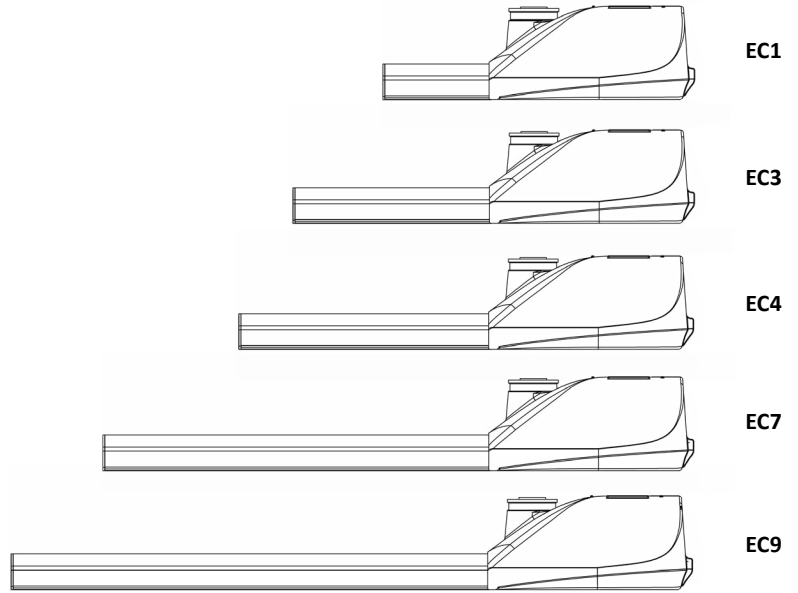
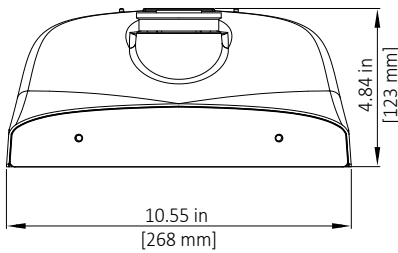


# ECobra-head™ LED Street Light

## EC M-Series Specification Data Sheet

### Luminaire Data

	L	Weight	EPA
<b>EC1</b>	16.1 in [409 mm]	10.8 lb [4.9 kg]	0.40 ft <sup>2</sup>
<b>EC3</b>	20.8 in [528 mm]	12.7 lb [5.8 kg]	0.45 ft <sup>2</sup>
<b>EC4</b>	23.5 in [597 mm]	14.0 lb [6.3kg]	0.48 ft <sup>2</sup>
<b>EC7</b>	30.6 in [777 mm]	19.3 lb [8.8 kg]	0.57 ft <sup>2</sup>
<b>EC9</b>	35.4 in [899 mm]	21.3 lb [9.7kg]	0.63 ft <sup>2</sup>



### Ordering Information

Sample Catalog No. EC1 4M MV NW 2 GY 700 PCR7 WL

Product & No. & Type of LEDs	Voltage	Nominal Color Temperature	Distribution	Finish <sup>1</sup>	Drive Current <sup>2</sup>	Options
<b>EC1 4M</b>	<b>MV</b> 120-277V	<b>WW</b> 3000K	<b>2</b> Type 2	<b>GY</b> Gray	<b>350</b> 350mA	<b>FDC</b> <sup>3</sup> Fixed Drive Current
<b>EC1 6M</b>	<b>HV</b> 347-480V	<b>NW</b> 4000K	<b>3</b> Type 3	<b>DB</b> Dark Bronze	<b>530</b> 530mA	<b>FFA</b> <sup>4</sup> Full Field Adjustability
<b>EC3 10M</b>		<b>CW</b> 5000K	<b>4</b> Type 4	<b>BR</b> Bronze	<b>700</b> 700mA	<b>LPCR</b> Less Photocontrol Receptacle
<b>EC4 14M</b>			<b>5</b> Type 5	<b>BK</b> Black		<b>PCR7</b> <sup>5</sup> 7-wire PC Receptacle
<b>EC7 18M</b>						<b>PCR7-CR</b> <sup>6</sup> Control Ready 7-wire PC Receptacle
<b>EC7 20M</b>						<b>SC</b> PCR Shorting Cap
<b>EC7 24M</b>						<b>WL</b> Utility Wattage Label
<b>EC9 30M</b>						<b>DSC</b> Door Safety Cable

### Notes:

- 1 Gray, Dark Bronze, and Black standard finish; consult factory for other finishes.
- 2 Specified drive current code is the factory set maximum drive current. Field adjustable current selector enables standard dimming to lower wattage drive currents only. Consult factory if wattage limits require a special drive current.
- 3 Non-field adjustable, fixed drive current. Specify required drive current. Not available with PCR7-CR option.
- 4 The FFA option enables full field adjustability from the specified drive current code to all drive currents available. This option is not DLC qualified.
- 5 Field adjustable current selector included to enable standard dimming to lower wattage drive currents only. Field changeable connectors included to enable connection to PCR7 (wireless node dimming is disabled by default).
- 6 Control-ready wired at factory for wireless node dimming. Default maximum drive current (700mA) must be specified.
- 7 Flush mounted house side shield. Shield cuts light off at 1/2 mounting height behind luminaire.
- 8 Flush mounted cul-de-sac shield. Shield cuts light off at 1/2 mounting height behind luminaire and 1-1/2 mounting height on either side of luminaire.
- 9 Specify Color (GY, DB, BK)
- 10 Specify MV (120-277V) or HV (347V-480V)

### Accessories\*

<b>HSS</b> <sup>7</sup>	House Side Shield, Snap-On
<b>CSS</b> <sup>8</sup>	Cul-De-Sac Side Shield, Snap-On
<b>SPB</b> <sup>9</sup>	Square Pole Horizontal Arm Bracket
<b>RPB</b> <sup>9</sup>	Round Pole Horizontal Arm Bracket
<b>PTB</b> <sup>9</sup>	Pole Top Tenon Horizontal Arm Bracket
<b>PTB2</b> <sup>9</sup>	Pole Top Tenon Horizontal Arm Bracket (2@180°)
<b>WB</b> <sup>9</sup>	Wall Horizontal Arm Bracket
<b>BSK</b>	Bird Deterrent Spider Kit
<b>PC</b> <sup>10</sup>	Twist Lock Photocontrol
<b>LLPC</b> <sup>10</sup>	Long-Life Twist Lock Photocontrol
<b>SC</b>	Twist Lock Shorting Cap

\*Accessories are ordered separately and not to be included in the catalog number

## Luminaire Specifications

### Housing

Die cast aluminum housing with universal two-bolt slip fitter mounts to 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter mast arm. Aluminum housing provides passive heat-sinking of the LEDs and has upper surfaces that shed precipitation. Mounting provisions meet 3G vibration per ANSI C136.31-2010 Normal Application, Bridge & Overpass. Mounting has leveling adjustment from + 5° to -5° in 2.5°. Electrical components are accessed without tools and are mounted on removable power door with stainless steel latches. Standard rubber wildlife guard conforms to mast arm with no gaps.

### Light Emitting Diodes

Hi-flux/Hi-power white LEDs produce a minimum of 90% of initial intensity at 100,000 hours of life based on IES TM-21. LEDs are tested in accordance with IES LM-80 testing procedures. LEDs have correlated color temperature of 3000K (WW), 4000K (NW), or 5000K (CW) and 70 CRI minimum. LEDs are 100% mercury and lead free.

### Field Adjustability

LED drive current can be changed in the field to adjust light output for local conditions (not available with PCR7-CR option). The specified drive current code will be the factory set maximum drive current and field adjustments can only be made to available lower wattage drive currents. Select the FFA option if full field adjustability to all available drive currents (700mA max) is desired. The FFA option is not DLC qualified.

### Performance Data

See next page

### Quality Control

Every luminaire is performance tested before and after a 2-hour burn-in period. Assembled in the USA.

### Optical Systems

Micro-lens optical systems produce IESNA Type 2, Type 3, Type 4 or Type 5 distributions and are fully sealed to maintain an IP66 rating. Luminaire produces 0% total lumens above 90° (BUG Rating, U=0). Optional house side shield (HSS) cuts light off at 1/2 mounting height behind luminaire. Optional Cul-de-sac shield (CSS) cuts light off at 1 mounting height on each side of luminaire. Both HSS and CSS can be field installed without tools.

### Electrical

Rated life of electrical components is 100,000 hours. Uses isolated power supply that is 1-10V dimmable. Power supply is wired with quick-disconnect terminals. Power supply features a minimum power factor of .90 and <20% Total Harmonic Distortion (THD). EMC meets or exceeds FCC CFR Part 15. Terminal block accommodates 6 to 14 gauge wire. Surge protection complies with IEEE/ANSI C62.41 Category C High, 20kV/10kA.

### Controls

3-Wire photocontrol receptacle is standard. ANSI C136.41 7-wire (PCR7) photocontrol receptacle is available. All photocontrol receptacles have tool-less rotatable bases. Wireless control module is provided by others.

### Finish

Housing receives a fade and abrasion resistant polyester powder coat finish. Finish tested to withstand 3000 hours in salt spray exposure per ASTM B117. Finish tested 500 hours in UV exposure per ASTM G154 and meets ASTM D523 gloss retention. Aluminum extruded components are anodized.

### Listings/Ratings/Labels

Luminaires are UL listed for use in wet locations in the United States and Canada. DesignLights Consortium™ qualified 120-277V product. International Dark Sky Association listed. Luminaire is qualified to operate at ambient temperatures of -40°C to 40°C.

### Photometry

Luminaires photometrics are tested by certified independent testing laboratories in accordance with IES LM-79 testing procedures. IES files for all CCT's are available at leotek.com.

### Warranty

10-year limited warranty is standard on luminaire and components.

### Performance Data

All data nominal, consult factory for IES files or LM-79 reports. IES files for all CCT's are available at leotek.com.

No. of LEDs & Type	Drive Current (mA)	System Wattage (W)	Type 2			Type 3		
			Delivered Lumens (Lm)	Efficacy (Lm/W)	BUG Rating	Delivered Lumens (Lm)	Efficacy (Lm/W)	BUG Rating
<b>EC1 4M</b>	350*	19	1900	100	B1 U0 G1	1800	95	B1 U0 G1
	450	23	2300	100	B1 U0 G1	2200	96	B1 U0 G1
	530	27	2700	100	B1 U0 G1	2500	93	B1 U0 G1
	700	35	3300	94	B1 U0 G1	3100	89	B1 U0 G1
<b>EC1 6M</b>	350	29	3000	103	B1 U0 G1	2900	100	B1 U0 G1
	530	42	4100	98	B1 U0 G1	4000	95	B1 U0 G1
	700	54	5000	93	B1 U0 G1	5000	93	B1 U0 G1
<b>EC3 10M</b>	350	40	4700	118	B1 U0 G1	4500	113	B1 U0 G1
	530	63	6500	103	B2 U0 G2	6500	103	B1 U0 G1
	700	87	8300	95	B2 U0 G2	8300	95	B2 U0 G1
<b>EC4 14M</b>	350	65	6800	105	B2 U0 G2	6800	105	B1 U0 G1
	530	98	9400	96	B2 U0 G2	9400	96	B2 U0 G2
	700	130	11700	90	B2 U0 G2	11700	90	B2 U0 G2
<b>EC7 18M</b>	350	82	8700	106	B2 U0 G2	8600	105	B2 U0 G2
	530	122	12000	98	B2 U0 G2	11900	98	B2 U0 G2
	700	163	15000	92	B2 U0 G2	14800	91	B2 U0 G2
<b>EC7 20M</b>	350	90	9700	108	B2 U0 B2	9600	107	B2 U0 G2
	530	137	13300	97	B3 U0 G3	13200	96	B2 U0 G2
	700	180	16700	93	B3 U0 G3	16500	92	B3 U0 G2
<b>EC7 24M</b>	350	109	11600	106	B3 U0 G3	11500	106	B2 U0 G2
	530	165	16000	97	B3 U0 G3	15800	96	B2 U0 G2
	700	215	20000	93	B3 U0 G3	19700	92	B3 U0 G3
<b>EC9 30M</b>	350	130	14000	108	B3 U0 G3	13800	106	B3 U0 G2
	530	198	19300	97	B3 U0 G3	19100	96	B3 U0 G2
	700	260	24000	92	B3 U0 G3	23700	91	B3 U0 G3

Note:

\* DLC qualification for EC1 4M at 350mA limited to 120-240V