



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

LED

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

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: ≥ 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)

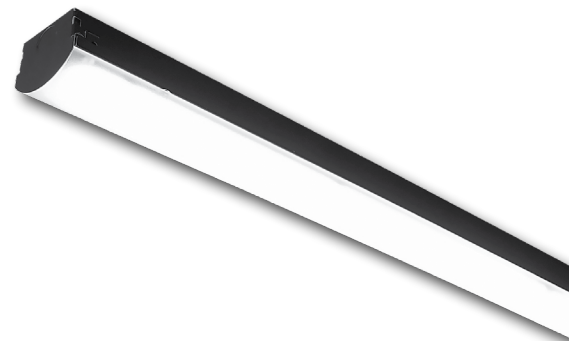
Construction:

- Precision brake formed from cold rolled steel
- Highly durable matte white finish. Optional matte black or metallic silver finish

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 PIR Sensor ⁽¹⁾	EXT10 10-Year Extended Warranty ⁽⁸⁾	BK Matte Black
			MD Medium			940 90 CRI/4000K		ZLD1 Leviton Bluetooth-enabled Programmable Dimming/ Occupancy/Daylight Harvesting Sensor with Grouping (120-277V) ⁽²⁾	C6 6' Single Circuit Cord	SL Metallic Silver
			MH Medium High			950 90 CRI/5000K			C65W 6' Single Circuit Cord with Low Voltage Connections	
			HI High					ZLDU Leviton Bluetooth-enabled Programmable Dimming/ Occupancy/Daylight Harvesting Sensor with Grouping, Scheduling (120-480V) ⁽²⁾	C10 10' Single Circuit Cord	
			VH Very High						C105W 10' Single Circuit Cord with Low Voltage Connections	
			SH Super High							D6 6' Dual Circuit Cord

Notes

- ⁽¹⁾ Max mounting height 10'. See Page 4 for more details.
- ⁽²⁾ Max mounting height 40'. See Page 4 for more details. Requires 48" fixture length.
- ⁽³⁾ " _ " = lens type. See Page 4 for lens descriptions. Requires 48" fixture length.
- ⁽⁴⁾ Max mounting height 40'. See Page 4 for more details.
- ⁽⁵⁾ Max mounting height 16.4'. See Page 5 for more details.
- ⁽⁶⁾ See Page 5 for more details.
- ⁽⁷⁾ Max mounting height 15'. See Page 5 for more details.
- ⁽⁸⁾ Not available on all models. Certain conditions apply. Consult factory or sales representative for details.
- ⁽⁹⁾ EM1 and EM2: 120-277V / 0°C-50°C ambient.
- ⁽¹⁰⁾ " _ " for 2-circuit wiring, specify circuit A or B here.

Controls Accessories (order separately)



For Douglas Controls

- BT-DMSW-U-A Bluetooth 1 Zone Dimmer
- BT-4BTSW-U-A Bluetooth 4-Button Wall Station
- BT-8BTSW-U-A Bluetooth 8-Button Wall Station



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)



For WattStopper Controls

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



For Leviton Intellect Solo Controls

- ZLSOR-RA1 Wireless IR Programming Tool (For ZSOL)

Z211L_
Wattstopper FSP
Programmable Photo/Motion
Multi-Voltage Sensor (high/
low/off)⁽³⁾

Z311L_
Wattstopper FSP Bluetooth-
enabled Programmable
Photo/Motion Multi-Voltage
Sensor
(high/low/off)⁽³⁾

ZOSMD
Microwave Daylight/Motion
Sensor With
Step-Dimming
(High/Low/Off)⁽⁴⁾

ZIFS
Douglas IFS sensor with
dimming/occupancy/daylight
harvesting and network
capabilities⁽⁵⁾

ZIFC
Douglas IFC controller with
network capabilities⁽⁶⁾

ZENLO
Enlighted Micro Sensor with
Dimming/Occupancy/Daylight
Harvesting and Enlighted One
System⁽⁷⁾

ZENLC
Enlighted Micro Sensor with
Dimming/Occupancy/Daylight
Harvesting and Enlighted
Connected System⁽⁷⁾

ZENLI
Enlighted Micro Sensor with
Dimming/Occupancy/Daylight
Harvesting and Enlighted IoT
System⁽⁷⁾

D10
10' Dual Circuit Cord

P(NEMA)
Plug (Specify NEMA
configuration)

CC
Conformal Coating

LVL
0-10V Dimming Leads for
Easy Field Access

48"
48" Length (Standard
Length is 46")

EM1
Emergency Pack - Up to
8W⁽⁹⁾

EM2
Emergency Pack - Up to
16W⁽⁹⁾

QWH(_)
Quick Wire Harness⁽¹⁰⁾

AC
Aligner Clips for Continuous
Row Mounting

BAA
Buy American Act
Compliant



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

Photometric Data:

ECL N G2 4 SH UV FR 950

Test No.: LLIA001735-006

Luminaire Lumens: 10,389 lm

Luminaire Watts: 72.5W

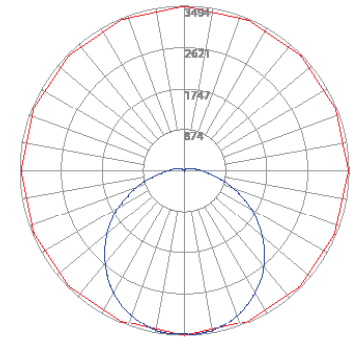
Efficacy: 143.2 LPW

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



Zonal Lumen Summary

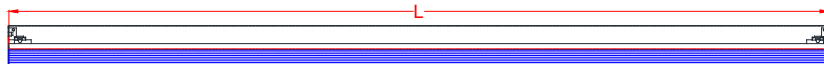
Zone	Lumens	%Fixt
0-20	1273.68	12.30
0-30	2708.31	26.10
0-40	4434.17	42.70
0-60	7771.58	74.80
0-80	9682.56	93.20
0-90	10055.04	96.80
90-120	292.09	2.80
90-130	314.23	3.00
90-150	330.84	3.20
90-180	333.75	3.20
0-180	10388.79	100.00

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		
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

Schematic:



Length (L) = 46.00" (48.00" optional)
Width (W) = 2.50"
Height (H) = 2.165"



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.](#)



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
ZIFS	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, LLLC (Douglas Lighting Controls-Dialog)*	Wireless Bluetooth Mesh, Programmable via iOS App or Douglas Dialog Software
ZIFC	Controller, No Sensors	High/Low/Off, High-End Trim, Grouping, LLLC (Douglas Lighting Controls-Dialog)*	Wireless Bluetooth Mesh, Programmable via iOS App or Douglas Dialog Software
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)
- Three 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

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



Universal Douglas: Cloud-based controls

The ECLN can be equipped with the Douglas Bluetooth Intelligent Fixture Sensor (IFS) as well as the Intelligent Fixture Controller.



- Occupancy, vacancy, partial-on and partial-off
- Occupancy timeout adjustable from 5 to 90 minutes
- Primary and secondary daylight harvesting

- Listed for emergency control when used on dedicated emergency power bus
- Same occupancy and daylight controls as the IFS when networked with one or more IFS sensors

Available with both IFS and IFC:

- 0-10V dimming with dim-to-off
- Bluetooth beacon for digital ceiling, IoT and location service strategies
 - 150-foot clear line of sight, 50 feet through standard walls
- May be used with dual-channel, tunable white LED drivers providing auxiliary power and dim-to-off capability
 - Commissioning through Douglas Lighting Controls, Inc. app from Apple app store

Note: Additional equipment required for IoT capabilities; max mounting height for sensor: 16.4 ft

CheckLight® Energy Management System

Douglas controls can be integrated with the CheckLight® Energy Management system. This system can help you uncover energy conversion opportunities, create conservation strategies, analyze lighting load inefficiencies, and make configuration changes from anywhere with Douglas' user-friendly interface. You can get measurements, reports, and control your system from a web-based application.

CheckLight® has the capability to look at different facilities within a portfolio and use data benchmarks to compare building performances.

- Find energy conservation opportunities
- Create energy saving strategies
- Analyze load inefficiencies
- Optimize energy management

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.

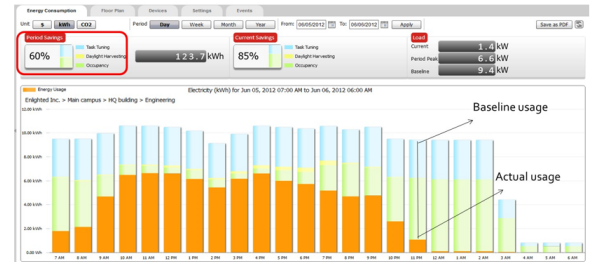
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓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

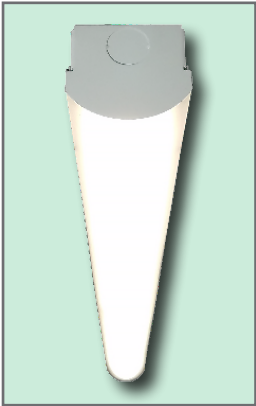
www.lumenfocus.com/controls-overview

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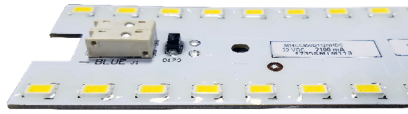
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Other Options:



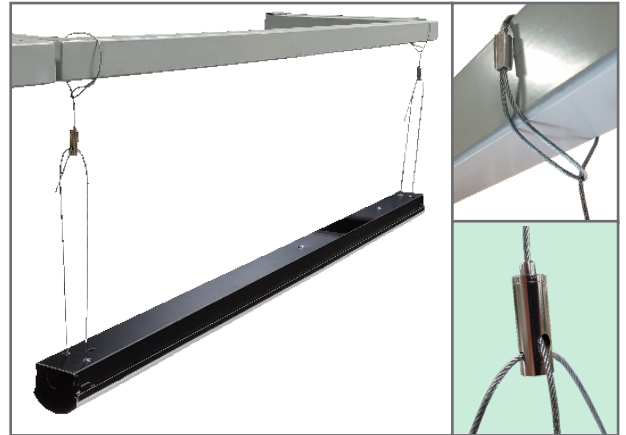
Shielding Frosted acrylic diffuser lenses minimize glare and improve aesthetics.



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.

