



Lumec **Leonis** LED luminaire is the culmination of years of effort from design professionals dedicated to improving the outdoor lighting environment so that the future will not only be ecologically sound but also aesthetically pleasing. Lumec has created the Leonis with beauty, sustainability and durability in mind. The **Leonis** allows you to create a beautiful, durable project while providing energy savings and safety.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lamps: _____ Qty: _____
 Notes: _____

Ordering guide

example: LEN4-80W48LED4K-T-3-120-CDMGM25-HS-16-PH-NP

Series	Lamp	Lamp Type	Optical System	Ballast	Driver Options ¹	Luminaire Options	Pole Height ⁵		Pole Options	Finish
							LEN4	LEN5-LEN6		
LEN4	35W48LED4K ^{1,2}	T	2 Type II (ASYM)	120	AST Adjustable Start Time	Decorative luminous element: LEDA ⁴ Amber LEDB ⁴ Blue LEDG ⁴ Green LEDR ⁴ Red LEDW ⁴ White Other options: OVR "Dynadimmer override function" HS House Side Shield SP2 Surge Protector	8 to 20	8 to 22	PH⁶ Photo-electric cell S Steel pole BE2TX Textured Midnight Blue BE6TX Textured Ocean Blue BE8TX Textured Royal Blue BG2TX Textured Sandstone BKTX Textured Black BRTX Textured Bronze GN4TX Textured Blue Green GN6TX Textured Forest Green GN8TX Textured Dark Forest Green GNTX Textured Green GR Gray Sandtex GY3TX Textured Medium Grey NP Natural Aluminum RD2TX Textured Burgundy RD4TX Textured Scarlet TG Hammertone Gold TS Hammertone Silver WHTX Textured White WHTX Textured White	
LEN5	55W48LED4K		3 Type III (ASYM)	208	CLO Constant Light Output					
LEN6	70W48LED4K ^{1,2}		4 Type IV (ASYM)	240	DALI Digitally Addressable Lighting Interface					
	80W48LED4K		5 ³ Type V (SYMM)	277	Dynadimmer					
	108W48LED4K			347	OTL Over The Life					
				480	CDMGP Dimming Level determined by user					
					Economy Profile CDMGE25 CDMGE50 CDMGE75					
					Median Profile CDMGM25 CDMGM50 CDMGM75					
					Safety Profile CDMGS25 CDMGS50 CDMGS75					

1. 347V and 480V not available.
 2. Not available with CDMG Dynadimmer, DALI and 0-10V
 3. Not available with HS option.
 4. Step down transformer supplied with 208,240,277 and 347V

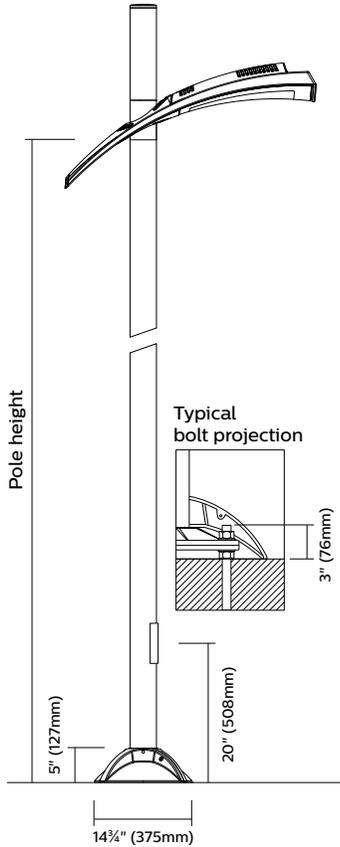
5. Pole height is in 6 inch increments.
 6. 480V not available with this option

LEN Leonis LED

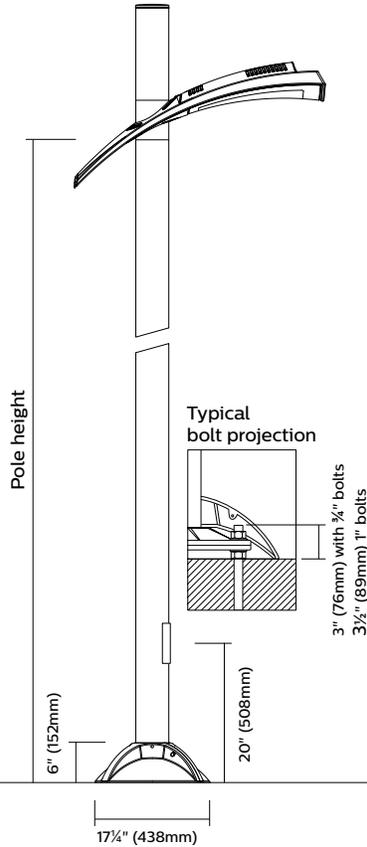
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Dimensions

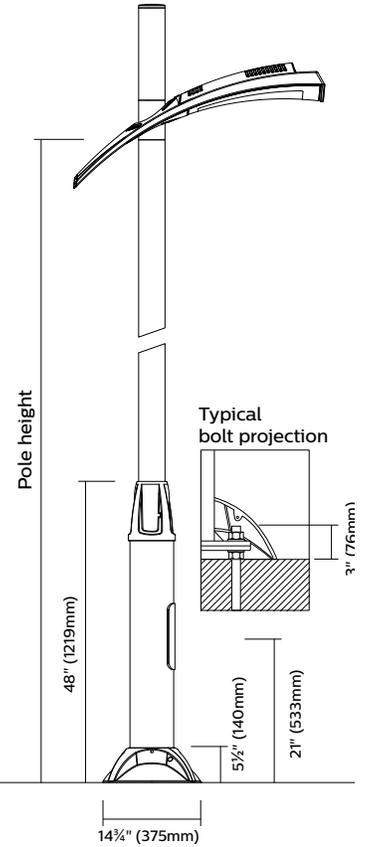
LEN4-LED



LEN5-LED



LEN6-LED



***LEN4 pole shaft**

Made from a 4" (102 mm) round extruded 6061 T6 aluminum tubing, having a 0.226" (5.7 mm) wall thickness, welded to both the bottom and top of the anchor plate.

***LEN5 pole shaft**

Made from a 5" (127 mm) round extruded 6061 T6 aluminum tubing, having a 0.219" (5.6 mm) wall thickness, welded to both the bottom and top of the anchor plate.

***LEN6 pole shaft**

Made from a one piece, seamless 4" round (102 mm) tube of extruded-aluminum welded over and in a 6-5/8" round (168 mm) extruded aluminum pole base. The assembly is welded to both the top and bottom of a cast-aluminum anchor plate.

Maintenance Opening

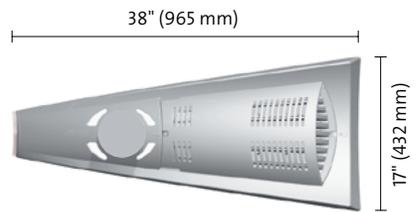
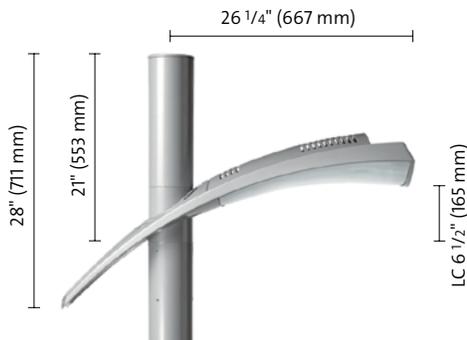
2" x 4 1/2" (51 mm x 114 mm) (LEN4 / LEN5) or 4-1/2" x 10" (114 mm x 254 mm) (LEN6) maintenance opening centered 20" (508 mm) (LEN4 / LEN5) or 21" (533 mm) (LEN6) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a copper ground lug.

Note: EPA recommendations are calculated according to AASHTO 2001 standards.

* Steel pole also available with the option (S).

Base Cover

Two piece base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

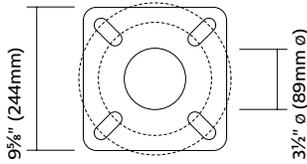


Weight: 55 lbs (25 kgs)

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Anchor plates

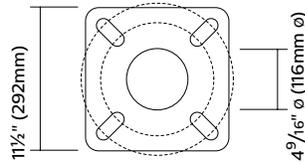


ALUMINUM

Bolt circle: 8½" (216 mm)
B.C. from: 6¾"-10" (171-254 mm)Anchor bolts: ¾"-20" (19-508 mm)

STEEL (S)

Bolt circle: 8½" (216 mm)
B.C. from: 6¾"-10½" (171-267 mm)Anchor bolts: ¾"-20" (19-508 mm)

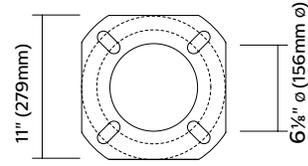


ALUMINUM

Bolt circle: 12½" (318 mm)
B.C. from: 9¾"-12¾" (235-324 mm)Anchor bolts: ¾"-20" (19-508 mm)

STEEL (S)

Bolt circle: 12½" (318 mm)
B.C. from (BLN 3/4"): 8"-12½" (203-324 mm)
B.C. from (BLN 1"): 8"-127/8" (203-327 mm)
Anchor bolts: 1"-36" (25-914 mm)



ALUMINUM

Bolt circle: 10½" (267 mm)
B.C. from: 8¾"-11" (222-279 mm)Anchor bolts: ¾"-20" (19-508 mm)

STEEL (S)

Bolt circle: 10½" (267 mm)
B.C. from: 8¾"-11½" (222-283 mm)Anchor bolts: ¾"-20" (19-508 mm)

LEN4 / LED

Wind speed	Maximum pole height (ft.)	
	ALUMINUM	STEEL (S)
90	18	20
110	18	20
120	18	20
150	16	20

LEN5 / LED

Wind speed	Maximum pole height (ft.)	
	ALUMINUM	STEEL (S)
90	20	22
110	20	22
120	20	22
150	20	22

LEN6 / LED

Wind speed	Maximum pole height (ft.)	
	ALUMINUM	STEEL (S)
90	20	22
110	20	22
120	20	22
150	20	22

Optional decorative luminous element



Luminaire Options

Luminous decorative element integrating light emitting diodes (LED). Powered by an independent driver.

Driver for Decorative Luminous Element

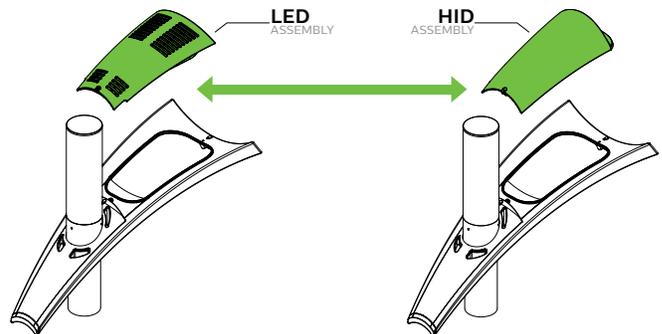
High power factor of 90%. Electronic driver for decorative tail LED, operating range 50/60 Hz. Accept voltage between 108 and 132 volt. Lamp starting capacity 40F (40C) degrees. Assembled on a unitized removable tray with quick disconnect plug.

Transformer for 208, 240, 277 and 347 volt

Located near the driver the transformer will drop voltage and will feed both drivers located inside the luminaire central adaptor.

LED Retrofit Kit

Thanks to a forward thinking design team, a LEDGINE module can be retrofitted into your existing Leonis and easily replace your HID optics when you are ready to take advantage of our LED engine.



LEN Leonis LED

Urban Luminaire

Housing

The lower housing is made of gravity die cast 356 Aluminum alloy 0.180 (4.6mm) minimum thickness. Welded to the luminaire's central adaptor.

Light Engine

LED engine composed of 4 main components: Heat Sink / LED Module / Optical System / Driver

Electrical components are RoHS compliant.

Heat Sink

Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

Lens

Made of etched soda lime tempered glass lens, permanently sealed onto the lower housing.

LED Module

LED type Lumileds LUXEON T. Composed of 48 high performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

Optical System

2 (type II asymmetrical), 3 (type III asymmetrical), 4 (type IV asymmetrical) or 5 (type V symmetrical). Composed of high performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM 63, LM 79 and TM 15 (IESNA) certifying its photometric performance. Street side indicated.

Driver

High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 or 347 to 480 VAC rated for both application line to line or line to neutral. Class I, THD of 20% max. Maximum ambient operating temperature from 40F (40C) to 130F(55C) degrees. Certified in compliance to UL1310 cULus requirement. Dry and damp location. Driver comes with dimming compatible 0-10 volts.

Note: 0-10 Volts not applicable with 35W48LED4K and 70W48LED4K see footnote

The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Driver Options

AST: Pre-set driver for progressive start-up of the LED module(s) to optimize energy management and enhance visual comfort at start-up.

CLO: Pre-set driver to manage the lumen depreciation by adjusting the power given to the LEDs offering the same lighting intensity during the entire lifespan of the LED module.

DALI: Pre-set driver compatible with the DALI control system.

OTL: Pre-set driver to signal end of life of the LED module(s) for better fixture management.

CDMG: Dynadimmer standard dimming functionalities including pre-programmed scenarios to suit many applications and needs from safety to maximum energy savings.

Ordering code	Scenario	Dimming time	Dimming power level
CDMG525	Safety	4 hours	25%
CDMG550	Safety	4 hours	50%
CDMG575	Safety	4 hours	75%
CDMG25	Median	6 hours	25%
CDMG50	Median	6 hours	50%
CDMG75	Median	6 hours	75%
CDMG25	Economy	8 hours	25%
CDMG50	Economy	8 hours	50%
CDMG75	Economy	8 hours	75%

Surge Protector

Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Luminaire Central Adaptor

Made of aluminum 6061 T6, 4" (102mm) or 5" (127 mm) (LEN5) outside diameter, complete with a tenon penetrating 9" (229mm) inside the pole. The tenon shall be mechanically fastened to the pole by two sets of three set screws at 120 degrees around the pole.

Wiring

Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding from luminaire.

Hardware

All exposed screws shall be complete with Ceramic primer seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, System Reliability Tool, Advance data and Lumileds LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +35°C / +95°F.

Finish

In accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

LED Products Manufacturing Standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340 5 1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

Vibration Resistance

Meets the ANSI C136.31 2001, American National Standard for Roadway Luminaire Vibration specifications for normal applications. (Tested for 1.5G over 100 000 cycles by an independent lab)

Certifications and Compliance

CSA, cULus Listed for Canada and USA.

LEN Leonis LED

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LED = Lumileds Luxeon T, CRI = 70, CCT = 4000K (3985K +/- 275K or 3710K to 4260K)
System (LED + driver) rated life = 100,000 hrs¹

LED Module	Typical delivered lumens	Typical system wattage ²	Typical current						LED current	Luminaire Efficacy Rating (Lm/W)	BUG rating
			@ 120V	@ 208V	@ 240V	@ 277V	@ 347V	@ 480V			
35W48LED4K-T-2	3887	36	0.31	0.20	0.19	0.20	N/A	N/A	235	107	B1-U2-G2
35W48LED4K-T-3	3715	36	0.31	0.20	0.19	0.20	N/A	N/A	235	102	B1-U2-G2
35W48LED4K-T-4	3578	36	0.31	0.20	0.19	0.20	N/A	N/A	235	98	B1-U2-G2
35W48LED4K-T-5	3183	36	0.31	0.20	0.19	0.20	N/A	N/A	235	87	B2-U2-G2
55W48LED4K-T-2	5579	54	0.38	0.22	0.23	0.21	0.17	0.13	350	103	B1-U2-G2
55W48LED4K-T-3	5267	54	0.38	0.22	0.23	0.21	0.17	0.13	350	97	B1-U3-G3
55W48LED4K-T-4	5135	54	0.38	0.22	0.23	0.21	0.17	0.13	350	95	B1-U2-G3
55W48LED4K-T-5	4611	54	0.38	0.22	0.23	0.21	0.17	0.13	350	85	B2-U2-G2
70W48LED4K-T-2	7136	70	0.58	0.35	0.31	0.29	N/A	N/A	465	102	B1-U2-G2
70W48LED4K-T-3	6799	70	0.58	0.35	0.31	0.29	N/A	N/A	465	97	B1-U3-G3
70W48LED4K-T-4	6569	70	0.58	0.35	0.31	0.29	N/A	N/A	465	94	B1-U3-G3
70W48LED4K-T-5	5899	70	0.58	0.35	0.31	0.29	N/A	N/A	465	84	B3-U3-G3
80W48LED4K-T-2	7966	81	0.63	0.36	0.34	0.31	0.24	0.18	530	99	B2-U3-G3
80W48LED4K-T-3	7746	81	0.63	0.36	0.34	0.31	0.24	0.18	530	96	B1-U3-G3
80W48LED4K-T-4	7333	81	0.63	0.36	0.34	0.31	0.24	0.18	530	91	B1-U3-G3
80W48LED4K-T-5	6585	81	0.63	0.36	0.34	0.31	0.24	0.18	530	82	B3-U3-G3
108W48LED4K-T-2	9985	106	0.86	0.50	0.50	0.43	0.30	0.22	700	95	B2-U3-G3
108W48LED4K-T-3	9615	105	0.86	0.50	0.50	0.43	0.30	0.22	700	91	B2-U3-G3
108W48LED4K-T-4	9191	105	0.86	0.50	0.50	0.43	0.30	0.22	700	87	B2-U3-G3
108W48LED4K-T-5	8254	105	0.86	0.50	0.5	0.43	0.3	0.22	700	78	B3-U3-G3

- L₇₀ = 100,000 hrs (at ambient temperature = 25°C).
- System wattage or total luminaire wattage includes the LED module and the LED driver.

Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

