



Project: _____
 Location: _____
 Cat. #: _____
 Type: _____
 Quantity: _____



ECL N G2 4 | 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, MH, HI]
- -30°C to 35°C [VH]
- -30°C to 30°C [SH]

Predicted Lifetime:

- L70: $\geq 129,000$ hrs (calculated)
- L80: $\geq 81,000$ hrs (calculated)
- L90: $\geq 39,000$ 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/>



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.)



Ordering Guide:

example: ECL N G2 4 MD UV FR 840 QC BK

Series	Version	Length	Output	Voltage	Shielding	CRI/CCT	Hanging	Controls	Options	Finish
ECL N	G2	4								
ECL N Narrow Strip	G2 Gen 2	4 46" (48" Optional)	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 ⁽⁵⁾	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
			MH Medium 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	
			HI High					Z211L_ Wattstopper FSP Programmable Photo/ Motion Multi-Voltage Sensor (high/low/off) ⁽²⁾	C10 10' Single Circuit Cord	
			VH Very 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	
			SH Super High					ZOSMD Microwave Daylight/Motion Sensor With Step-Dimming (High/Low/Off) ⁽³⁾	D6 6' Dual Circuit Cord	
								ZSLFC2 Keystone SmartLoop Wireless Bluetooth Mesh Occupancy/Daylight Harvesting Smart Sensor ⁽¹⁾	D10 10' Dual Circuit Cord	
								ZLDS Leviton Intellect DALI Sensor with Dimming/Occupancy/Daylight Harvesting with Newtork Capabilities ⁽⁴⁾	P(NEMA) Plug (Specify NEMA configuration)	
								ZL7S Leviton Intellect 0-10V Sensor with Dimming/Occupancy/Daylight Harvesting with Newtork Capabilities ⁽⁴⁾	CC Conformal Coating	
								ZLDC Leviton Intellect DALI Fixture Controller with Newtork Capabilities ⁽⁴⁾	LVL 0-10V Dimming Leads for Easy Field Access	
								ZL7C Leviton Intellect 0-10V Fixture Controller with Newtork Capabilities ⁽⁴⁾	48" 48" Length (Standard Length is 46")	
								ZENLO Enlighted Micro Sensor with Dimming/ Occupancy/Daylight Harvesting and Enlighted One System ⁽⁴⁾	EM6 6.5W Emergency Pack ⁽⁶⁾	
								ZENLC Enlighted Micro Sensor with Dimming/ Occupancy/Daylight Harvesting and Enlighted Connected System ⁽⁴⁾	EM10 10W Emergency Pack ⁽⁶⁾	
								ZENLI Enlighted Micro Sensor with Dimming/ Occupancy/Daylight Harvesting and Enlighted IoT System ⁽⁴⁾	EM14 14W Emergency Pack ⁽⁶⁾	
									QWH(_) Quick Wire Harness ⁽⁷⁾	
									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⁾ 120-277V Only. See Page 5 for more details.
⁽⁴⁾ See Page 5 for more details.
⁽⁵⁾ Not available on all models. Certain conditions apply. Consult factory or sales representative for details.
⁽⁶⁾ 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 4 MD UV FR 940 EM10 → 140.4 LPW x 10W = 1,404 lm
⁽⁷⁾ " _ " for 2-circuit wiring, specify circuit A or B here.

Controls Accessories (order separately)



For Leviton Programmable Sensor
 ZLSOR-RA1 IR Programming Remote



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



For Keystone SmartLoop Controls
 KTS�-WS1-B-SG/G2 5-Button Bluetooth Wireless Wall Switch
 KTS�-TK1-USB USB Time Keeper



For Leviton Intellect 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)

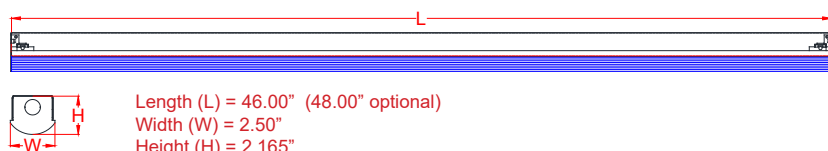


Performance Chart:

Catalog #	Watts	Lumens (930)	LPW (930)	Lumens (935)	LPW (935)	Lumens (940)	LPW (940)	Lumens (950)	LPW (950)
ECL N G2 4 LW UV FR 9xx	15.4	2092.0	136.0	2100.8	136.6	2150.7	139.9	2150.7	139.9
ECL N G2 4 ML UV FR 9xx	22.3	3109.3	139.5	3122.4	140.1	3196.6	143.5	3196.6	143.5
ECL N G2 4 MD UV FR 9xx	29.6	4046.8	136.6	4063.9	137.1	4160.4	140.4	4160.4	140.4
ECL N G2 4 MH UV FR 9xx	34.2	4975.9	145.5	4996.9	146.1	5115.5	149.6	5115.5	149.6
ECL N G2 4 HI UV FR 9xx	43.5	6156.9	141.6	6182.9	142.2	6329.7	145.6	6329.7	145.6
ECL N G2 4 VH UV FR 9xx	56.3	8074.9	143.5	8108.9	144.1	8301.5	147.5	8301.5	147.5
ECL N G2 4 SH UV FR 9xx	72.5	10105.2	139.3	10147.8	139.9	10388.8	143.2	10388.8	143.2

Scaling Factor:
No lens: 1.05

Schematic:



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
ZSLFC2	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling, LLC (Keystone Tech.-SmartLoop)	Wireless Bluetooth Mesh, Programmable via Keystone SmartLoop App for iOS or Android
ZLxS	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLC (GreenMAX 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*, LLC (GreenMAX 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), LLC (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*, LLC (Enlighted IoT)*, Space - Building Utilization*, Where - Real Time Location Services*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software

LLC = Luminaire Level Lighting Control

* Additional equipment required. Contact LumenFocus representative for details



Dimming Sensors (Z211/Z311)

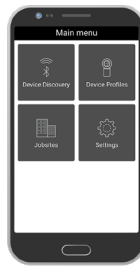
- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Comes pre-installed on the fixture
- Rated for cold locations
- Parameters for Bluetooth-enabled Z311 adjustable via phone app - iOS or Android
- Parameters for Z211 adjustable via wireless configuration 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: 360° lens, maximum coverage 48', diameter from 8' height
 - L3: 360° lens, maximum coverage 40', diameter from 20' height



Z211 sensor with lens in black



FSIR-100



Phone app interface for Z311 sensor

Keystone SmartLoop Wireless Control System

The SmartLoop wireless lighting control system by Keystone is a Bluetooth mesh lighting control system that allows you to set up and manage your lighting ecosystem quickly and easily. It's powerful enough to run a space with multiple lighting zones, but simple enough to program in minutes with your smartphone – perfect for warehouses, offices, schools, and auditoriums, whether new construction or retrofit.

- Wireless Bluetooth 2.4 GHz mesh network
- Supports up to 100 devices on a single region, with unlimited regions
- Independent per-fixture control: Occupancy, Daylight Harvesting, Task Tuning, Grouping, Scene Setting, Scheduling
- Commissioned via SmartLoop mobile app for iPhone and Android



ZSLFC2



- Low voltage individual fixture controller for SmartLoop system
- Integrated daylight and PIR motion sensors
- **Up to 16' mounting height.** 16' radius at 16' height.
- Works with 0-10V dim-to-off drivers with 12V aux. power

SmartLoop Accessories

- Bluetooth Wireless Wall Switch: **KTSL-WS1-B-SG/G2**
 - Battery Powered: 2x CR2032
 - 5 Button: Power Toggle, Dimming, Automatic Sensor/Preset Level Operation, Scene Activation
- USB Time Keeper: **KTSL-TK1-USB**
 - Relays time to system components after a power loss
 - Powered by standard USB charging port
 - Internal CR1220 battery backup



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 G2'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 40 feet.



Leviton Intellect Solo Dimming Sensor (ZSOL)

The ECLN G2 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



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

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.



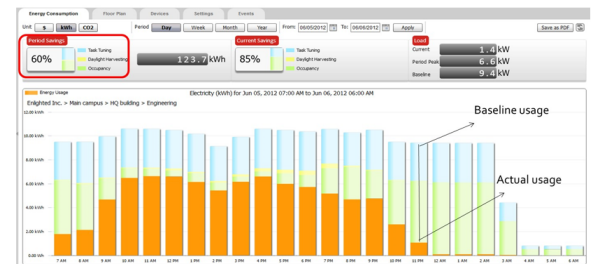
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓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

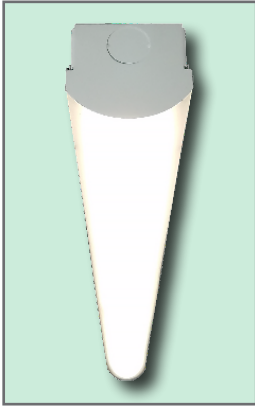
www.lumenfocus.com/controls-overview

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Other Options:



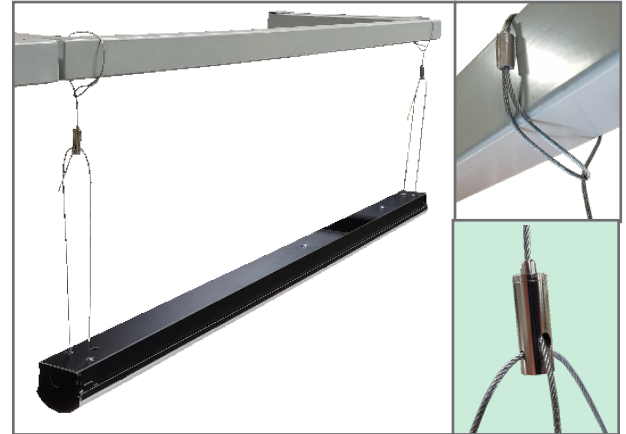
Shielding Frosted acrylic diffuser lenses minimize glare and improve aesthetics.



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.

Photometric Data:

ECL N G2 4 SH UV FR 950

Test No.: LLIA001735-006

Luminaire Lumens: 10,389 lm

Luminaire Watts: 72.5W

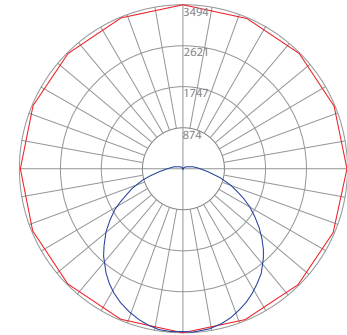
Efficacy: 143.2 LPW

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	40273	35954	35023
55	34965	31722	31018
65	28008	26590	26027
75	20323	21209	20392
85	11697	17111	15460



— Vert. Plane
— Horiz. Cone

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	1273.68	12.30
0-30	2708.31	26.10
0-40	4434.17	42.70
0-60	7771.58	74.80
0-80	9682.56	93.20
0-90	10055.04	96.80
90-120	292.09	2.80
90-130	314.23	3.00
90-150	330.84	3.20
90-180	333.75	3.20
0-180	10388.79	100.00

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	50	30
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104		
1	107	102	98	94	104	100	96	92	95	91	88	90	88	85		
2	97	89	82	76	94	87	80	75	83	77	73	79	74	70		
3	89	78	70	63	86	76	69	62	73	66	61	70	64	59		
4	81	69	60	53	79	68	59	53	65	57	52	62	56	51		
5	75	62	53	46	72	60	52	46	58	50	45	56	49	44		
6	69	56	47	40	67	54	46	40	52	45	39	50	44	39		
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34		
8	60	46	37	32	58	45	37	31	44	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	30	25		

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



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.](#)

