



eW Accent Compact

High resolution media direct view linear LED fixture with solid white light

PHILIPS



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High resolution media direct view linear LED fixture with solid white light

eW Accent Compact is a direct view linear LED fixture ideally suited for displaying large-scale video, graphics, and intricately designed effects in a host of architectural settings. eW Accent Compact accepts Ethernet input from the PDS-400 48V EO to support long control runs not subject to DMX data and addressing limitations. Two lens choices are available for eW Accent Compact: a clear lens which delivers the brightest output and a translucent lens which provides the widest viewing angle.

- Precise resolution control—Fixtures can be addressed and controlled in increments down to 19 mm (0.75 in), or up to 1220 mm (4 ft).
- Native, onboard Ethernet—Fixtures accept Ethernet input from PDS-400 48V EO to support long control runs not subject to DMX data and addressing limitations.
- Three fixture lengths—305 mm (1 ft), 610 mm (2 ft), and 1220 mm (4 ft) lengths are easily connected to create long, continuous columns or rows of intense, solid white. The 305 mm (1 ft) fixtures in particular allow for extra flexibility when space is at a premium.
- Rugged, durable construction—This IP66-rated fixture is designed to meet the taxing requirements of outdoor applications. The aluminium housing resists shock, vibration, and other forms of rough handling.
- Flexible positioning—Over-molded end-to-end locking connectors supply both power and data. Connectors can make 180° turns for easy layout. Jumper cables can add extra space between fixtures.
- Industry-leading controls—Works seamlessly with the complete Philips line of controllers, including Video System Manager Pro, Light System Manager, and iPlayer 3, and any third-party controllers.
- Universal power input range—Accepts a universal power input range of 100 - 277 VAC for consistent installation anywhere in the world. Each 400 W, outdoor-rated PDS-400 48V EO can support multiple fixtures for creating long lines of video or ribbons of solid white light.
- ActiveSite integration—ActiveSite is the first ever cloud-hosted connected lighting system for architectural LED lighting installations. ActiveSite allows you to remotely monitor, manage, and maintain an installation site from anywhere in the world, using a secure web connection.



Available in Two Lens Designs

The clear lens produces a brighter light output while the translucent lens offers the widest viewing angle.

Linear Lighting — Redefined

The Corpus Christi Harbor Bridge is a prominent feature of the city's skyline. Originally built in the 1950s, the bridge serves as a gateway to the city, and separates the city's two main sources of income—tourism, which is centered on the bayfront, and oil, with miles of refineries lining the channel. Much of the bridge's lighting system had been corroded by the severe environment of the Gulf Coast — including extreme heat, harsh winds, and salt water. As a result, the lights were turned off and the bridge remained dark for more than a decade. After learning about the benefits and applications of LED lighting, City Mayor Joe Adame decided to relight the bridge with LED lights to help create a signature feature for the city.

Terry Orf, Senior Architect at Naismith Engineering, Inc., was the lead on the project. Because the funding was coming from a variety of sources, Orf was under pressure to find an LED lighting system that would not only meet the technical specifications of the job but would also meet the quality and reliability standards of the investors. Orf tested a variety of LED lighting systems, and Philips Color Kinetics won the job for a variety of reasons. "I looked down at my light meter and was amazed at the output that I was measuring and seeing from the fixtures. The Philips Color Kinetics fixtures were four times the intensity of the competitors," says Orf. "The Philips Color Kinetics LED lighting system was also simple to install and to program — basically, plug and go." The IP rating was also a major factor in Orf's decision. To prove out the ability of Philips Color Kinetics products to withstand the corrosive Gulf Coast environment, the city of Corpus Christi funded two smaller pilot projects with Philips Color Kinetics lighting — one on wind vanes in the downtown area, and one on the local amphitheater.



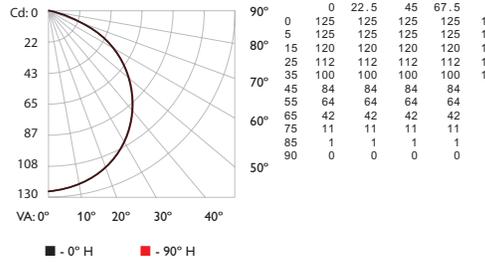
Photometrics / eW Accent Compact 305 mm (12 in)

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

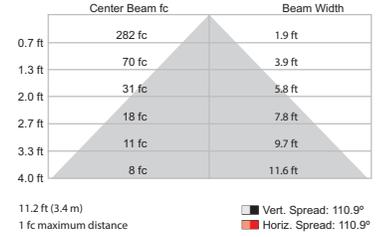
Clear Lens 2700 K

Lumens	Efficacy	CRI	On-Axis Candela	Viewing Angle
336	35.6	82	125	105°

Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Luminaire
0-30	97.3	28.9%
0-40	159.9	47.5%
0-60	281.7	83.7%
0-90	336.3	99.9%
60-90	54.6	16.2%
70-100	14.6	4.3%
90-120	0.2	0.1%
90-180	0.2	0.1%
0-180	336.6	100.0%

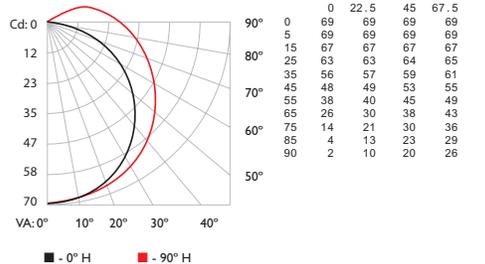
Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80				70				Effective Floor Cavity Reflectance: 20%						
	50	30	0	0	50	30	0	0	50	30	20	50	30	20	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02
0	1.10	1.05	1.02	0.98	1.07	1.03	1.00	0.97	0.99	0.96	0.93	0.95	0.93	0.91	0.92
1	1.00	0.93	0.86	0.81	0.98	0.91	0.85	0.74	0.87	0.82	0.78	0.84	0.80	0.76	0.81
2	0.92	0.82	0.74	0.68	0.89	0.80	0.73	0.63	0.77	0.71	0.66	0.74	0.69	0.65	0.72
3	0.84	0.72	0.64	0.58	0.82	0.71	0.63	0.54	0.69	0.62	0.56	0.66	0.60	0.56	0.64
4	0.77	0.65	0.56	0.50	0.75	0.64	0.55	0.47	0.62	0.54	0.49	0.60	0.53	0.48	0.56
5	0.71	0.58	0.50	0.43	0.69	0.57	0.49	0.42	0.56	0.48	0.43	0.54	0.47	0.42	0.52
6	0.66	0.53	0.44	0.38	0.64	0.52	0.44	0.37	0.51	0.43	0.38	0.49	0.42	0.38	0.48
7	0.62	0.48	0.40	0.34	0.60	0.48	0.40	0.33	0.46	0.39	0.34	0.45	0.38	0.34	0.44
8	0.58	0.44	0.36	0.31	0.56	0.44	0.36	0.30	0.43	0.35	0.30	0.41	0.35	0.30	0.40
9	0.54	0.41	0.33	0.28	0.53	0.40	0.33	0.27	0.39	0.32	0.28	0.38	0.32	0.27	0.37
10															

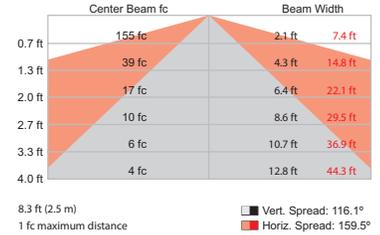
Translucent Lens 2700 K

Lumens	Efficacy	CRI	On-Axis Candela	Viewing Angle
302	31.5	83	69	210°

Illuminance at Distance



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Luminaire
0-30	55.0	18.3%
0-40	91.9	30.6%
0-60	172.4	57.3%
0-90	260.9	86.8%
60-90	88.5	29.5%
70-100	69.5	23.1%
90-120	36.0	12.0%
90-180	39.7	13.2%
0-180	300.6	100.0%

Coefficients Of Utilization - Zonal Cavity Method

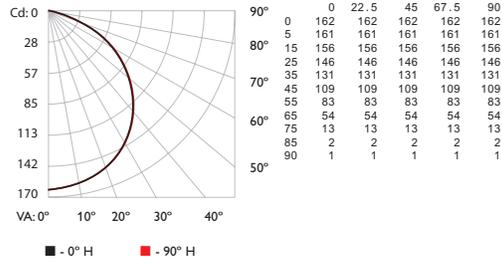
RCC %:	80				70				Effective Floor Cavity Reflectance: 20%						
	50	30	0	0	50	30	0	0	50	30	20	50	30	20	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	0
RCR:	0	1.16	1.16	1.16	1.12	1.12	1.12	0.87	1.04	1.04	1.04	0.97	0.97	0.97	0.90
1	1.03	0.97	0.91	0.86	0.98	0.93	0.88	0.67	0.86	0.82	0.79	0.80	0.77	0.74	0.74
2	0.92	0.83	0.75	0.68	0.88	0.79	0.72	0.54	0.74	0.68	0.63	0.68	0.63	0.59	0.63
3	0.83	0.72	0.62	0.55	0.80	0.69	0.61	0.45	0.64	0.57	0.51	0.59	0.54	0.49	0.55
4	0.76	0.63	0.53	0.46	0.72	0.61	0.52	0.38	0.56	0.49	0.43	0.52	0.46	0.41	0.49
5	0.70	0.56	0.46	0.39	0.66	0.54	0.45	0.33	0.50	0.42	0.37	0.47	0.40	0.35	0.44
6	0.64	0.50	0.40	0.34	0.61	0.48	0.39	0.28	0.45	0.37	0.32	0.42	0.35	0.30	0.39
7	0.59	0.45	0.36	0.29	0.57	0.44	0.35	0.25	0.41	0.33	0.28	0.38	0.32	0.27	0.36
8	0.55	0.41	0.32	0.26	0.53	0.40	0.31	0.22	0.37	0.30	0.25	0.35	0.28	0.24	0.33
9	0.51	0.37	0.29	0.23	0.49	0.36	0.28	0.20	0.34	0.27	0.22	0.32	0.26	0.21	0.30
10	0.48	0.34	0.26	0.21	0.46	0.33	0.26	0.16	0.32	0.25	0.20	0.30	0.24	0.19	0.28

For lux multiply fc by 10.7

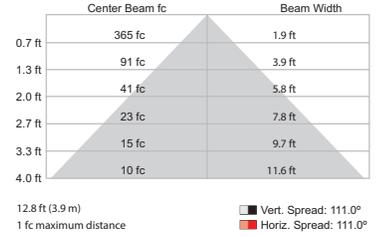
Clear Lens 4000 K

Lumens	Efficacy	CRI	On-Axis Candela	Viewing Angle
437	45.8	83	162	105°

Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Luminaire
0-30	126.7	29.0%
0-40	208.7	47.7%
0-60	366.5	83.7%
0-90	437.4	99.9%
60-90	70.9	16.2%
70-100	18.8	4.3%
90-120	0.3	0.1%
90-180	0.3	0.1%
0-180	437.7	100.0%

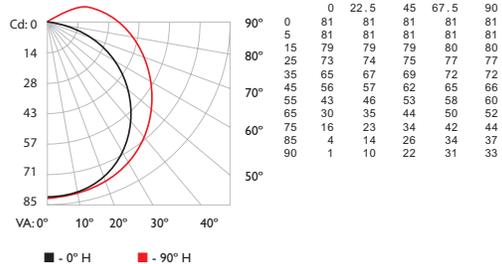
Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80				70				Effective Floor Cavity Reflectance: 20%						
	50	30	0	0	50	30	0	0	50	30	20	50	30	20	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02
	1	1.10	1.06	1.02	0.98	1.07	1.03	1.00	0.97	0.99	0.96	0.94	0.95	0.93	0.91
	2	1.00	0.93	0.86	0.81	0.98	0.91	0.85	0.74	0.87	0.82	0.78	0.84	0.80	0.76
	3	0.92	0.82	0.74	0.68	0.89	0.80	0.73	0.63	0.77	0.71	0.66	0.74	0.69	0.65
	4	0.84	0.73	0.64	0.58	0.82	0.71	0.63	0.55	0.69	0.62	0.56	0.66	0.60	0.56
	5	0.77	0.65	0.56	0.50	0.75	0.64	0.56	0.48	0.62	0.54	0.49	0.60	0.53	0.48
	6	0.71	0.58	0.50	0.43	0.70	0.57	0.49	0.42	0.56	0.48	0.43	0.54	0.47	0.42
	7	0.66	0.53	0.44	0.38	0.64	0.52	0.44	0.37	0.51	0.43	0.38	0.49	0.43	0.38
	8	0.62	0.48	0.40	0.34	0.60	0.48	0.40	0.33	0.46	0.39	0.34	0.45	0.38	0.33
	9	0.58	0.44	0.36	0.31	0.56	0.44	0.36	0.30	0.43	0.35	0.30	0.41	0.35	0.30
	10	0.54	0.41	0.33	0.28	0.53	0.40	0.33	0.27	0.39	0.32	0.28	0.38	0.32	0.28

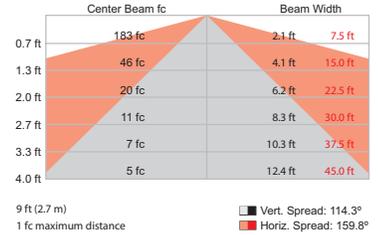
Translucent Lens 4000 K

Lumens	Efficacy	CRI	On-Axis Candela	Viewing Angle
346	36.2	84	81	210°

Illuminance at Distance



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Luminaire
0-30	64.8	18.8%
0-40	108.1	31.3%
0-60	202.1	58.5%
0-90	304.1	88.0%
60-90	102.0	29.5%
70-100	79.2	22.9%
90-120	39.2	11.3%
90-180	41.5	12.0%
0-180	345.6	100.0%

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80				70				Effective Floor Cavity Reflectance: 20%						
	50	30	0	0	50	30	0	0	50	30	20	50	30	20	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	0
RCR:	0	1.16	1.16	1.16	1.12	1.12	1.12	0.88	1.04	1.04	1.04	0.97	0.97	0.97	0.91
	1	1.03	0.97	0.92	0.87	0.99	0.93	0.89	0.66	0.87	0.83	0.79	0.81	0.78	0.75
	2	0.92	0.83	0.75	0.68	0.89	0.80	0.73	0.55	0.74	0.68	0.63	0.69	0.64	0.60
	3	0.84	0.72	0.63	0.56	0.80	0.69	0.61	0.46	0.65	0.58	0.52	0.60	0.54	0.49
	4	0.76	0.63	0.54	0.46	0.73	0.61	0.52	0.39	0.57	0.49	0.43	0.53	0.47	0.41
	5	0.70	0.56	0.46	0.39	0.67	0.54	0.45	0.33	0.51	0.43	0.37	0.47	0.41	0.35
	6	0.64	0.50	0.41	0.34	0.61	0.49	0.40	0.29	0.45	0.38	0.32	0.43	0.36	0.31
	7	0.59	0.45	0.36	0.30	0.57	0.44	0.35	0.26	0.41	0.34	0.28	0.39	0.32	0.27
	8	0.55	0.41	0.32	0.26	0.53	0.40	0.32	0.23	0.38	0.30	0.25	0.35	0.29	0.24
	9	0.52	0.38	0.29	0.23	0.49	0.37	0.29	0.20	0.35	0.27	0.22	0.33	0.26	0.21
	10	0.48	0.35	0.27	0.21	0.46	0.34	0.26	0.19	0.32	0.25	0.20	0.30	0.24	0.19

For lux multiply fc by 10.7

Specifications

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

Item	Specification		305 mm (1 ft)		610 mm (2 ft)		1219 mm (4 ft)	
			2700 K	4000 K	2700 K	4000 K	2700 K	4000 K
	Lumens †	Clear Lens	336	437	672	874	1344	1748
		Translucent Lens	302	346	604	692	1208	1384
	Lumens Per Pixel	Clear Lens	21	27.3	42	54.6	84	109.3
		Translucent Lens	18.9	21.6	37.8	43.3	75.5	86.5
	Efficacy (lm/W)	Clear Lens	35.6	45.8	35.6	45.8	35.6	45.8
		Translucent Lens	31.5	36.2	31.5	36.2	31.5	36.2
	On-Axis Candela	Clear Lens	125	162	250	324	500	648
		Translucent Lens	69	81	138	162	276	324
	On-Axis Candela Per Pixel	Clear Lens	7.8	10.1	15.6	20.2	30.3	40.4
		Translucent Lens	4.3	5.1	8.6	10.2	17.3	20.4
Viewing Angle	Clear Lens	105°						
	Translucent Lens	210°						
Lumen Maintenance†		60,000+ hours L70 @ 25° C (full output)				60,000+ hours L70 @ 50° C (full output)		
Electrical	Input Voltage		100 – 277 VAC, auto-switching, 48V via PDS-400 48V EO					
	Power Consumption		10 W per fixture maximum at full output, steady state		16 W per fixture maximum at full output, steady state		28 W per fixture maximum at full output, steady state	
Control	Interface		PDS-400 48V EO, CM-400 48V EO					
	Control System		Philips full range of controllers, including Video System Manager Pro, Light System Manager, and iPlayer 3, or third-party controllers					
Physical	Dimensions (Height x Width x Depth)	Clear Lens	68.6 x 303.5 x 35.3 mm (2.7 x 11.9 x 1.3 in)		68.6 x 609 x 35.3 mm (2.7 x 23.9 x 1.3 in)		68.6 x 1220 x 35.3 mm (2.7 x 48 x 1.3 in)	
		Translucent Lens	86.6 x 303.5 x 35.3 mm (3.4 x 11.9 x 1.3 in)		86.6 x 609 x 35.3 mm (3.4 x 23.9 x 1.3 in)		86.6 x 1220 x 35.3 mm (3.4 x 48 x 1.3 in)	
	Weight	Clear Lens	1.3 lb (0.61 kg)		2 lb (0.91 kg)		3.4 lb (1.53 kg)	
		Translucent Lens	1.4 lb (0.63 kg)		2.1 lb (0.96 kg)		3.6 lb (1.64 kg)	
	Housing		Extruded aluminum/polycarbonate					
	Lens		Clear or translucent polycarbonate					
	Fixture Connections		Over-molded, integral male/female connectors					
	Temperature Ranges		-40° – 50° C (-40° – 122° F) Operating -20° – 50° C (-4° – 122° F) Startup -40° – 80° C (-40° – 176° F) Storage					
	Maximum Fixtures Per PDS-400 48V EO		31		20		12	
	Humidity		0 – 95%, non-condensing					
Mechanical Impact		IK10						
Certification and Safety	Certification		UL / cUL, CE, CQC, FCC Class A, RCM					
	Environment		Dry/Damp/Wet Location, IP66					

† Lumen measurement complies with IES LM-79-08 testing procedures.

§ Lxx = xx% lumen maintenance (when light output drops below xx% of initial output). All values are given at B10, or the median value where 90% 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-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

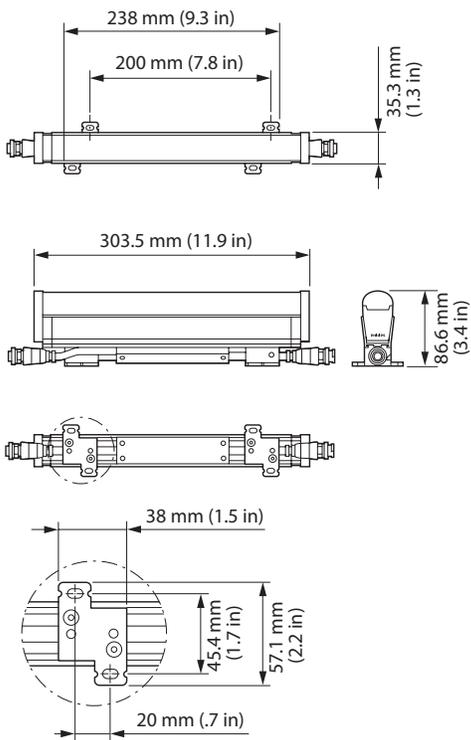
§§ Efficacy measurements are estimated based on the 305 mm (1 ft) measurements.



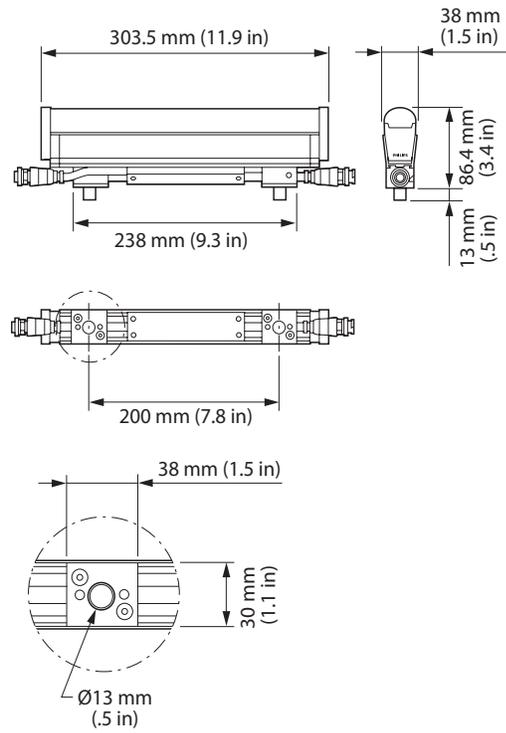
CHROMACORE[®]
CK TECHNOLOGY

Dimensions - 305 mm (1 ft)

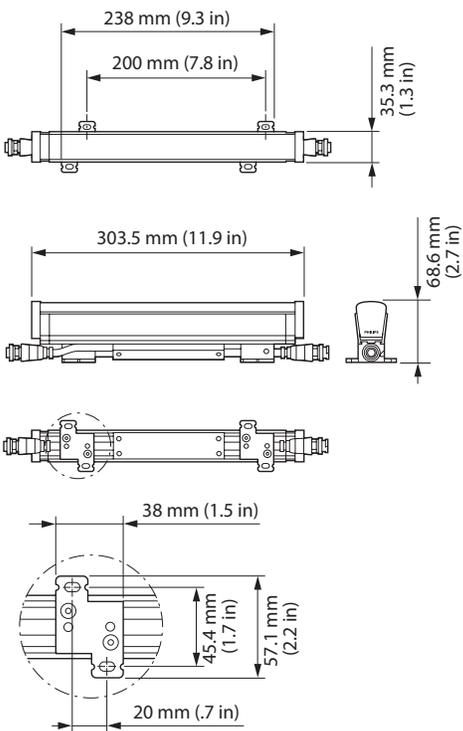
Translucent Lens Front Mount



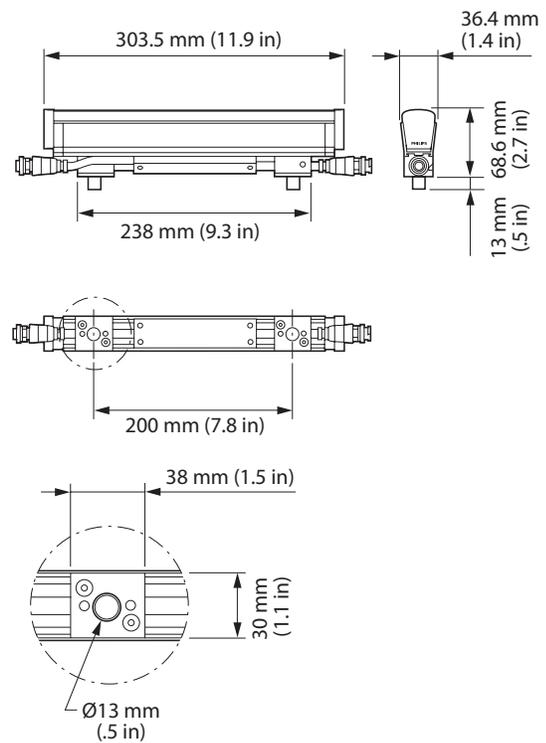
Translucent Lens Rear Mount



Clear Lens Front Mount

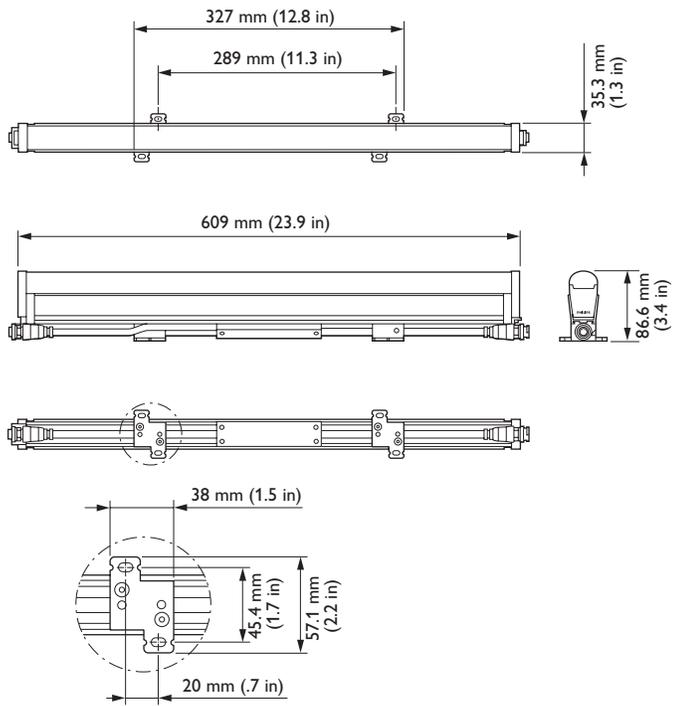


Clear Lens Rear Mount

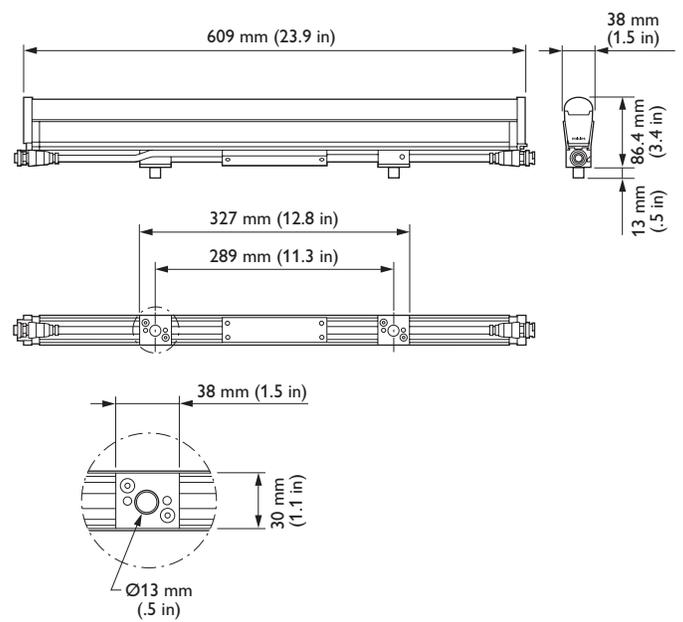


Dimensions - 610 mm (2 ft)

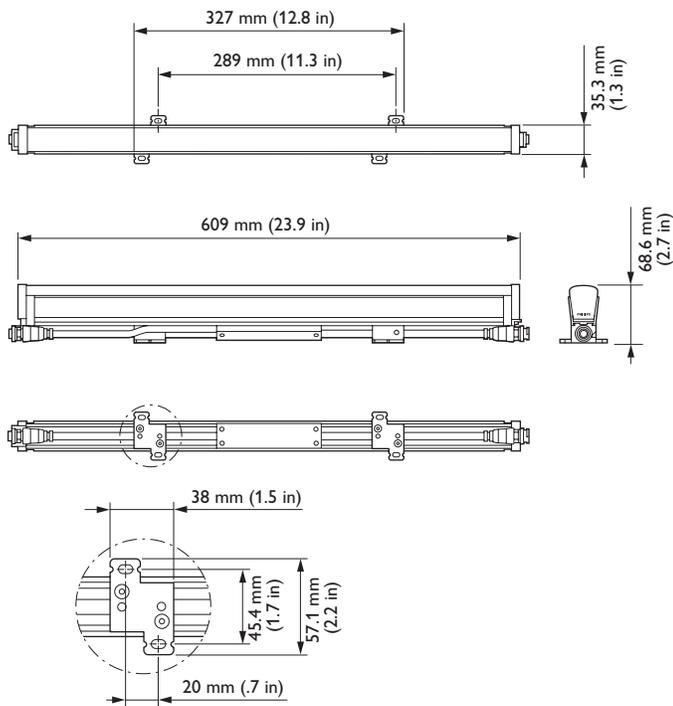
Translucent Lens Front Mount



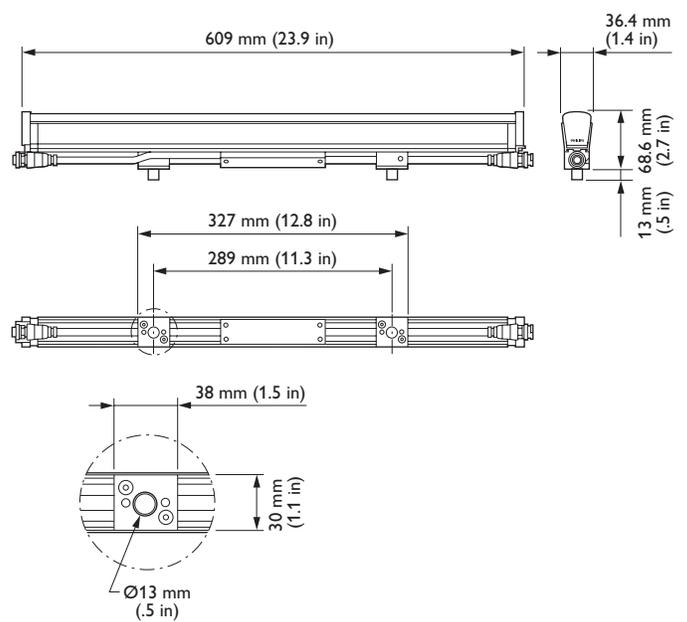
Translucent Lens Rear Mount



Clear Lens Front Mount

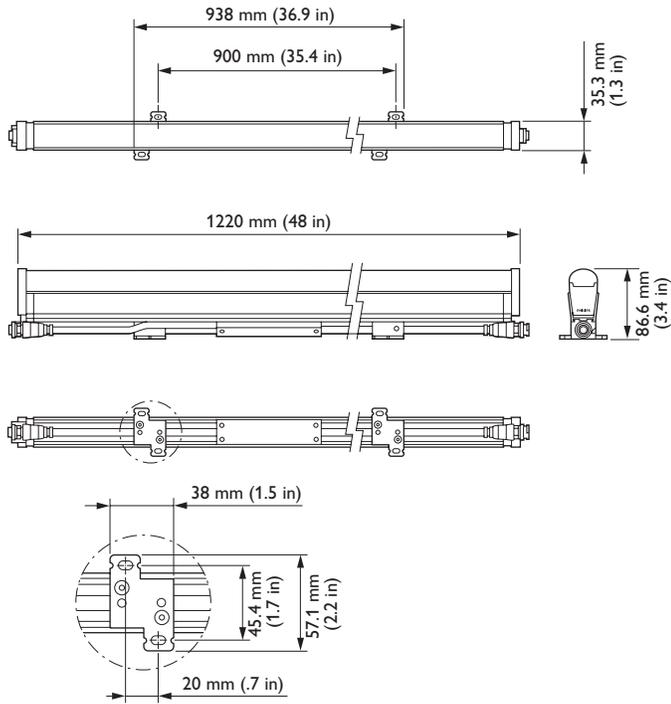


Clear Lens Rear Mount

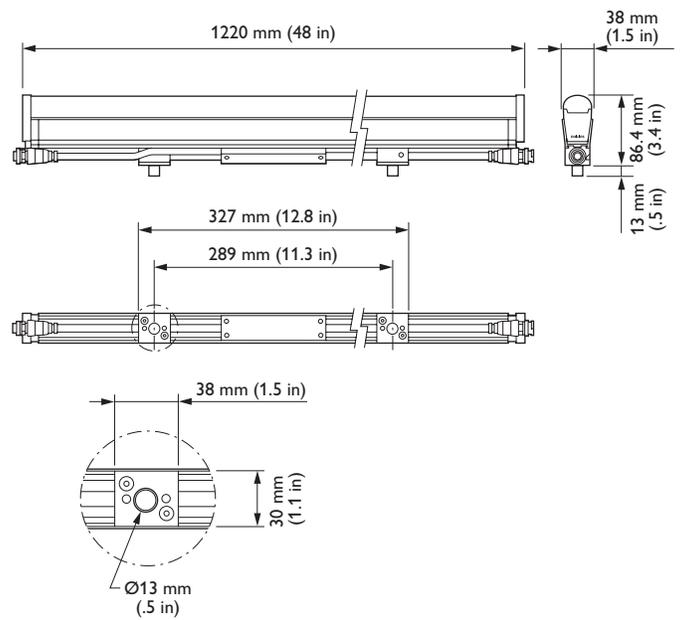


Dimensions - 1220 mm (4 ft)

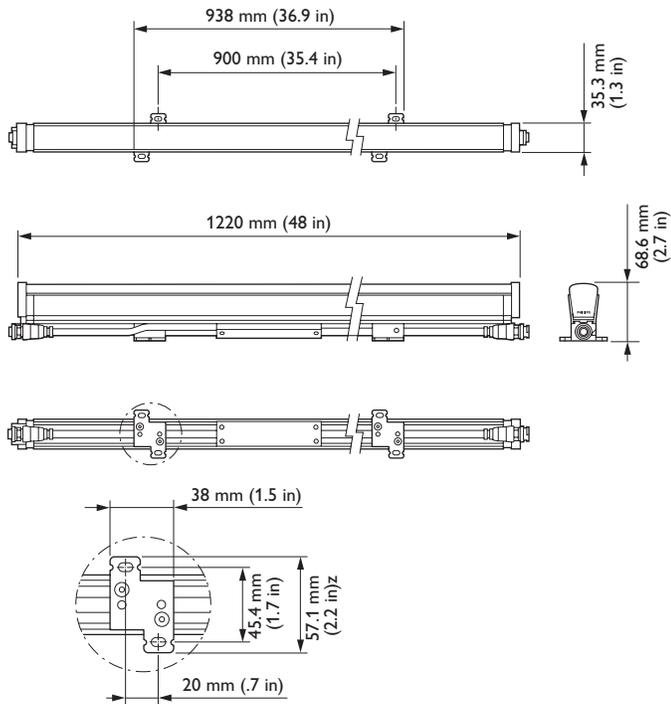
Translucent Lens Front Mount



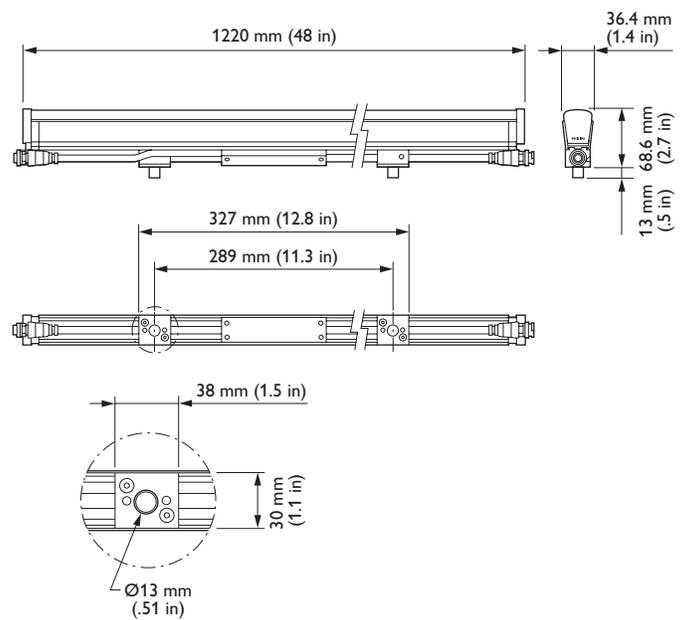
Translucent Lens Rear Mount



Clear Lens Front Mount



Clear Lens Rear Mount



Fixtures and Accessories

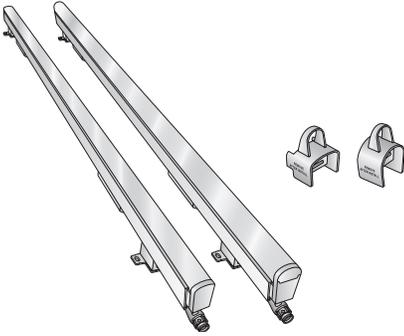
eW Accent Compact is part of a complete system which includes fixtures and:

- One or more PDS-400 48V EO or CM-400 48V EO devices
- One Leader Cable to connect each PDS-400 48V EO output to a series of fixtures
- Optional Jumper Cables to add space between fixtures in a series, if necessary
- Philips Color Kinetics full range of controllers, including Light System Manager, Video System Manager Pro, iPlayer 3, Antumbra eW Keypad, and ColorDial Pro, or third-party controllers

Included in the box

eW Accent Compact fixture

Installation Spacer



Fixtures

Item	Type	Item Number	Philips 12NC
eW Accent Compact	305 mm (1 ft) Clear Lens, 2700 K	500-000200-03	912400133780
	305 mm (1 ft) Translucent Lens, 2700 K	500-000200-00	912400133777
	610 mm (2 ft) Clear Lens, 2700 K	500-000200-04	912400133781
	610 mm (2 ft) Translucent Lens, 2700 K	500-000200-01	912400133778
	1219 mm (4 ft) Clear Lens, 2700 K	500-000200-05	912400133782
	1219 mm (4 ft) Translucent Lens, 2700 K	500-000200-02	912400133779
	305 mm (1 ft) Clear Lens, 4000 K	500-000200-09	912400133786
	305 mm (1 ft) Translucent Lens, 4000 K	500-000200-06	912400133783
	610 mm (2 ft) Clear Lens, 4000 K	500-000200-10	912400133787
	610 mm (2 ft) Translucent Lens, 4000 K	500-000200-07	912400133784
	1219 mm (4 ft) Clear Lens, 4000 K	500-000200-11	912400133788
	1219 mm (4 ft) Translucent Lens, 4000 K	500-000200-08	912400133785

Accessories

Leader Cable	15 m (50 ft)	108-000200-00	912400133789
	30 m (100 ft)	108-000200-01	912400133790

Jumper Cable	1.5 m (5 ft)	108-000200-02	912400133791
	305 mm (1 ft)	108-000200-03	912400134184

Accessories	Horizontal Louver, 305 mm (1 ft)	120-000200-00	912400133792
	Horizontal Louver, 610 mm (2 ft)	120-000200-01	912400133793
	Horizontal Louver, 1219 mm (4 ft)	120-000200-02	912400133794
	Vertical Louver, 305 mm (1 ft)	120-000200-03	912400133795
	Vertical Louver, 610 mm (2 ft)	120-000200-04	912400133796
	Vertical Louver, 1220 mm (4 ft)	120-000200-05	912400133797
	Rear Mounting Studs, 2 pieces	120-000200-06	912400133798

Power/Data Supply	PDS-400 48V EO, UL	109-000200-00	912400133799
	PDS-400 48V EO, CE	109-000200-01	912400134110
	CM-400 48V EO	109-000210-00	912400133801
	PS-600 48V	109-000220-00	912400133803
	PS-480 48V	109-000220-01	912400133804

Use Item Number when ordering in North America.

Installation

eW Accent Compact fixtures are ideally suited for creating long ribbons of color and color-changing effects. Variable node size offers the precision to display large-scale video, graphics, and intricately designed effects in a host of architectural settings, including permanent building-covering displays.

Owner / User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate eW Accent Compact fixtures 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.

⚠ Refer to the eW Accent Compact Installation Instructions for specific warning and caution statements at www.colorkinetics.com/ls/rgb/eW-Accent-Compact/

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 damp or wet locations. Additionally, use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes.

Planning Your Installation

Because of their potential complexity, eW Accent Compact installations require upfront planning for configuring, positioning, and mounting fixtures. eW Accent Compact fixtures receive power and data from either the PDS-400 48V EO or CM-400 48V EO devices. Planning includes understanding how to set fixtures' node size (pixel resolution), how to position fixtures in relation to the devices, the number of fixtures you can connect together in a single run, and whether you need to connect fixtures end-to-end or use jumper cables to add extra space between them. Planning for media displays involves additional considerations such as pixel pitch, minimum and maximum viewing distances, sampling, and display resolution.

⚠ Feed fixtures from one side, DO NOT SERPENTINE a set of eW Accent Compact fixtures when installing. Each run of fixtures should be in a straight line.

All installations involve three main steps:

1. Create a lighting design plan and layout grid
2. Address and configure fixtures
3. Mount and test fixtures

If you're creating a simple installation with relatively few lights, or if you're running an Ethernet lighting network with an accessible Ethernet switch, you can install the lights first, then address and configure them after installation. For more complex installations, especially for installations that require fixtures to be hung in locations that are difficult to access or installations in which fixtures are not all visible from a single location, you may want to address fixtures in a staging area before installing them.

Understanding Node Size and Pixel Resolution

To allow a fine level of control, eW Accent Compact fixtures offer variable node size. A node is an individually controllable fixture segment of a certain length. eW Accent Compact nodes can be as large as the full length of the fixture or as small as 19 mm (0.75 in.) A 1220 mm (4 ft) fixture, for instance, can act as one large node, or it can have as many as 64 nodes of 19 mm (0.75 in) each.

In architectural accenting applications, you typically use larger node sizes for filling spaces or washing surfaces with a desired intensity of color-changing light. In media applications, the appropriate node size is determined by the maximum and minimum viewing distances and media resolution.

Number of Nodes Per Fixture

Fixture Length	Nodes Per Fixture
305 mm (1 ft)	1 – 16
610 mm (2 ft)	1 – 32
1220 mm (4 ft)	1 – 64

Ethernet Control

eW Accent Compact fixtures accept Ethernet (KiNET) data input. Because it is not subject to DMX addressing limitations, Ethernet is the preferred environment for intricate color-changing light shows and media displays calling for hundreds or thousands of nodes that must be controlled individually. In an Ethernet lighting network, each eW Accent Compact fixture effectively functions as its own universe, identified by the fixture's unique IP address.

A typical Ethernet installation uses one or more Ethernet switches, and an Ethernet controller such as Light System Manager or Video System Manager Pro. You can connect a series of up to 31 305mm (1 ft), 20 610 mm (2 ft), or 12 1220 mm (4 ft) eW Accent Compact fixtures to a single PDS-400 48V EO.

Achieving Consistent Node Size

Consistent node size can be important for planning both media installations and dynamic light shows. Node sizes that divide evenly into a fixture's total length remain consistent across multiple fixtures installed end-to-end, regardless of fixture length.

Consistent Node Sizes

Node Size	Nodes Per 305 mm (1 ft) fixture	Nodes Per 610 mm (2 ft) fixture	Nodes Per 1220 mm (4 ft) fixture
19 mm (0.75 in)	16	32	64
38 mm (1.5 in)	8	16	32
76 mm (3 in)	4	8	16
144 mm (5.7 in)	2	4	8
288 mm (11.3 in)	1	2	4

Additional Considerations for Media Displays

Along with the planning required for any eW Accent Compact installation, planning for media displays involves additional considerations such as pixel pitch, minimum and maximum viewing distances, sampling, and display resolution.

Determining Pixel Pitch and Viewing Distances for Media Displays

In a media display, each fixture node functions as a pixel in the display. Planning for low-resolution media displays involves designing a layout for your eW Accent Compact fixtures that determines the pixel sizes and places the pixels close enough together to accommodate media at acceptable minimum and maximum viewing distances.

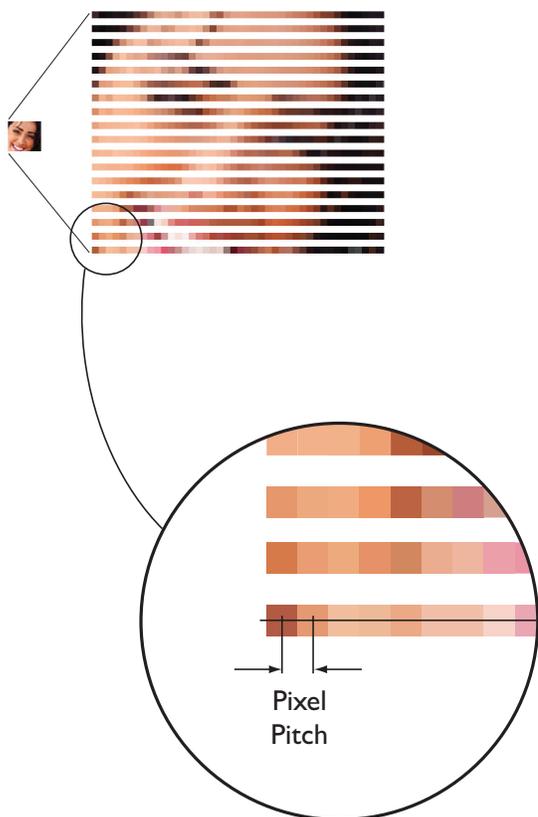
Images on an LED media display appear to be sharper to the human eye as the distance to the display increases. Likewise, images appear less visible as the distance decreases. The spacing between pixels, known as the *pixel pitch*, determines the minimum and maximum viewing distances for discernible media output.

Pixel pitch is measured center-to-center. In an eW Accent Compact fixture, where there may be no black space between pixels, you determine pixel pitch by measuring from the center of one node to the center of the next.

There are number of ways of adjusting pixel pitch using eW Accent Compact fixtures:

- You can separate pixels within a single fixture by configuring the media display so that every other fixture node is black.
- You can separate pixels horizontally between fixtures by using jumper cables.
- You can separate pixels vertically between fixtures by spacing your fixture runs.

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



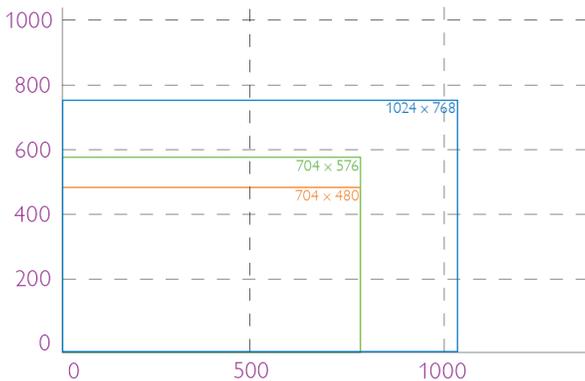
- To determine the minimum viewing distance, multiply the pixel pitch by 100 distance units. For example, if the pixel pitch is 50 mm, the minimum viewing distance is 5 m (16.4 ft).
- To determine the maximum viewing distance for discernible media, multiply the screen height by 20 distance units. For example, if the screen height is 20 m (65.6 ft), then the maximum viewing distance for recognizable media is 400 m (1312.3 ft).
- LED screens are visible beyond the maximum viewing distance for discernible media. To determine the maximum viewing distance that still creates visual impact, multiply the screen height by 50 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 Media Display Resolutions

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

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

 VSE Pro, or Video System Engine Pro, is the hardware component of Video System Manager Pro, an integrated video controller from Philips Color Kinetics. Visit www.philipscolorkinetics.com/led/controllers/vsmpro/ for complete information



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

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

For example, if you retain the horizontal resolution of a digital media 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 media 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 media output. This method is especially effective when creating an installation that covers a building which, by necessity, already has spacing between lines of media due to windows and other architectural features.

You can reduce pixel count either horizontally or vertically by using jumper cables to add space between eW Accent Compact fixtures. As in the above example, you would sample and distribute pixels from the source media to match the pixel size and spacing of your installation.

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

Create a Lighting Design Plan and Layout Grid

Even for relatively simple installations, it's good practice to create a lighting design plan that identifies your fixtures, records their IP addresses and node sizes, and identifies their locations and the locations of other required hardware. For complex installations displaying light shows with dynamic effects, and especially for Ethernet-based media displays, a detailed lighting design plan is essential.

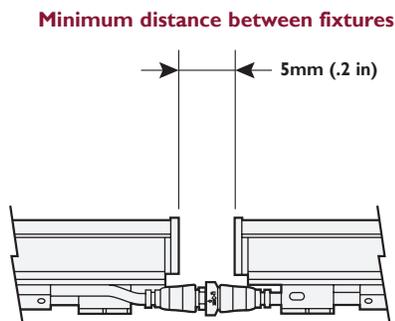
A lighting design plan is typically an architectural diagram or other diagram that shows the physical layout of the installation, including the appropriate positioning and spacing of all required fixtures, power sources, controllers, and cables. Some professional media content companies specialize in creating media designs and supporting lighting design plans.

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

1. Determine the appropriate location of each PDS-400 48V EO in relation to the fixtures, and of the fixtures in relation to each other.

You connect the first fixture in a series to a PDS-400 48V EO with a 15 m (50 ft) or 30 m (100 ft) Leader Cable. Refer to the PDS-400 48V EO Installation Instructions or Product Guide for guidelines on configuring and positioning the PDS-400 48V EO in relation to the controller.

2. eW Accent Compact fixtures are installed in series. The in-line connectors allow end-to-end fixture connections for the best visual effects. When connected end-to-end, fixtures can be installed as close as 5 mm (.2 in) apart. When you need to separate fixtures by more than this amount, use the 305 mm (1 ft) or 1.5 m (5 ft) jumper cables.
3. Each run of fixtures can include a maximum of 31 305 mm (1 ft) fixtures. Total run length, including fixtures, Leader Cable, and Jumper Cables, must not exceed 300 ft (91.4 m).
4. Connectors are gender-specific. Since the Leader Cable has a female connector, all lights in a run must be installed with their male connectors facing toward the PDS-400 48V EO.
5. On an architectural diagram or other diagram that shows the physical layout of the installation, identify the locations of all switches, controllers, power supplies, fixtures, and leader and jumper cables.



Maximum Run Lengths

Leader Cable	Fixture Length/Type	Maximum Fixtures Per Run
15 m (50 ft)	1220 mm (4 ft) / 27.5 W	12
30 m (100 ft)	1220 mm (4 ft) / 27.5 W	11
15 m (50 ft)	610 mm (2 ft) / 16 W	20
30 m (100 ft)	610 mm (2 ft) / 16 W	18
15 m (50 ft)	305 mm (1 ft) / 10 W	31
30 m (100 ft)	305 mm (1 ft) / 10 W	28

Start the Installation

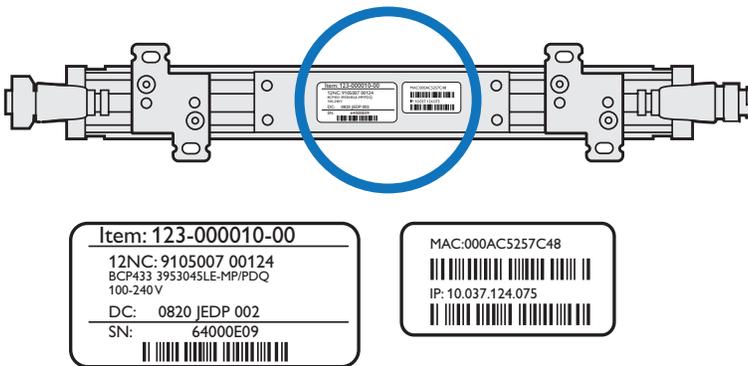
1. Install all PDS-400 48V EO devices, including any interfaces with controllers. One Leader Cable is required to connect each run or series of fixtures to a PDS-400 48V EO. PDS-400 48V EO sends power and control signals to the fixtures over the Leader Cable.
2. Verify that all additional supporting equipment (switches, controllers) is in place.
3. If your installation calls for Jumper Cables to add space between fixtures, make sure they are available.
4. Ensure that all additional parts (#10 mounting screws suitable for the mounting surface, clamps, truss, terminators) and tools (screwdrivers, pliers or pliers) are available.

* For complete instructions on how to wire the PDS-400 48V EO, refer to the PDS-400 48V EO Installation Guide or Product Guide.

Unpack and Prepare Fixtures

1. Carefully inspect the box containing eW Accent Compact and the contents for any damage that may have occurred in transit.
2. Each eW Accent Compact fixture has an onboard Ethernet switch and comes pre-programmed with a unique IP address. As you unpack the fixtures, record the IP addresses in a layout grid (typically a spreadsheet or list) for easy reference and light addressing.

* DO NOT SERPENTINE a set of eW Accent Compact fixtures when installing. Each run of fixtures should be in a straight line.

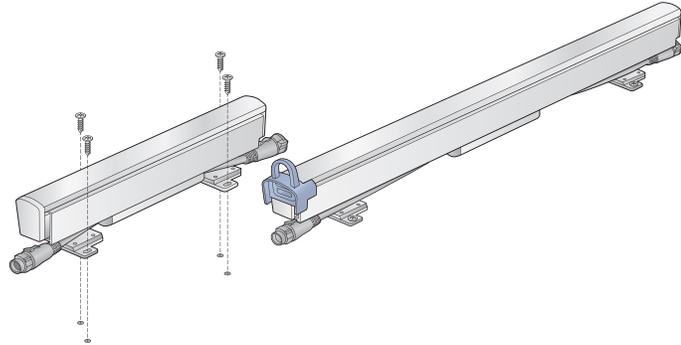
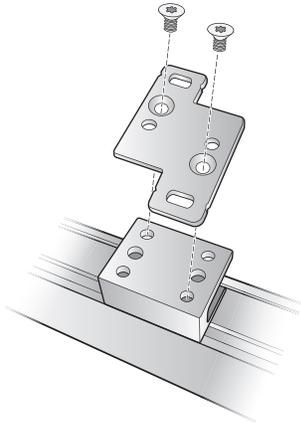


3. Assign each fixture to a position in the lighting design plan.
4. To streamline installation and aid in light show programming, you can affix a weatherproof label identifying the order or placement in the installation to an inconspicuous location on each light fixture's housing.

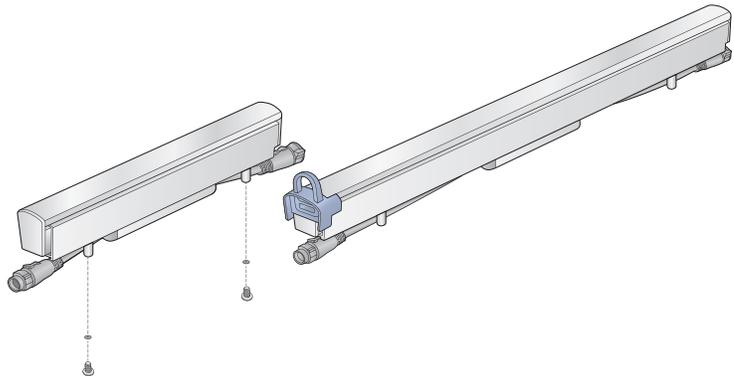
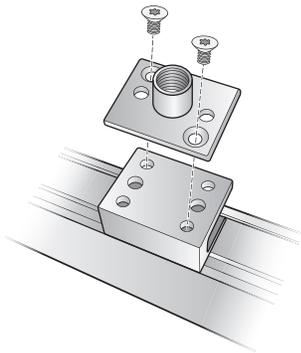
Mount and Connect Fixtures

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

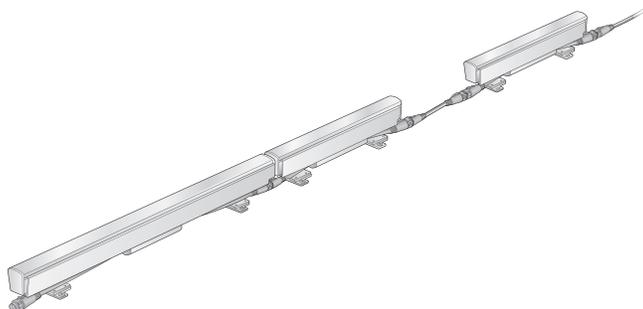
1. Position the first fixture in a series and attach it with #10 mounting screws suitable for the mounting surface. Ensure that the male input connector is in a position to receive data and power from the Leader Cable.



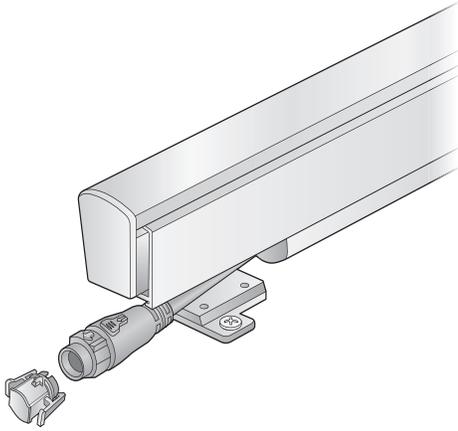
2. If mounting via the rear, remove default mounting brackets with the rear mounting brackets and secure to fixture with #10 mounting screws suitable for the mounting surface. Ensure that the male connector is in a position to receive data and power from the Leader Cable.



3. Position the next fixture in the series, matching the male connector end to the female output connector of the previously mounted fixture. The provided spacer ensures the minimum space between fixtures is 5 mm. The flexible connector cables allow for up to 180° turns.

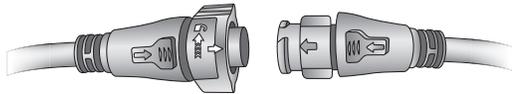


4. Continue mounting the fixtures, making power / data connections as you go, until all lights in the series are mounted.
5. Insert the provided fixture terminator into the last fixture in the series.



✳ Terminator is included with Leader Cable

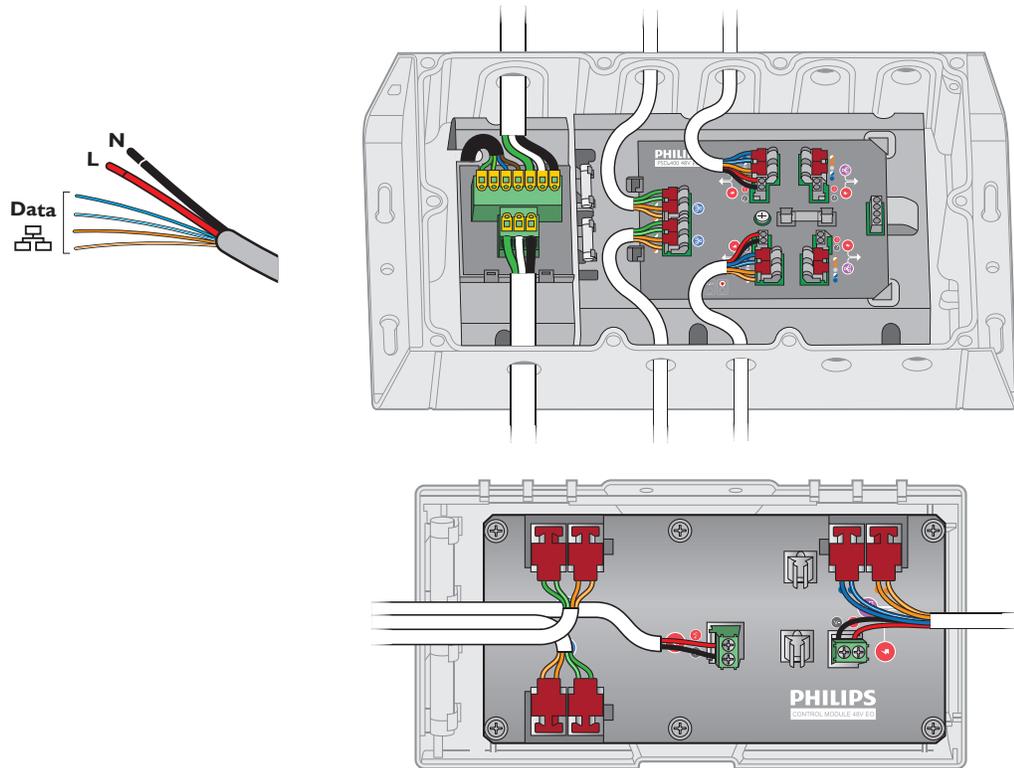
6. Connect the Leader Cable to the first fixture in the series.
7. Make PDS-400 48V EO connections:



- Remove the PDS-400 48V EO cover.
- Attach a strain relief fitting to the PDS-400 48V EO. Apply RTV silicone between fitting and enclosure, and insert the Leader Cable through strain relief fitting, washer, and ear clamp. Route the Leader Cable to its final destination in the PDS-400 48V EO enclosure.
- Position the ear clamp near the opening. Crimp both ears of the ear clamp uniformly around the Leader Cable with pincers or pliers. Tighten the strain relief nut, compressing the fitting snugly around the Leader Cable.
- Inside the PDS-400 48V EO housing, connect the Leader Cable's data wires to

✳ Refer to the PDS-400 48V EO Product Guide for comprehensive installation and configuration instructions. You can view or download the guide from www.philipscolorkinetics.com/ls/pds/pds-400_48V_EO

the 4-wire IDC terminal block, and the line, neutral, and ground wires to the fixture cable 4-wire terminal block.



Address and Configure the Fixtures

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

eW Accent Compact fixtures have variable node sizes, ranging from 19 mm (0.75 in) to the entire length of the fixture.

In Ethernet networks, each fixture is identified by a unique IP address and effectively functions as its own universe. As long as all eW Accent Compact IP addresses are unique within an installation, the set of IP addresses assigned to a given fixture is unique within the installation.

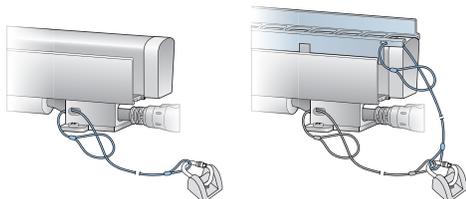
- In Ethernet installations, you can address and configure fixtures using QuickPlay Pro with a computer connected to an Ethernet switch in your lighting network. QuickPlay Pro automatically discovers all eW Accent Compact fixtures for quick configuration. Alternatively, you can discover and address fixtures using an Ethernet controller such as Light System Manager or Video System Manager Pro. For complete details on addressing and configuring eW Accent Compact fixtures, refer to the *Addressing and Configuration Guide*.

* You can download QuickPlay Pro from www.philipscolorkinetics.com/support/addressing/

Attach Safety Cable (Optional)

When dictated by local or state code or advised by a structural engineer, attach a safety cable to the eW Accent Compact fixture housing and tether it to a secure anchor point.

1. Thread a safety cable through the fixture housing as shown.
2. Attach the safety cable to the mounting surface using a method that follows the code or engineer's requirements.



Safety cable minimum requirements

Material	304 or 316 Stainless Steel
Size	1/8 in (3.2 mm) nominal diameter. Minimum break load must be greater than 2,100 lb (953 kg).

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