LUMENFOCUS

90+ CRI LED

ECL N G2 2 | LED Narrow Strip

Features:
• High performance LED technology
• 0-10V dimming drivers standard
• DALI drivers available
• Field replaceable LED boards and drivers
• Frosted diffuser available to help minimize glare and improve aesthetics
• A wide variety of lumen packages and lengths allows for flexibility in design and helps maximize energy savings
• Advanced controls available
• Buy American Act compliant *(All base luminaires are BAA compliant. Addition of options may change eligibility. Contact factory for details.)*

Applications:
Suitable for most commercial and institutional applications
• Office
• Retail
• Coves
• Valences

Ambient Operating Temp.:
• -30°C to 40°C [LW, ML, MD, HI]
• -30°C to 35°C [VH]
• -30°C to 30°C [SH]

Predicted Lifetime:
• L70: ≥ 129,000 hrs (calculated)
• L80: ≥ 81,000 hrs (calculated)
• L90: ≥ 39,000 hrs (reported)
• 85% lumen maintenance @ 60,000 hrs
(based on LM80 and insitu laboratory testing)

Construction:
• Precision brake formed from cold rolled steel with a highly durable matte white finish. Optional matte black and metallic silver options constructed of brake formed aluminum

Certifications:
• UL 1598 listed for US and Canada, suitable for damp locations
• DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers)
  http://designlights.org/

c(UL)us   DLC LISTED

Warranty:
• 5 year limited system warranty - see www.LumenFocus.com for complete warranty terms and conditions
• 10 year warranty option available on specific models
  (Not available on all models. Certain conditions apply. Consult factory or sales representative for details.)

MADE IN USA
USING DOMESTIC AND FOREIGN COMPONENTS

BAA
BUY AMERICAN ACT COMPLIANT

10 YEAR EXTENDED WARRANTY
AVAILABLE ON CERTAIN MODELS

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Ordering Guide:

example: ECL N G2 2 MD UV FR 840 QC BK

Series	Version	Length	Output	Voltage	Shielding	CRI/CCT	Hanging	Controls	Options	Finish
ECL N	G2	2								
ECL N Narrow Strip	**G2** Gen 2	**2** 24"	**LW** Low	**UV** 120-277	**Blank** No Lenses	**930** 90 CRI/3000K	**Blank** None	**Blank** No Controls	**Blank** No Options	**Blank** White
			ML Medium Low	**34** 347V	**FR** Frosted Acrylic Diffusers	**935** 90 CRI/3500K	**QC** 10' Quick Hang Cable Kit	**ZSOL** Leviton Intellect Solo Programmable PIR/Daylight Harvesting Sensor[1]	**EXT10** 10-Year Extended Warranty[4]	**BK** Matte Black
			MD Medium			**940** 90 CRI/4000K	**SH** Slide Hanger	**ZLD1** Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping (120-277V)[1]	**C6** 6' Single Circuit Cord	**SL** Metallic Silver
			HI High			**950** 90 CRI/5000K		**ZLDU** Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping, Scheduling (120-480V)[1]	**C65W** 6' Single Circuit Cord with Low Voltage Connections	
			VH Very High					**Z211L_** Wattstopper FSP Programmable Photo/Motion Multi-Voltage Sensor (high/low/off)[2]	**C10** 10' Single Circuit Cord	
			SH Super High					**Z311L_** Wattstopper FSP Bluetooth-enabled Programmable Photo/Motion Multi-Voltage Sensor (high/low/off)[2]	**C105W** 10' Single Circuit Cord with Low Voltage Connections	
								ZOSMD Microwave Daylight/Motion Sensor With Step-Dimming (High/Low/Off)[1]	**D6** 6' Dual Circuit Cord	
								ZLDS Leviton Intellect DALI Sensor with Dimming/Occupancy/Daylight Harvesting with Network Capabilities[3]	**D10** 10' Dual Circuit Cord	
								ZL7S Leviton Intellect 0-10V Sensor with Dimming/Occupancy/Daylight Harvesting with Network Capabilities[3]	**P(NEMA)** Plug (Specify NEMA configuration)	
								ZLDC Leviton Intellect DALI Fixture Controller with Network Capabilities[3]	**CC** Conformal Coating	
								ZL7C Leviton Intellect 0-10V Fixture Controller with Network Capabilities[3]	**LVL** 0-10V Dimming Leads for Easy Field Access	
								ZENLO Enlighted Micro Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted One System[3]	**EM4** 4W Emergency Pack[5]	
								ZENLC Enlighted Micro Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted Connected System[3]	**QWH(_)** Quick Wire Harness[6]	
								ZENLI Enlighted Micro Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted IoT System[3]	**AC** Aligner Clips for Continuous Row Mounting	
									BAA Buy American Act Compliant	

Notes

[1] See Page 4 for more details.

[2] "_" = lens type. See Page 4 for more details.

[3] See Page 5 for more details.

[4] Not available on all models. Certain conditions apply. Consult factory or sales representative for details.

[5] 120-277V / 0°C-55°C ambient. To estimate lumen output in emergency mode, multiply EM wattage by the Lumens per Watt of the luminaire it is installed in.
ex. ECL N G2 2 MD UV FR 940 EM4 → 130.0 LPW x 4W = 520 lm

[6] "_" for 2-circuit wiring, specify circuit A or B here.

Controls Accessories *(order separately)*

For Leviton Intellect Solo Sensor
ZLS0R-RA1   IR Programming Remote

For WattStopper Controls
FSIR-100   Wireless IR Programming Tool (For Z211Lx)

For Leviton Intellect Networked Controls
DRKDN-U1W   1-Button Wireless Wall Controller
DRKDN-U2W   2-Button Wireless Wall Controller
DRKDN-U2W   4-Button Wireless Wall Controller
DRKDN-U8W   8-Button Wireless Wall Controller

For Enlighted Controls
WS-2-00   Enlighted Remote Control Wall Switch (for Enlighted Connected & IoT)
WS-2-00-IL   Enlighted Remote Control Wall Switch (for Enlighted One)

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Performance Chart:

Catalog #	Watts	Lumens (930)	LPW (930)	Lumens (935)	LPW (935)	Lumens (940)	LPW (940)	Lumens (950)	LPW (950)
ECL N G2 2 LW UV FR 9xx	8.5	1043.2	122.6	1047.6	123.1	1072.5	126.0	1072.5	126.0
ECL N G2 2 ML UV FR 9xx	12.1	1550.5	128.1	1557.0	128.7	1594.0	131.7	1594.0	131.7
ECL N G2 2 MD UV FR 9xx	16.0	2018.0	126.5	2026.5	127.0	2074.6	130.0	2074.6	130.0
ECL N G2 2 HI UV FR 9xx	22.6	3070.2	136.1	3083.1	136.7	3156.3	140.0	3156.3	140.0
ECL N G2 2 VH UV FR 9xx	29.1	4026.6	138.6	4043.5	139.2	4139.6	142.5	4139.6	142.5
ECL N G2 2 SH UV FR 9xx	37.5	5039.0	134.4	5060.2	134.9	5180.4	138.1	5180.4	138.1

Scaling Factor:
No lens: 1.05

Photometric Data:

ECL N G2 2 SH UV FR 950

Test No.: LLIA001735-003
Luminaire Lumens: 5,181 lm
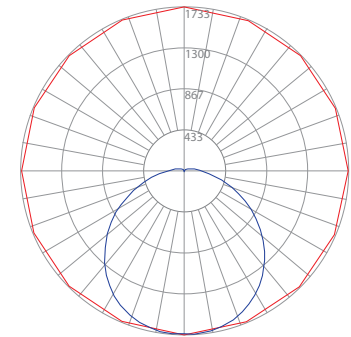**Luminaire Watts:** 37.5W
Efficacy: 138.1 LPW
Spacing Criterion (0-180): 1.24
Spacing Criterion (90-270): 1.30

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	37395	34170	33728
55	32025	29930	29880
65	25387	25001	25342
75	18224	20046	20261
85	10069	16257	15967

Coefficients Of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC		80				70				50				30	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104
1	107	102	98	93	104	99	95	92	95	91	88	90	87	85
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70
3	89	78	70	63	86	76	68	62	73	66	61	69	64	59
4	81	69	60	53	79	67	59	53	64	57	52	62	56	51
5	75	62	53	46	72	60	52	45	58	50	45	55	49	44
6	69	56	47	40	67	54	46	40	52	45	39	50	44	38
7	64	50	42	35	62	49	41	35	47	40	35	46	39	34
8	60	46	37	32	58	45	37	31	43	36	31	42	35	31
9	56	42	34	28	54	41	34	28	40	33	28	39	32	28
10	52	39	31	26	51	38	31	26	37	30	25	36	29	25

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08

— Vert. Plane
— Horiz. Cone

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	633.40	12.20
0-30	1347.60	26.00
0-40	2205.51	42.60
0-60	3854.77	74.40
0-80	4806.00	92.80
0-90	4997.88	96.50
90-120	155.62	3.00
90-130	168.21	3.20
90-150	179.49	3.50
90-180	182.65	3.50
0-180	5180.53	100.00

Schematic:
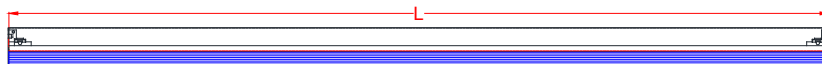
Length (L) = 24.00"
Width (W) = 2.50"
Height (H) = 2.165"

LUMENFOCUS
Re-boardABILITY

The ECLN features field replaceable boards and drivers. This allows you to upgrade to more efficient technology in the future. Or, in the rare event of a failure, you can rapidly replace defective components. Re-boardABILITY helps to ensure you won't get stuck with an obsolete light fixture. Learn more about Re-boardABILITY here.

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Controls Summary:

Control Code	Type	Capabilities	Communication
ZSOL	Motion (PIR), Daylight Harvesting	High/Low/Off	Wired 0-10V, Programmable via IR remote (sold separately)
ZLD1	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZLDU	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
Z211Lx	Motion (PIR), Photosensor	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via IR remote (sold separately)
Z311Lx	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZOSMD	Motion (Microwave), Photosensor	On/Low/Off	Wired 1-10V
ZLxS	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLLC (Green-MAX DRC)	Wireless Zigbee 2.4 GHz Mesh, Programmable via GreenMAX DRC app. for iOS or Android along with DRKDN-UxW Wall Controller (sold separately)
ZLxC	Controller, No Sensors	High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLLC (Green-MAX DRC)	Wireless Zigbee 2.4 GHz Mesh, Programmable via GreenMAX DRC app. for iOS or Android along with DRKDN-UxW Wall Controller (sold separately)
ZENLO	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Upgradable to Connected (ZENLC) or IoT (ZENLI)	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted Room Controller WS-2-00-IL (sold separately)
ZENLC	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, Upgradable to IoT (ZENLI), LLLC (Enlighted IoT)*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software
ZENLI	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, LLLC (Enlighted IoT)*, Space - Building Utilization*, Where - Real Time Location Services*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software

LLLC = Luminaire Level Lighting Control
* Additional equipment required. Contact LumenFocus representative for details

Dimming Sensors (Z211/Z311)

- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Comes pre-installed on the fixture
- Rated for cold locations
- Parameters for Bluetooth-enabled Z311 adjustable via phone app - iOS or Android
- Parameters for Z211 adjustable via wireless configuration tool (FSIR-100 - sold separately)
- Available with black lens for black finishes (pictured below)
- Two lenses available, tailored for the ideal detection area and mounting height:
  - L2: **360º lens, maximum coverage 48', diameter from 8' height**
  - L3: **360º lens, maximum coverage 40', diameter from 20' height**

Z211 sensor with lens in black

FSIR-100

Phone app interface for Z311 sensor

Microwave Occupancy Sensor (ZOSMD)

The Leviton OSM3D-DDW (or equivalent) detects motion through low density materials using high frequency electromagnetic waves. This means it can sit discretely behind the ECLN's frosted lens. The ZOSMD features automatic switching based on motion and ambient light level. ZOSMD option adds step-dimming functionality - standby dimming level 10% / 20% / 30% / 50%. **Max mounting height for ZOSMD is 40 feet.**

Leviton Intellect Solo Dimming Sensor (ZSOL)

The ECLN can be equipped with an integrated Leviton Intellect Solo Sensor ("ZSOL" option). This is a 0-10V dimming Passive Infrared (PIR) occupancy and daylight harvesting sensor.

Other features:
- Partial-on
- Partial-off
- **8' to 10' mounting height**
- IP20 rated
- Detection angle: 120 degrees
- IR remote available for programming sensor from the floor (sold separately)
- Can be used to comply with IECC, ASHRAE 90.1 and 2019 Title 24, Part 6 dimming, occupancy/vacancy sensing and daylight harvesting requirements.

Smart Sensors (ZLD1/ZLDU)

The ZLDx option includes high bay and low bay lenses along with aisleway masks that can easily be installed or swapped out in the field. **The high bay lens is good for 20'-40' mounting heights, while the low bay lens is good for 8'-20' mounting heights.**

- Leviton Smart IP66 passive infrared (PIR) sensors
- Features mesh grouping (16 devices per group), occupancy sensing, daylight harvesting, scheduling (for ZLDU only), single-level switching
- Comes pre-installed on the center face of the fixture
- Rated for cold locations
- Configurable through the Leviton Smart Sensor App using a smartphone or other Bluetooth-enabled iOS or Android device

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GreenMAX DRC Wireless Networked Control System
with Leviton Intellect Sensors & Controllers

The GreenMAX DRC Wireless Keypad Room Controllers are used as the brain of the system, managing the fixture integrated Leviton Intellect sensors & controllers. Wirelessly commission, configure, control, monitor and provision the GreenMAX DRC system using the GreenMAX DRC App and an Android or iOS smart device.

- Occupancy/Vacancy Sensing
- Multi-Level Lighting, Partial-On, Partial-Off
- Daylight Harvesting
- Task Tuning
- Scheduling
- Grouping
- Demand Response
- BMS Integration
- ZigBee 2.4 GHz Wireless Mesh Network
- Up to 75' between devices

* DRKDN-UxW room controller required for full functionality and programming of Intellect sensors & controllers

ZLxS

- PIR Occupancy Sensor
- Daylight Sensor
- 0-10V or DALI
- **Up to 20' mounting height**

ZLxC

- Wireless fixture controller, no sensor
- 0-10V or DALI

DRKDN-UxW Room Controllers
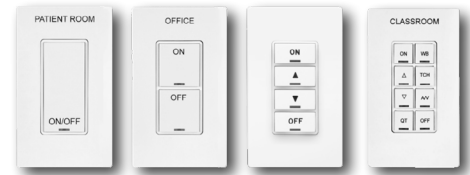
- 1-, 2-, 4-, and 8-button configurations
- Line voltage powered: 120-277V
- Max capacity: 60 devices
- Programmable: On/Off/Raise/Lower/ Toggle/Scene
- Use any Android or iOS device for configuration using the GreenMAX DRC App

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Enlighted: All-in-one sensors, upgradeable systems

Enlighted's SMART Micro Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. **Max installation height is 15 feet.**
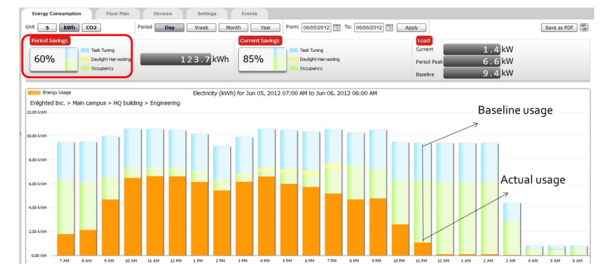
Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if you start with Enlighted One but want to add energy reporting or building management systems integration in the future, you can.

Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
Where & Space Applications			✓
Location & Occupancy APIs & Beaconing			✓
Future App & API Ready			✓

Note: Additional equipment required for ZENLC and ZENLI

Real-time data analytics

Enlighted's control units compile data in real-time, which can be viewed via the Energy Manager. The Energy Manager is part of the Enlighted Connected and Enlighted IoT configurations.
- Real-time measurements and verification of energy savings
- Space analytics - data can be compiled into motion trails and heat maps
- Analyze traffic density and congestion in a space

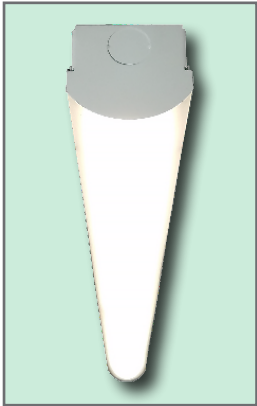Learn more about our available advanced controls options here:
www.lumenfocus.com/controls-overview

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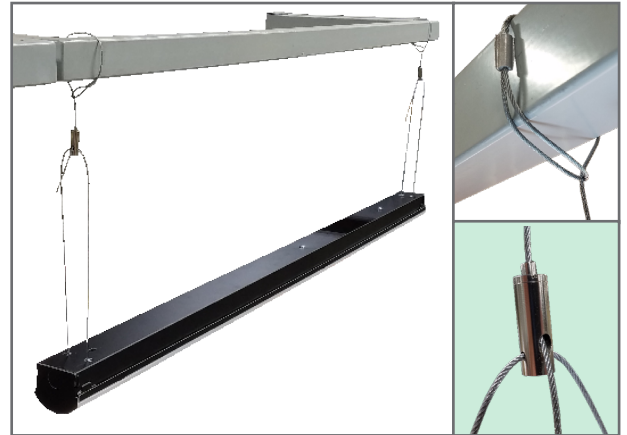Page 5 of 6

Other Options:

Shielding Frosted acrylic diffuser lenses minimize glare and improve aesthetics.
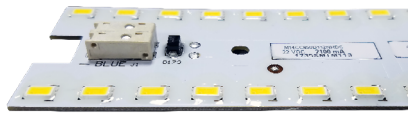
Conformal coating Grants LED boards added protection from moisture and corrosion in more hazardous environments.
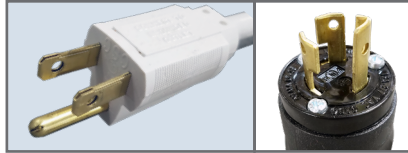
Cords are available in single circuit or dual circuit, 6' or 10'. Standard plug is optional, as are other NEMA configurations if specified.

Hanging The QC hanging kit from ALP comes in 10' or 20'. Cables are pre-looped for easy installation and designed for easy fixture height adjustment. When ordered, QCs come boxed with each fixture.