands are available with standard on-center node spacing of 102 mm (4 in) or 305 mm (12 in) along a three-wire, 18 AWG cable. For information about custom orders, see the eW Flex Compact Ordering Sheet at www.philipscolorkinetics.com/ls/essentialwhite/ewflexcompact/
- Custom Leader Cables — Custom Leader Cable lengths are available in addition to standard cables of 7.6 m (25 ft), 15.2 m (50 ft), and 30.5 m (100 ft).
- Industry-leading controls — eW Flex Compact works seamlessly with the complete Philips line of controllers, including Video System Manager Pro, Light System Manager, and iPlayer 3, as well as third-party DMX controllers.

Superior Light Output

eW Flex Compact strands consist of 50 individually controllable, high-intensity LED nodes. Each node produces solid white light output of up to 31.5 candela.

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification		Clear Flat Lens	Translucent Dome Lens
Output	Lumens Per Node	2700 K	80.9	35.0
		4000 K	86.9	39.6
	Candela Per Node	2700 K	29.8	7.1
		4000 K	31.5	8.0
	Luminance	2700 K	45127 cd/m²	10660 cd/m²
		4000 K	47679 cd/m²	12106 cd/m²
	CRI	2700 K	82	85
		4000 K	84	86
	Viewing Angle	2700 K	110°	200°
		4000 K	110°	200°
	LED Channels		White	
Electrical	Input Voltage		24 VDC via sPDS-480ca, sPDS-60ca, and PDS-60ca	
	Power Consumption		1 W max. per node at full output, steady state	
Control	Interface		PDS-60ca 24V (Pre-programmed or DMX/Ethernet) sPDS-60ca 24V (DMX/Ethernet) sPDS-480ca 24V (Ethernet)	
	Control System		Philips full range of controllers, including Video System Manager Pro, Light System Manager, and iPlayer 3, or third-party controllers	
Physical	Node Dimensions *Height x Width x Depth*		31 x 32 x 17 mm (1.2 x 1.25 x .67 in)	31 x 32 x 25 mm (1.2 x 1.25 x 1 in)
	Weight		2.2 lbs (1 kg) 50-node strand, 4 in on-center node spacing	
	Housing		White or black polycarbonate	
	Lens		Clear or translucent plastic	
	Fixture Connections		Integrated watertight 3-pin connector	
	Temperature Ranges		-30° – 50° C (-22° – 122° F) Operating ≥ 0° C (≥ 32° F) Handling -20° – 50° C (-4° – 122° F) Startup -30° – 85° C (-22° – 185° F) Storage	
	Humidity		0 – 95%, non-condensing	
	Maximum Fixtures Per Power/Data Supply		PDS-60ca 24V: 1 strand sPDS-60ca 24V: 1 strand sPDS-480ca 24V: 8 strands	
Certification and Safety	Certification		UL/cUL, FCC Class A, CE	
	Environment		Dry/Damp/Wet Location, IP66	

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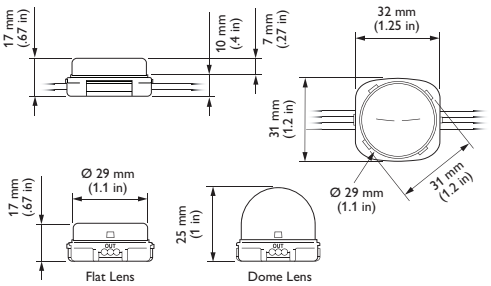
Lumen Maintenance

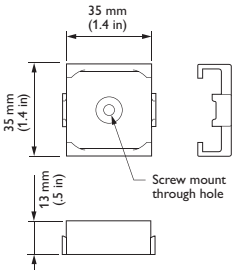
Threshold*	Ambient Temperature	Reported†	Calculated†
L90	@ 25° C	50,600 hours	>100,000 hours
	@ 50° C	50,600 hours	>100,000 hours
L80	@ 25° C	50,600 hours	>100,000 hours
	@ 50° C	50,600 hours	>100,000 hours
L70	@ 25° C	50,600 hours	>100,000 hours
	@ 50° C	50,600 hours	>100,000 hours

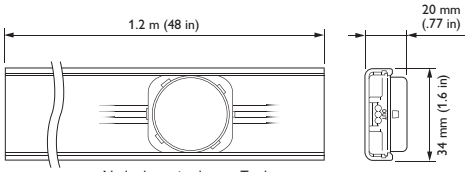
* Lxx= xx% lumen maintenance (when light output drops below xx% of initial output). All values are given at B_{50}, or the median value where 50% of the LED population is better than the reported or calculated lumen maintenance measurement.

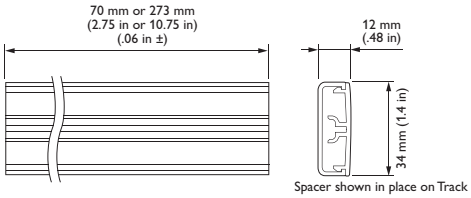
† Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures.

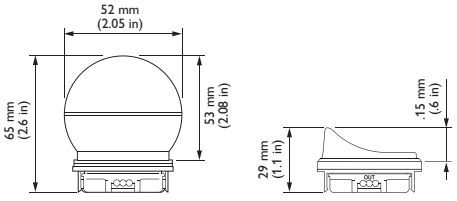
In accordance with TM-21-11, reported values represent the interpolated value based on six times the LM-80-80 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

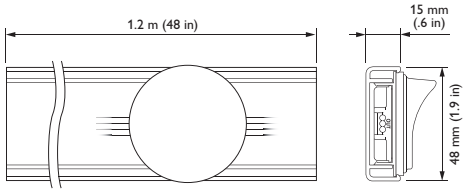


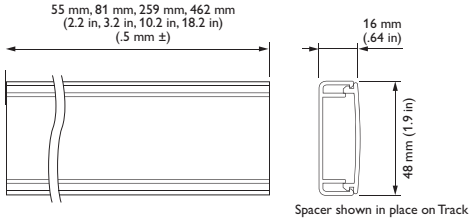












Fixtures and Power/Data Supplies

eW Flex Compact is part of a complete system which includes fixtures and:

- One or more power/data supplies.
- One Leader Cable to attach each strand of eW Flex Compact to a power/data supply port.
- Optional mounting tracks, spacers, or single-node mounts.
- Any Philips controller, including Video System Manager, Light System Manager, and iPlayer 3, or any third-party controller.

Fixtures, 4 inch on-center node spacing

Item	Type			Item Number	Philips 12NC
eW Flex Compact *50 nodes*	2700 K	Clear Flat Lens	White	500-000012-00	912400130619
			Black	500-000012-01	912400130620
		Translucent Dome Lens	White	500-000012-02	912400130621
			Black	500-000012-03	912400130622
	3000 K	Clear Flat Lens	White	500-000012-08	912400130627
			Black	500-000012-09	912400130628
		Translucent Dome Lens	White	500-000012-10	912400130629
			Black	500-000012-11	912400130630
	3500 K	Clear Flat Lens	White	500-000012-16	912400130635
			Black	500-000012-17	912400130636
		Translucent Dome Lens	White	500-000012-18	912400130637
			Black	500-000012-19	912400130638
	4000 K	Clear Flat Lens	White	500-000012-24	912400130643
			Black	500-000012-25	912400130644
		Translucent Dome Lens	White	500-000012-26	912400130645
			Black	500-000012-27	912400130646
	5000 K	Clear Flat Lens	White	500-000012-48	912400133735
			Black	500-000012-49	912400133736
		Translucent Dome Lens	White	500-000012-50	912400133737
			Black	500-000012-51	912400133738
	5700 K	Clear Flat Lens	White	500-000012-32	912400130651
			Black	500-000012-33	912400130652
		Translucent Dome Lens	White	500-000012-34	912400130653
			Black	500-000012-35	912400130654
	6500 K	Clear Flat Lens	White	500-000012-40	912400130659
			Black	500-000012-41	912400130660
		Translucent Dome Lens	White	500-000012-42	912400130661
			Black	500-000012-43	912400130662

Use Item Number when ordering in North America.

Included in the box

eW Flex Compact strand (50 nodes)
Extra termination cap
Installation Instructions

Custom Configurations

In addition to the standard configurations discussed in this product guide, custom configurations are also available. See the eW Flex Compact Ordering Information sheet at www.philipscolorkinetics.com/ls/ew/flexcompact/ for more information.

Component	Available Non-Standard Options
Node Spacing	51 mm (2 in) – 610 mm (24 in) on-center
Strand Length	5 – 60 nodes
Node/Cable Color	Clear
Lens	Clear flat, translucent flat

Fixtures, 12 inch on-center node spacing

Item	Type			Item Number	Philips 12NC
eW Flex Compact *50 nodes*	2700 K	Clear Flat Lens	White	500-000012-04	912400130623
			Black	500-000012-05	912400130624
		Translucent Dome Lens	White	500-000012-06	912400130625
			Black	500-000012-07	912400130626
	3000 K	Clear Flat Lens	White	500-000012-12	912400130631
			Black	500-000012-13	912400130632
		Translucent Dome Lens	White	500-000012-14	912400130633
			Black	500-000012-15	912400130634
	3500 K	Clear Flat Lens	White	500-000012-20	912400130639
			Black	500-000012-21	912400130640
		Translucent Dome Lens	White	500-000012-22	912400130641
			Black	500-000012-23	912400130642
	4000 K	Clear Flat Lens	White	500-000012-28	912400130647
			Black	500-000012-29	912400130648
		Translucent Dome Lens	White	500-000012-30	912400130649
			Black	500-000012-31	912400130650
	5000 K	Clear Flat Lens	White	500-000012-52	912400133739
			Black	500-000012-53	912400133740
		Translucent Dome Lens	White	500-000012-54	912400133741
			Black	500-000012-55	912400133742
	5700 K	Clear Flat Lens	White	500-000012-36	912400130655
			Black	500-000012-37	912400130656
		Translucent Dome Lens	White	500-000012-38	912400130657
			Black	500-000012-39	912400130658
	6500 K	Clear Flat Lens	White	500-000012-44	912400130663
			Black	500-000012-45	912400130664
		Translucent Dome Lens	White	500-000012-46	912400130665
			Black	500-000012-47	912400130666

Use Item Number when ordering in North America.

Power/Data Supplies

Item	Type	Item Number	Philips 12NC
PDS-60ca 24V Power/ Data Supply	Pre-programmed	109-000016-00	910503700095
	DMX/Ethernet	109-000016-04	912400133526
sPDS-60ca 24V Power/ Data Supply	DMX/Ethernet	109-000021-04 (NA Cord) 109-000021-05 (EU/UK Cord)	912400133527 912400133636
sPDS-480ca 24V Power/ Data Supply	Ethernet	109-000026-01	912400133528

Item	Type	Color	Item Number	Philips 12NC
Leader Cable	7.6 m (25 ft)	Black	108-000045-00	910503700696
	15.2 m (50 ft)	Black	108-000045-01	910503700697
	30.5 m (100 ft)	Black	108-000045-02	910503700698
Mounting Track	1.2 m (1 4 ft.) track	White	101-000057-00	910503700044
		Black	101-000057-01	910503700045
Spacers	50 102 mm (4 in) spacers	White	101-000059-00	910503700048
		Black	101-000061-02	910503700052
	50 305 mm (12 in) spacers	White	101-000059-01	910503700049
		Black	101-000061-01	910503700053
Single-Node Mounts	50 mounts	White	101-000058-00	910503700046
		Black	101-000058-01	910503700047

Accessories

Item	Type	Color	Item Number	Philips 12NC
Marquee Lens Kits *Qty 50*	Clear	White	999-007997-00	910503702308
		Black	999-007997-01	910503702309
	Semi-Frosted	White	999-007997-04	910503702312
		Black	999-007997-05	910503702313
	Translucent	White	999-007997-02	910503702310
		Black	999-007997-03	910503702311
Glare Shield Kits *Qty 50*		Black	120-000179-00	912400130036
Accessory Mounting Track *Qty 1*	(1.2 m) 4 ft	White	101-000057-03	910503704266
		Black	101-000057-04	910503704267
Accessory Spacers *Qty 50*	102 mm (4 in)	White	101-000075-00	910503704272
		Black	101-000075-02	910503704274
	305 mm (12 in)	White	101-000075-01	910503704273
		Black	101-000075-03	910503704275

Installation

eW Flex Compact can be used in a wide range of two-dimensional and three-dimensional configurations, including portable video screens and permanent building-covering displays. eW Flex Compact installations are not constrained by fixture size, shape, or architectural space.

Because of their potential complexity, eW Flex Compact installations require up-front planning for configuring, positioning, and mounting the fixture strands. Planning includes understanding how to position strands in relation to power/data supplies and the number of strands each power/data supply can support. Planning for video displays involves additional considerations, such as how to space eW Flex Compact nodes to achieve the desired pixel pitch, minimum and maximum viewing distances, sampling, and display resolution.

Clean lenses with water and mild detergent using a soft cleaning cloth. Wipe lenses dry. Do not use paper towels, abrasive cleaning products, or window cleaners. Abrasive cleaning products will scratch lenses, and window cleaners will soften and mar the polycarbonate. Do not use cleaning solutions that contain ammonia, sodium hydroxide, or isopropyl alcohol, which can scratch, pit, haze, yellow, or crack lenses.

All installations involve three main steps:

1. Create a lighting design plan and layout grid
2. Mount fixture strands
3. Test fixture strands

Owner/User Responsibilities

Refer to the eW Flex Compact Installation Instructions for specific warning and caution statements.

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate strands of eW Flex Compact in such a manner as to comply with all applicable codes, state and local laws, ordinances, and regulations. Consult with the appropriate electrical inspector to ensure compliance.

Installing in Damp or Wet Locations

When installing in damp or wet locations, seal all fixture connections, power/data supplies, and junction boxes with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate in wiring compartments, cables, or other electrical parts. Use suitable outdoor-rated junction boxes when installing in wet or damp locations. Additionally, use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes.

DMX or Ethernet Control?

eW Flex Compact installations can be controlled via either DMX or Ethernet. DMX is appropriate for relatively simple installations, or for installations where all lights operate in unison — for example, for accent, perimeter, or cove lighting applications.

Each node in a strand of eW Flex Compact is identified by a *light number*. A light number corresponds to three sequential DMX addresses. A DMX universe consists of 512 addresses, so the maximum number of light numbers available in a DMX universe is 170 (170 x 3 = 510).

Because Ethernet is not subject to the DMX addressing limitations, it is the preferred environment for dynamic light shows and video displays, both of which require numerous unique light numbers. In an Ethernet environment, each power/data supply effectively acts as its own universe.

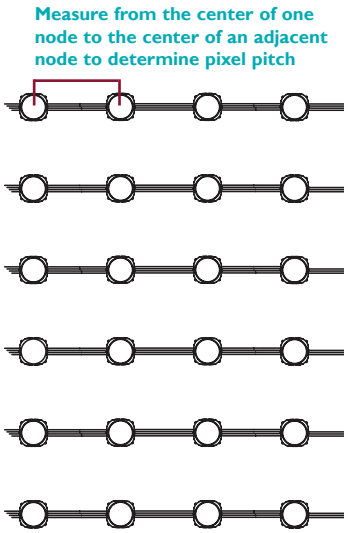
DMX installations require the use of a PDS-60ca 24V or sPDS-60ca 24V power/data supply, while the sPDS-480ca 24V power/data supply is Ethernet only.

Considerations for Video Displays

In addition to the planning required for all eW Flex Compact installations, planning for video displays involves special considerations such as pixel pitch, minimum and maximum viewing distances, sampling, and display resolution.

Determining Pixel Pitch and Viewing Distances for Video Displays

When using eW Flex Compact strands to display video, each node acts as a pixel in the display. Images on an LED video display appear to be sharper to the human eye as the distance from the display increases. Likewise, images appear less visible as the distance decreases. The spacing between pixels, known as the *pixel pitch*, determines the minimum and maximum viewing distances for discernible video output. Pixel pitch is measured center-to-center. For an eW Flex Compact strand, you determine pixel pitch by measuring from the center of one node to the center of the next.



Designing a layout with overlapping strands is a common technique for increasing pixel pitch. For example, to create a dense line of nodes, place multiple runs close to each other vertically, with a slight horizontal offset between the nodes. Philips offers eW Flex Compact with both 102 mm (4 in) and 305 mm (12 in) spacing between nodes. Using strands with made-to-order node spacing is another method for adjusting pixel pitch.

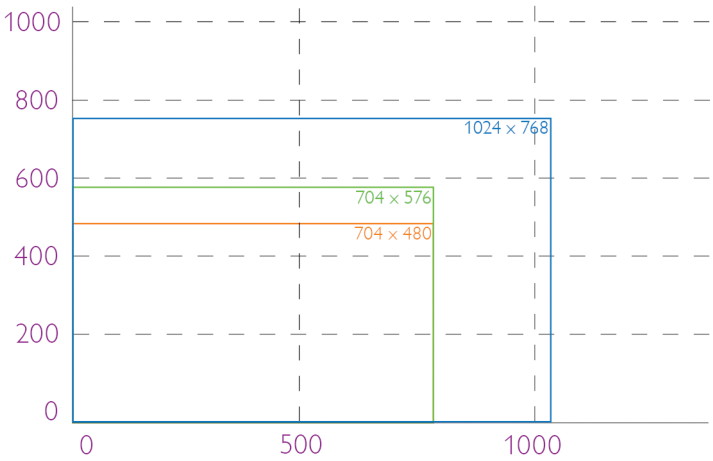
The following calculations and examples are general guidelines for determining minimum and maximum viewing distances, based on video displays using grids of evenly spaced pixels:

- To determine minimum viewing distance, multiply pixel pitch by 100 distance units. For example, if the pixel pitch is 76 mm (3 in), the minimum viewing distance is 7.6 m (25 ft).
- To determine the maximum viewing distance for discernible video, multiply the screen height by 20 distance units. For example, if the screen height is 20 m (65.6 ft), then the maximum viewing distance for recognizable video is 400 m (1312.3 ft).
- LED screens are visible beyond the maximum viewing distance for discernible video. To determine the maximum viewing distance that still creates visual impact, multiply the screen height by 50 distance units. For example, a screen 20 m (65.6 ft) high will continue to create visual impact at 1000 m (3280.8 ft).

Working with Video Display Resolutions

The resolution of an LED video display equals the total number of vertical and horizontal pixels — the greater the pixel count, the greater the resolution.

- The resolution of VSE digital video is 1024 x 768
- The resolution of PAL video is 704 x 576
- The resolution of NTSC video is 704 x 480



Reproducing a video signal with 1:1 pixel mapping on an LED display requires a substantial pixel count. For example, true NTSC video output requires 337,920 pixels, PAL output requires 405,504 pixels, and digital video output requires 786,432 pixels.

For designs where the acceptable level of discernible video may be more or less demanding, or for help with your specific installation, contact Philips Color Kinetics Application Engineering Services for assistance.

However, you can use a controller such as Philips Video System Manager Pro to reduce the required pixel count for any video format by sampling and distributing pixels from the source video to match your installation.

For example, if you retain the horizontal resolution of a digital video source (1024 lines wide), but sample every tenth line of pixels vertically (76 lines high instead of 768 lines), you can retain the correct aspect ratio while exponentially reducing the pixel count. From a distance, even with only 76 lines of vertical output, the human eye can still discern video images because the horizontal resolution is dense.

An installation using 1024 x 76 nodes would have a pixel count of 77,824 yet still display high-quality digital video output. This method is especially effective when creating an installation that covers a building which, by necessity, already has spacing between lines of video due to windows and other architectural features.

Create a Lighting Design Plan and Layout Grid

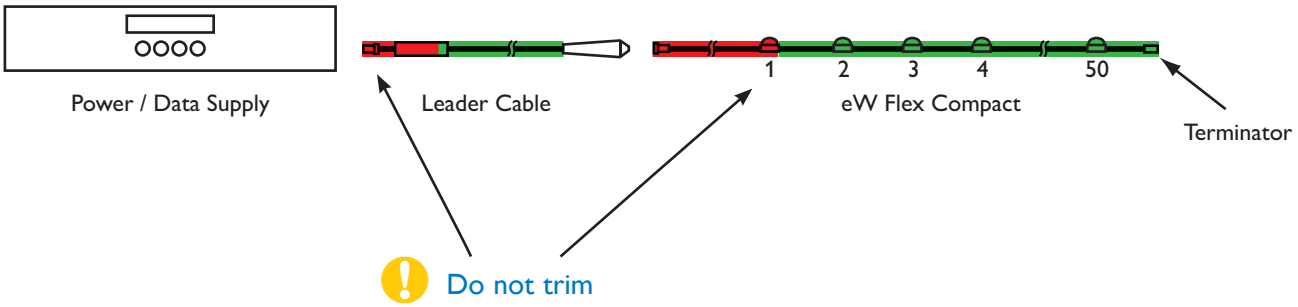
Even for relatively simple installations, it's good practice to create a lighting design plan. For complex installations displaying light shows with dynamic effects, and especially for Ethernet-based video displays, such a plan is essential. A lighting design plan is typically an architectural diagram or other diagram that shows the physical layout of the installation, including the appropriate positioning and spacing of all fixtures, power/data supplies, power sources, controllers, cables, and other required hardware. For DMX installations, the plan should record the DMX base number and node count for each eW Flex Compact strand. For Ethernet installations, the plan should record the IP address of each power/data supply and the number of nodes per power/data supply port.

Keep the following considerations in mind when creating a lighting design plan and layout grid:

Refer to the Installation Instructions or Specification Sheet of your power/data supply for guidelines on configuring and positioning the power/data supply in relation to a controller or Ethernet switch.

- Determine the appropriate location of each power/data supply in relation to the fixtures, and of the fixtures in relation to each other. You connect a strand of eW Flex Compact fixtures to an available power/data supply port using a Leader Cable of 7.6 m (25 ft), 15.2 m (50 ft), or 30.5 m (100 ft).
- eW Flex Compact Leader Cables can be shortened, and strands can be cut to any node length. An extra termination cap is included for sealing the cut end of the strand.

  Do not trim the Leader Cable between the power/data supply connector and the PCA transmitter junction box. Do not trim strands between the connector and the first node.



- On an architectural diagram or other diagram that shows the physical layout of the installation, identify the locations of all switches, controllers, power supplies, and fixtures.
- Nodes in each strand are sequentially addressed beginning with the node closest to the Leader Cable. Orientation of the power/data supply is therefore especially critical when using dynamic effects.
- In Ethernet environments, each power/data supply is identified with a unique IP address. We recommend recording the IP address of each power/data supply on a layout grid. For complex installations with many power/data supplies, we recommend assigning meaningful IP addresses to each power/data supply, so their locations are easy to identify.

Start the Installation

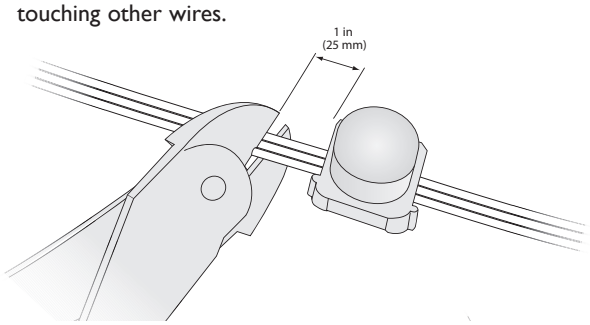
1. Install all power/data supplies, including any interfaces with controllers. Power/data supplies send power and control signals to fixtures over the Leader Cable.
2. Verify that all additional supporting equipment (switches, controllers) is in place.
3. Ensure that all additional parts (for example, optional single node mounts, spacers, mounting track, and mounting hardware) and tools are available.

Cut and Seal eW Flex Compact Strands (Optional)

You can cut eW Flex Compact strands to any desired node length. We recommend cutting and sealing the strands before mounting them.

1. Using a wire cutter, cut the cable to the desired length, leaving at least 25 mm (1 in) of cable after the last node. Ensure the cut is clean and there are no frayed wires touching other wires.

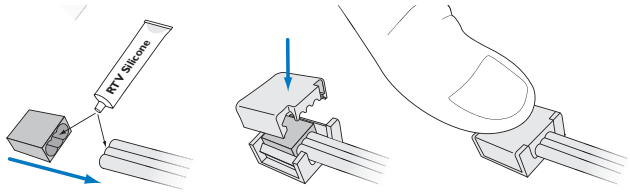
Never cut a strand between the three-pin connector and the first node.



2. Apply a liberal amount of electronics-grade RTV silicone sealant to the cable ends and to the opening of the rubber seal boot included with the extra termination cap. Insert the boot onto the cable.

Never reuse a termination cap.

3. Sit the sealed cable boot into the base of the provided termination cap.
4. Firmly press the termination cap onto the base until the top snaps into place. If using pliers, be careful not to crack the housing.



Mount the Fixtures

You can mount eW Flex Compact strands directly to a mounting surface, or you can mount them using eW Flex Compact mounting accessories (available separately):

- Optional mounting tracks ensure straight runs in linear applications. Spacers snap to the mounting tracks for a clean, finished look that hides cables and mounting hardware between nodes.
- Single node mounts can be positioned individually to provide anchor points for nodes in installations with uneven node spacing or complex geometries.

Optional Marquee Lens and Glare Shield Kits use their own mounting tracks and spacers. Refer to "Mount eW Flex Compact Strands with Accesories" for details.

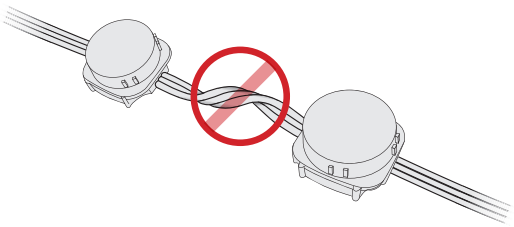
You cannot use single-node mounts with marquee lenses or glare shields.

Make sure the power is OFF before mounting and connecting eW Flex Compact fixtures.

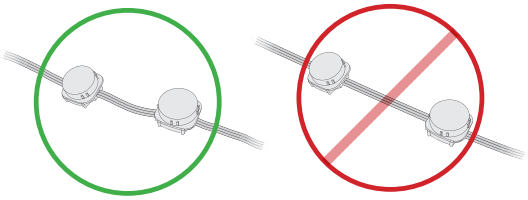
1. Using a pencil or chalk line, mark a center-line path for the nodes to follow.
2. (Optional) To install mounting track, cut the track to the desired length with a saw or snips. Using flathead screws suitable for the mounting surface, drive screws through the plastic track into the attaching surface. Recommended maximum spacing between screws is 406 mm (16 in). Snap optional spacers into the track to hide mounting hardware and wires.
3. (Optional) Ensure that the spacing between single node mounts is sufficient to accommodate cable length between nodes and to allow for cable bending as necessary.

   Using double-sided tape on the base of the mounts, adhere the mounts to the attaching surface. Reinforce installation with #6 flathead screws suitable for the mounting surface.
4. If using mounting track or single node mounts, push the fixture nodes into the mounts.
5. If mounting directly to a mounting surface, install eW Flex Compact strands using a suitable mounting method. For example, you can mount strands to a pipe or cable using plastic cable ties.

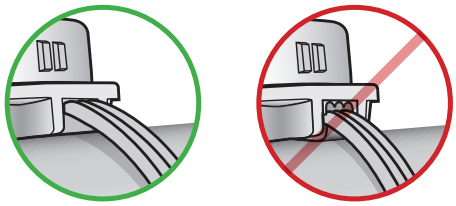
Do not twist or loop cable



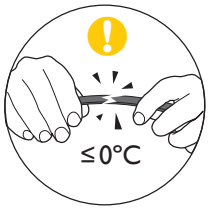
Do not overstretch cable

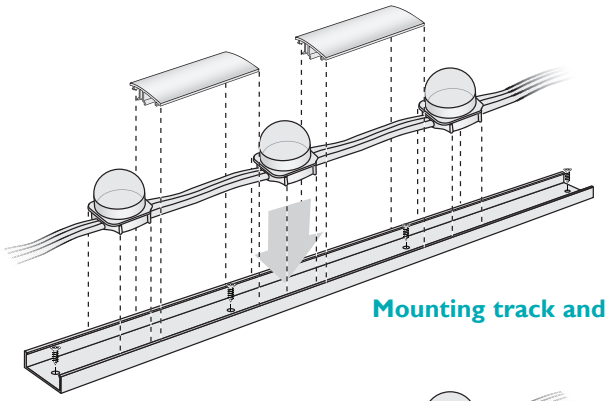


Do not pull cable away from node

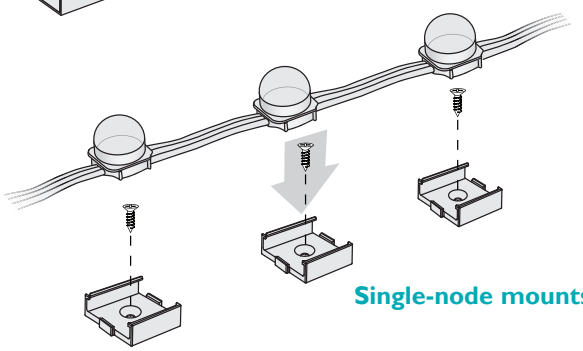


Use caution when handling cable in sub-freezing temperatures





Mounting track and spacers



Single-node mounts

Mount eW Flex Compact Strands with Accessories (Optional)

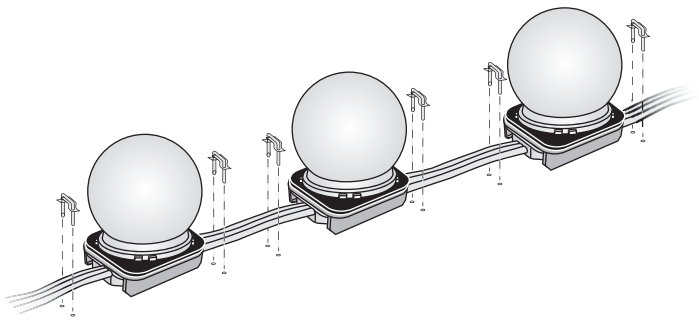
Marquee lenses and glare shields clip onto eW Flex Compact strands with flat lenses. Available with clear, semi-frosted, or translucent finshes, marquee lenses create the appearance of bulbs on a traditional theatre marquee. Glare shields block unwanted spill light, and can shield the light sources from being directly visible in certain mounting situations.

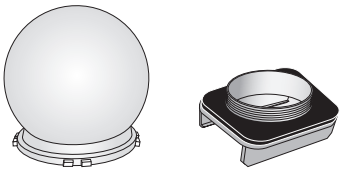
You can mount strands with marquee lenses and glare shields directly to a mounting surface, in front of a substrate, or using optional Accessory Mounting Tracks and Accessory Spacers. Mounting tracks ensure straight runs in linear applications. If using strands with standard 4-in or 12-in on-center spacing, you can snap spacers to the mounting tracks for a clean, finished look that hides cables and mounting hardware between nodes.

Mounting eW Flex Compact Strands with Accessories Directly to a Mounting Surface

1. Using a pencil or chalk line, mark a center-line path for the nodes to follow.
2. Clip a lens or glare shield holder over each eW Flex Compact node.
3. Do one of the following:
   - Screw a marquee lens onto the lens holder. Hand tighten to approximately 10 to 15 in-lbs (1.1 to 1.7 Nm).
   - Align the tabs on the glare shield with the slots in the glare shield holder, and snap the glare shield onto the glare shield holder.
4. Fasten assembled eW Flex Compact strands to the mounting surface using a suitable mounting method, For example, you can mount strands to a pipe or cable using plastic cable ties.

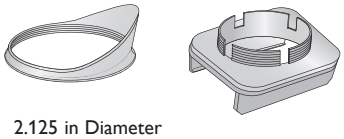
You cannot use eW Flex Compact accessories on strands with with dome lenses, or with standard mounting tracks or single node mounts. You can install either a marquee lens or glare shield on a node, but not both.





2.125 in Diameter (54 mm)

Marquee Lens Kit



2.125 in Diameter (54 mm)

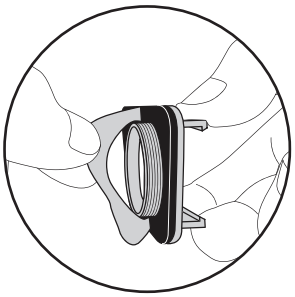
Glare Shield Kit

Mounting eW Flex Compact Strands with Accessories in Front of a Substrate

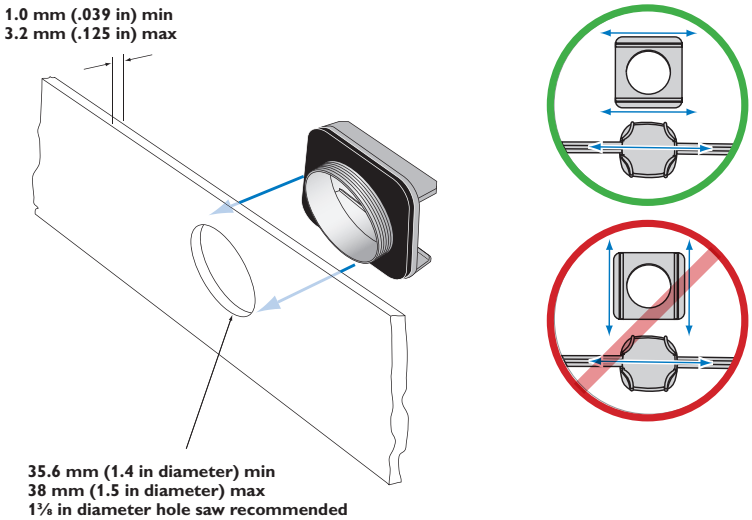
1. Prepare the substrate by cutting openings of the appropriate diameter in the required locations.

   To accommodate the threads on the marquee lens holder or the ridges on the glare shield holder, the recommended substrate thickness is 1.6 mm (.0625 in), and the maximum thickness is 3.2 mm (.125 in). We recommend using a 1 3/8 in diameter hole saw to cut openings in the substrate. Openings should be a minimum of 35.6 mm (1.4 in) in diameter, and a maximum of 38 mm (1.5 in) in diameter.

2. Peel the backing from a lens or glare shield holder to expose the adhesive surface.

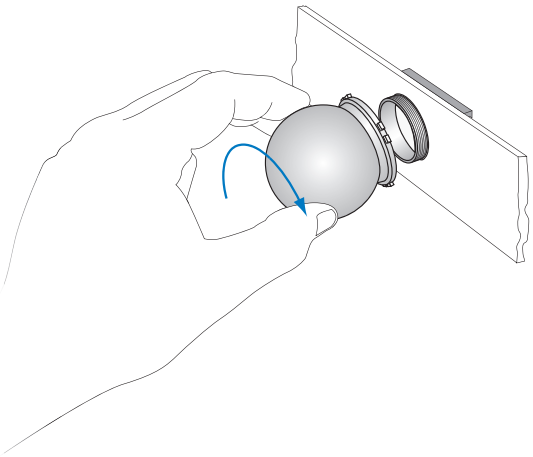


3. Insert the lens or glare shield holder through an opening in the substrate, and temporarily affix the lens holder by pressing the adhesive surface to the back of the substrate. Make sure that the holder is oriented in the direction of the eW Flex Compact strand.

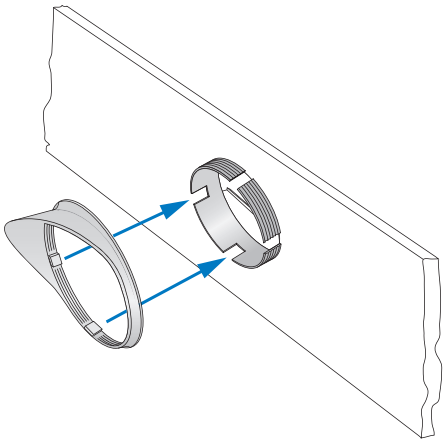


4. Do one of the following:

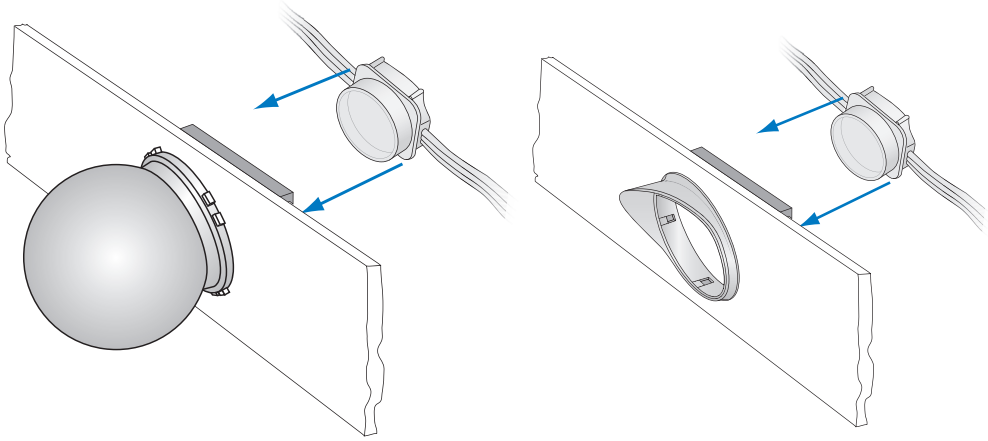
   - Screw a marquee lens onto the lens holder. Hand tighten to approximately 10 to 1.1 to 1.7 Nm (15 in-lbs).

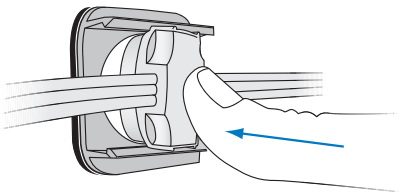


   - Align the tabs on the glare shield with the slots in the glare shield holder, and snap the glare shield onto the glare shield holder.



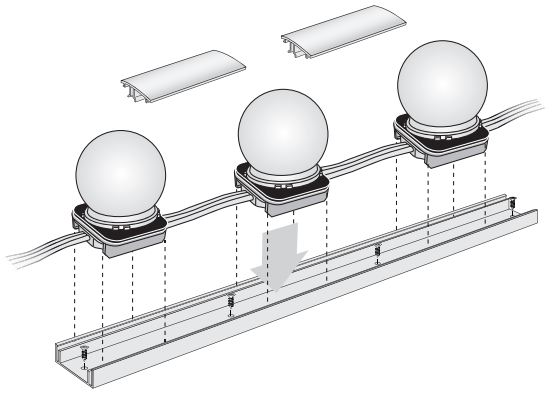
5. Repeat steps 2 – 4 for each opening.
6. Once all accessories are installed on the substrate, mount eW Flex Compact strands by inserting one node into the back of each lens or glare shield holder. Press until the nodes snap firmly into the lens or glare shield holders.





Mounting Marquee Lenses and Glare Shields to Accessory Mounting Track

1. Clip a lens or glare shield holder to each node.
2. Do one of the following:
   - Screw a marquee lens onto the lens holder. Hand tighten to approximately 1.1 to 1.7 Nm (10 to 15 in-lbs).
   - Align the tabs on the glare shield with the slots in the glare shield holder, and snap the glare shield onto the glare shield holder.
3. Cut the Accessory Mounting Track to the desired length with a saw or snips. Using flathead screws suitable for the mounting surface, drive screws through the plastic track into the attaching surface. Recommended maximum spacing between screws is 406 mm (16 in).
4. Snap the assembled eW Flex Compact nodes into the mounting track.
5. If using strands with standard 4-in or 12-in on-center spacing, you can snap optional Accessory Spacers into the track to hide mounting hardware and wires.



Make Power and Data Connections

eW Flex Compact fixtures are designed to work with 24 VDC power/data supplies from Philips Color Kinetics. Power/data supplies send power and data to eW Flex Compact strands over a Leader Cable. Each sPDS-480ca 24V can power up to 8 fixture strands in Ethernet installation, while each PDS-60ca 24V or sPDS-60ca 24V can power 1 strand in either Ethernet or DMX installations.

PDS-60ca 24V is an IP66-rated power/data supply, suitable for use in damp and wet locations. Although sPDS-480ca 24V is rated for use in dry locations only, you can install it in a watertight enclosure for outdoor applications.

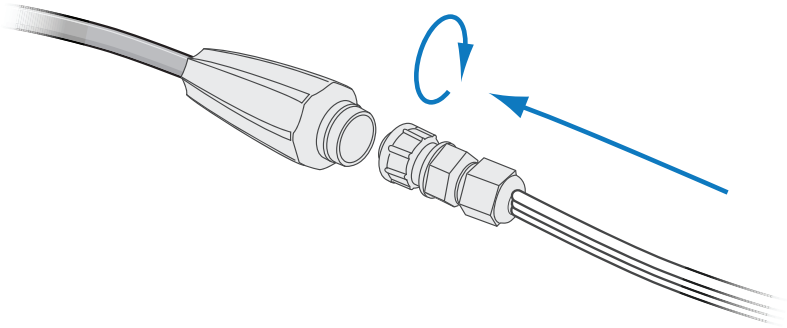
Make sure the power is OFF before connecting eW Flex Compact fixture strands.

Maximum strands per power/data supply

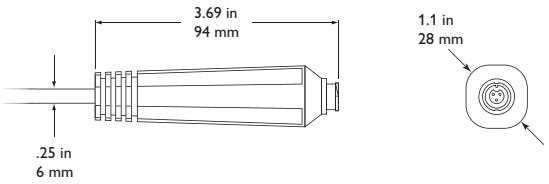
PDS-60ca 24V	1
sPDS-60ca 24V	1
sPDS-480ca 24V	8

Connecting eW Flex Compact Leader Cables

Connect a Leader Cable to the three-pin connector on the end of each eW Flex Compact strand by turning the fixture strand's grommet clockwise. In wet or damp environments, tighten the grommet on the male connector sufficiently to ensure a watertight seal. Use caution when handling the Leader Cable or eW Flex Compact strand in sub-freezing temperatures, as the wiring can become brittle and break.

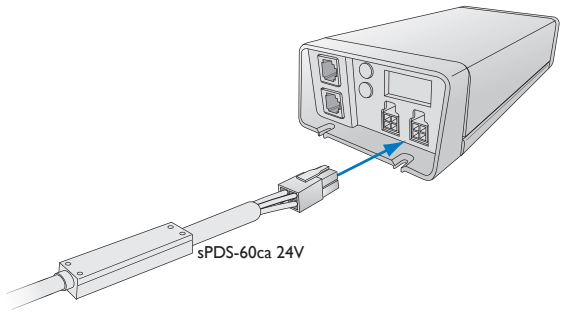


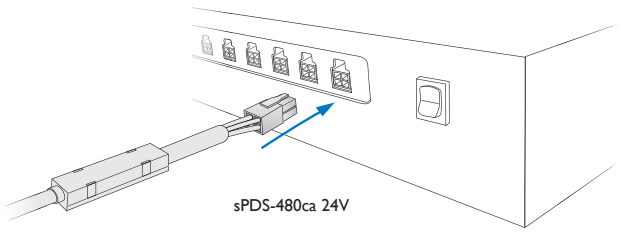
Leader Cable connector dimensions



Connecting to the sPDS-60ca 24V or sPDS-480ca 24V Power/Data Supply

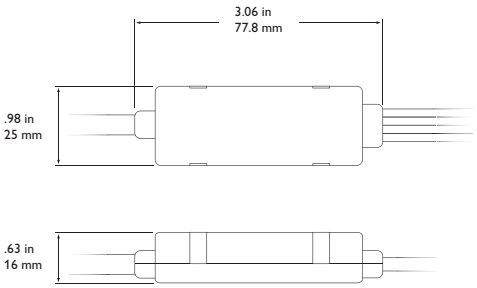
- Connect a Leader Cable to an available power port on the back of the power/data supply housing.





If using conduit, remove the transmitter PCA junction box cover from the Leader Cable, as described here, before pulling the cable through the conduit, then replace the junction box cover.

Transmitter PCA junction box dimensions

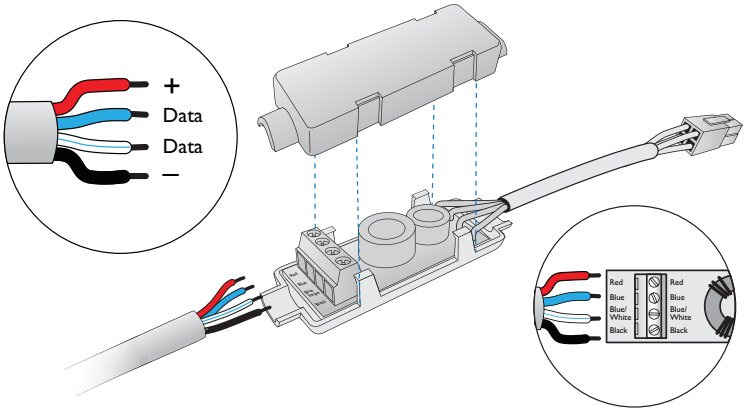


You can download the QuickPlay Pro software and the Addressing and Configuration Guide from www.philipscolorkinetics.com/support addressing/

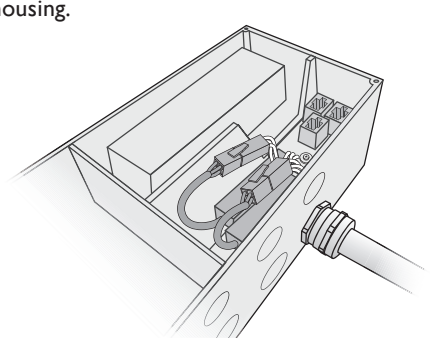
Connecting to the PDS-60ca 24V Power/ Data Supply

The PDS-60ca 24V is an IP66-rated power/data supply, suitable for use in damp and wet locations. The following procedure describes how to connect and seal a PDS-60ca 24V power/data supply for outdoor applications.

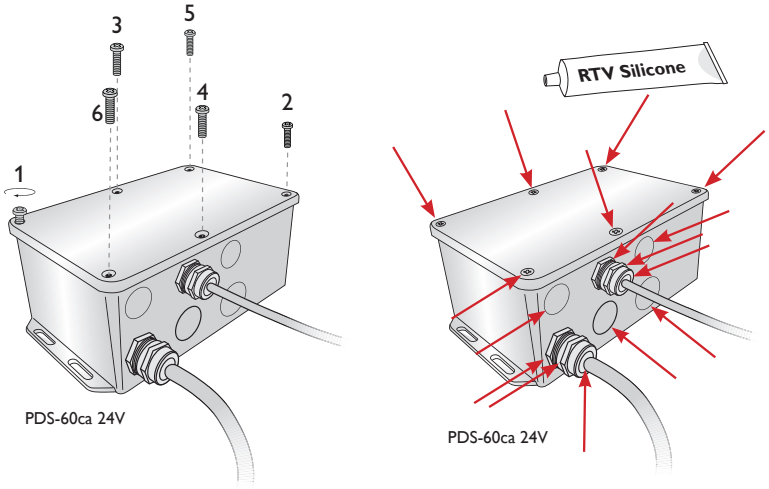
1. Remove the power/data supply cover.
2. Remove the cover of the transmitter PCA junction box on the Leader Cable by expanding the four tabs on the side and sliding the cover from the base.
3. Connect line, common, ground, and data to the provided terminal block, then replace the cover of the transmitter PCA junction box.



4. Connect the Leader Cable connector to an available port inside the power/ data supply housing.



5. Secure the power/data supply cover. If installing in a wet or damp location, seal the power/data supply with electronics-grade RTV silicone sealant.



6. Repeat steps 1 – 5 for each power/data supply in the installation.

Address and Configure the Fixtures

Make sure the power is ON before addressing and configuring fixtures.

Power/data supplies and controllers work together to stream data to the eW Flex Compact strands in your installation.

- Each individual eW Flex Compact node is assigned three sequential DMX addresses. A DMX universe consists of 512 addresses, so the maximum number of eW Flex Compact nodes that can be individually addressed in a DMX universe is 170 (170 x 3 = 510).

  When using a PDS-60ca 24V power/data supply with DMX control, you program the power/data supply rather than addressing the eW Flex Compact strings directly. Use SmartJack Pro (or iPlayer 3) with QuickPlay Pro addressing software to set a base DMX address for the power/data supply, and to specify the node quantity of each attached eW Flex Compact strand.

  For lighting designs where nodes work in unison, all nodes should be set to the same DMX addresses. For dynamic light show designs that show different brightness levels on different nodes simultaneously, you must assign unique DMX addresses to each node. Starting with its base DMX address, PDS-60ca automatically assigns addresses to each eW Flex Compact node in sequence, from the first node on output port 1 through the last node on output port 2.

  Because you are limited to 170 uniquely addressed nodes per DMX universe (less than four strands of 50 nodes each), Ethernet is the preferred environment for video displays and dynamic lighting effects.

- Each Ethernet-based power/data supply comes pre-programmed with a unique IP address, so the power/data supply effectively functions as its own universe. When creating a light map with a controller or media server, such as Light System Manager or Video System Manager Pro, each eW Flex Compact node automatically receives a unique identifier.

  You can discover all power/data supplies by IP address using QuickPlay Pro, Light System Manager, or Video System Manager Pro. For large installations, and especially for video displays, we recommend giving power/data supplies meaningful IP addresses to streamline installation, mapping, testing, and troubleshooting. When readdressing power/data supplies, you will need the layout grid you created when you recorded each power/data supply's IP address during installation planning.

For complete details on addressing and configuring fixtures, controllers, and power/data supplies, refer to the *Addressing and Configuration Guide* or the User Guide, or Specification Sheet for your controller or power/data supply.

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