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–G3–3–120–CDMGM25–HS–16–PH–NP

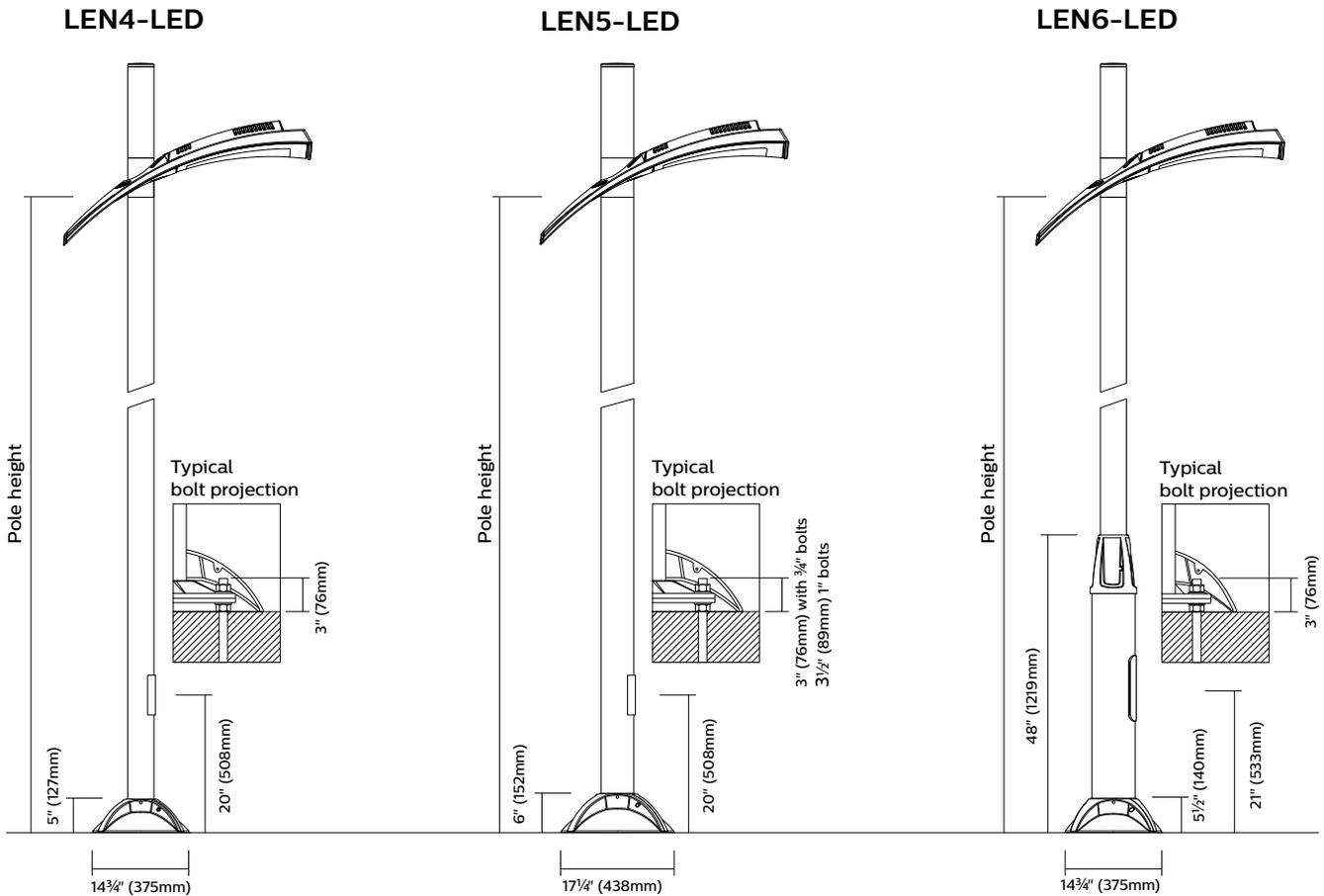| Series	Lamp	Gen [T]	Optical System	Ballast	Driver Options	Luminaire Options	Pole Height [5]		Pole Options	Finish
LEN4 LEN5 LEN6	35W48LED4K [1,2] 55W48LED4K 70W48LED4K [1,2] 80W48LED4K 108W48LED4K	G3	2 Type II (ASYM) 3 Type III (ASYM) 4 Type IV (ASYM) 5 [3] Type V (SYMM)	120 208 240 277 347 480	AST[1] Adjustable Start Time CLO[1] Constant Light Output DALI[1] Digitally Adressable Lighting Interface Dynadimmer OTL[1] Over The Life DMG Dimmable driver 0–10V SRD[1] Sensor ready driver, standard configuration SRD1[1] Sensor ready driver, alternate configuration **Economy Profile** CDMGE25[1] CDMGE50[1] CDMGE75[1] **Median Profile** CDMGM25[1] CDMGM50[1] CDMGM75[1] **Safety Profile** CDMGS25[1] CDMGS50[1] CDMGS75[1]	**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 RCD7 [7] Receptacle 7-pin	LEN4 8 to 20	LEN5-LEN6 8 to 22	PH [6] 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

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
7. The RCD7 is located on top of the Luminaire central adaptor.

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Dimensions

LEN4-LED   **LEN5-LED**   **LEN6-LED**

Pole height

Typical bolt projection

3" (76mm)

5" (127mm) 20" (508mm)

14¾" (375mm)

Pole height

Typical bolt projection

3" (76mm) with ¾" bolts
3½" (89mm) 1" bolts

6" (152mm) 20" (508mm)

17¼" (438mm)

Pole height

Typical bolt projection

3" (76mm)

48" (1219mm)

5½" (140mm) 21" (533mm)

14¾" (375mm)

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*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.

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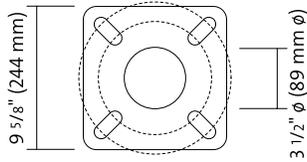
* Steel pole also available with the option (S).

*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.

Base Cover

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

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26 ¹/4" (667 mm)

28" (711 mm)

21" (553 mm)

LC 6 ¹/2" (165 mm)

38" (965 mm)

17" (432 mm)

Weight: 55 lbs (25 kgs)

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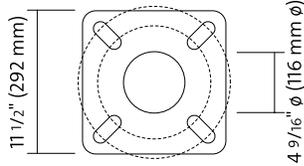
Anchor plates

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)
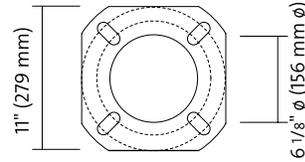B.C. from: 6¾"–10½" (171–267 mm)Anchor bolts: ¾"–20" (19–508 mm)

ALUMINUM
Bolt circle: 12½" (318 mm)
B.C. from: 9¼"–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"–11⅛" (222–283 mm)Anchor bolts: ¾"–20" (19–508 mm)

LEN4 / LED

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

LEN5 / LED

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

LEN6 / LED

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

Optional decorative luminous element

> LEDW   > LEDA   > LEDB   > LEDG   > LEDR

Luminaire Options

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

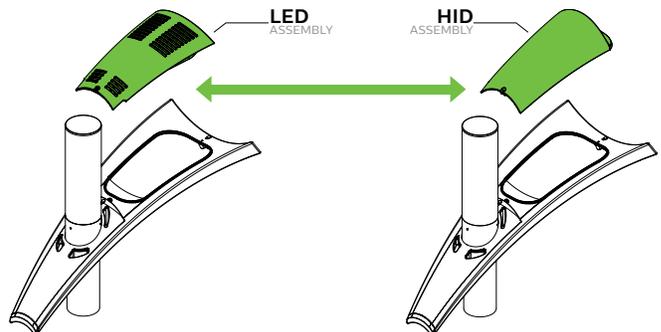### Driver for Decorative Luminous Element

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 Retroift 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.

LED ASSEMBLY   HID ASSEMBLY

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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

LEDgine 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.

DMG: Dimmable driver 0-10V.

SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle.

SRD1: Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock.

Ordering code	Scenario	Dimming time	Dimming power level
CDMGS25	Safety	4 hours	25%
CDMGS50	Safety	4 hours	50%
CDMGS75	Safety	4 hours	75%
CDMGM25	Median	6 hours	25%
CDMGM50	Median	6 hours	50%
CDMGM75	Median	6 hours	75%
CDMGE25	Economy	8 hours	25%
CDMGE50	Economy	8 hours	50%
CDMGE75	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.

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LED Wattage and Lumen Values: for LEN with Arm Mount

Ordering Code:	Total LEDs	LED current (mA)	Average System Wattage (W)	2			3			4			5		
				Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
3000K															
LEN-35W48LED3K-G3-x	48	235	36	4899	135	B1-U2-G1	4765	131	B1-U2-G2	4467	123	B1-U2-G2	4080	112	B2-U2-G2
LEN-55W48LED3K-G3-x	48	350	54	7030	130	B2-U2-G2	6838	126	B1-U2-G2	6410	118	B1-U2-G3	5855	108	B3-U2-G3
LEN-70W48LED3K-G3-x	48	465	70	8993	129	B2-U2-G2	8747	125	B2-U2-G3	8199	117	B1-U2-G3	7490	107	B3-U2-G3
LEN-80W48LED3K-G3-x	48	530	81	10039	124	B2-U2-G2	9764	121	B2-U2-G3	9153	113	B2-U2-G3	8361	104	B3-U2-G3
LEN-108W48LED3K-G3-x	48	700	104	12582	121	B2-U2-G2	12238	117	B2-U2-G3	11472	110	B2-U3-G3	10479	100	B3-U3-G3
4000K															
LEN-35W48LED4K-G3-x	48	235	36	5144	141	B1-U2-G1	5003	137	B1-U2-G2	4690	129	B1-U2-G2	4284	118	B2-U2-G2
LEN-55W48LED4K-G3-x	48	350	54	7381	136	B2-U2-G2	7180	133	B1-U2-G2	6730	124	B1-U2-G3	6148	114	B3-U2-G3
LEN-70W48LED4K-G3-x	48	465	70	9442	135	B2-U2-G2	9184	131	B2-U2-G3	8609	123	B2-U2-G3	7864	113	B3-U2-G3
LEN-80W48LED4K-G3-x	48	530	81	10541	131	B2-U2-G2	10252	127	B2-U2-G3	9611	119	B2-U3-G3	8779	109	B3-U2-G3
LEN-108W48LED4K-G3-x	48	700	104	13211	127	B3-U2-G2	12850	123	B2-U2-G3	12046	115	B2-U3-G4	11003	105	B3-U3-G3

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.;
highly recommended to confirm performance with a layout – contact Applications at outdoorlighting.applications@signify.com.
Note: Some data may be scaled based on tests on similar but not identical luminaires.