The Nero NE1 is a swimming pool rated luminaire constructed entirely of marine-grade 316 stainless steel. It utilizes a special alignment feature to ensure the beam of light is perpendicular to the installation surface, even if the pre-installation blockout niche is not. The use of LEDs allows for the creative introduction of color and improved energy-efficiency. This luminaire is suitable for saline waters.

Performance

Static White & Color[1]	Lumen Output (lm)	Efficacy (lm/W)	Peak Intensity (cd)
2,700 K (80 CRI)	290	80	3,700
3,000 K (80 CRI)	305	83	3,850
4,000 K (80 CRI)	325	90	4,100
Blue (470 nm)	75	19	900
Turtle-Friendly (630 nm)[2]	180	61	2,300

[1] Lumen output values are based on a 3 W luminaire with 14° lens.
[2] Available in 3 W option only

Dynamic Color[2]	Lumen Output (lm)	Efficacy (lm/W)	Peak Intensity (cd)
RGB	149	19	313

[2] Lumen output values are based on a 6 W luminaire with 40° lens.

Beam Angles	14°, 20°, 25°, 40°

opticlear™ microantileach™ electropolish+™

Products and specifications are subject to change without notice.
LS333ANS2LED_260106

Electrical

Power Consumption	< 8 W (Nominal for 6 W)	
Lifetime	> 60,000 hours @ 35°C Water Temperature (B10, L90, TM21 Reported) 66,556 hours @ 35°C Water Temperature (B10, L90, TM21 Projected)	
Input Voltage	Low Voltage	24 Vdc (International) 12 to 15 Vac, 12 to 24 Vdc (North America)
Equivalent Rating	6 W / 450 lm is approximately equivalent to 40 W incandescent lamp 9 W / 700 lm is approximately equivalent to 60 W incandescent lamp	

Control

Protocols[1]	PWM (0-10 V to PWM and DMX to PWM converters available)

[1] For other protocols contact Lumascape for more information.

Physical

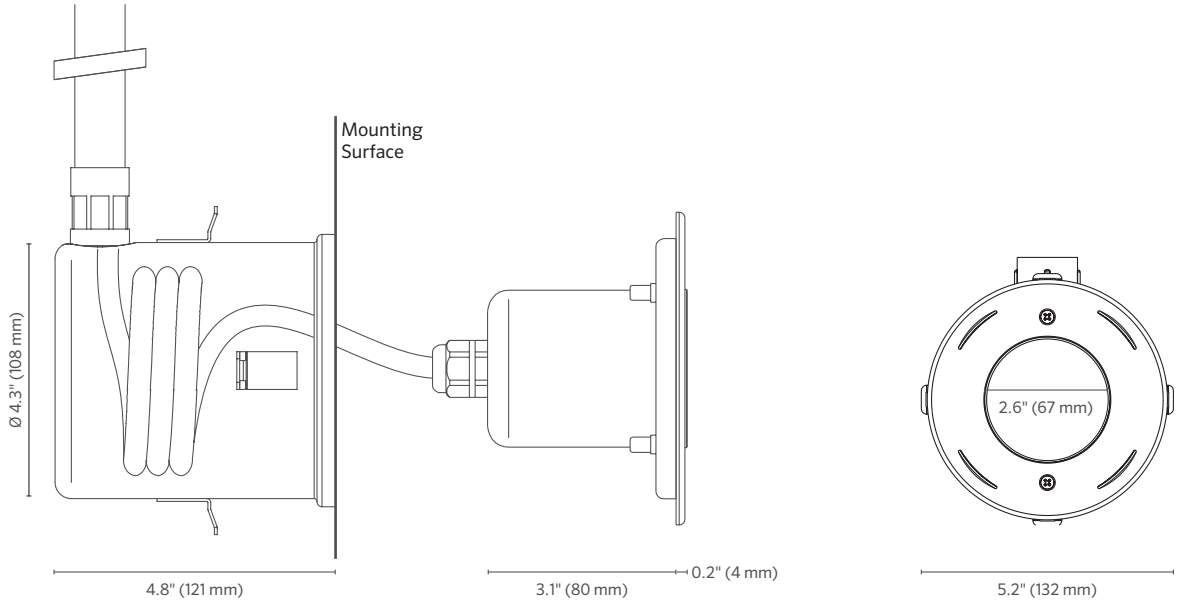
Housing	Marine-grade 316 stainless steel with teflon coated cover screws
Installation	Pre-installation niche included
Water Temperature	41°F to 104°F (5°C to 40°C)
Weight	3.5 lb (1.6 kg)

Certification & Compliance

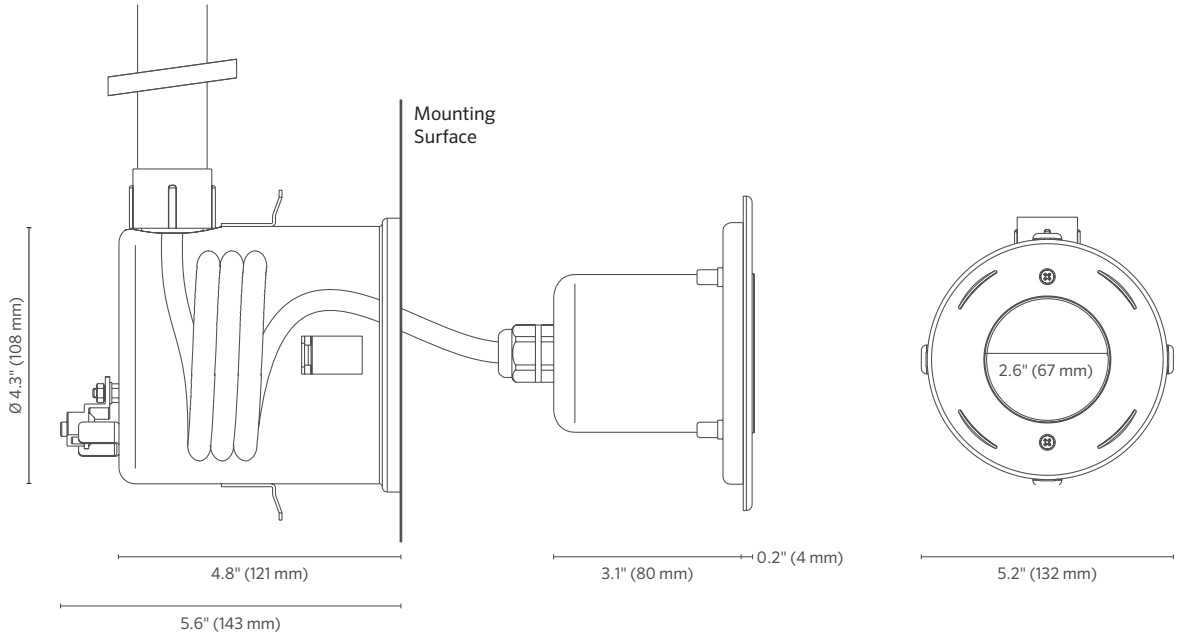
IP Rating	IP68 to 33' (10 m)
IK Rating	IK10
Environment	Swimming pools, spas and fountains – wet niche (not approved for use in Canada)
Certifications	UL676: Underwater Luminaires, CE, UKCA, RCM Complies to *Florida Fish and Wildlife Commission* (Turtle-Friendly option only)

Dimensions

International market configuration



North American market configuration



Specification Matrix

LS333ANS-2LED – [ ] [ ] [ ] [ ] [ ]

Light Engine	Code
3 W	3
6 W	6
9 W	9

Static White & Color	Code
2,700 K (80 CRI)	D7
3,000 K (80 CRI)	H6
4,000 K (80 CRI)	W4
Blue (470 nm typical)	B4
Turtle-Friendly (620 nm)	RO

Dynamic Color	Code
RGB	M4

Beam Angles	Code
14°	NR[1,2]
20°	NM
25°	ME
40°	WD

[1] Not available in RGB
[2] Not available in 9 W

Input Voltage (International)	Code
24 Vdc	07[1]
PWM Dimmable Driver, 24 Vdc	27[2]

[1] Not available in RGB
[2] Requires appropriate power supply

Cable Length	Code
5 m	05
8 m	08
15 m	15
20 m	20
25 m	25

For custom cable lengths, contact Lumascape. Cable cannot be field installed.

Input Voltage (North America)	Code
12 to 15 Vac, 60 Hz or 12 to 24 Vdc	13[1,2]
PWM Dimmable Driver, 12 to 15 Vac, 60 Hz or 12 to 24 Vdc	23[2]

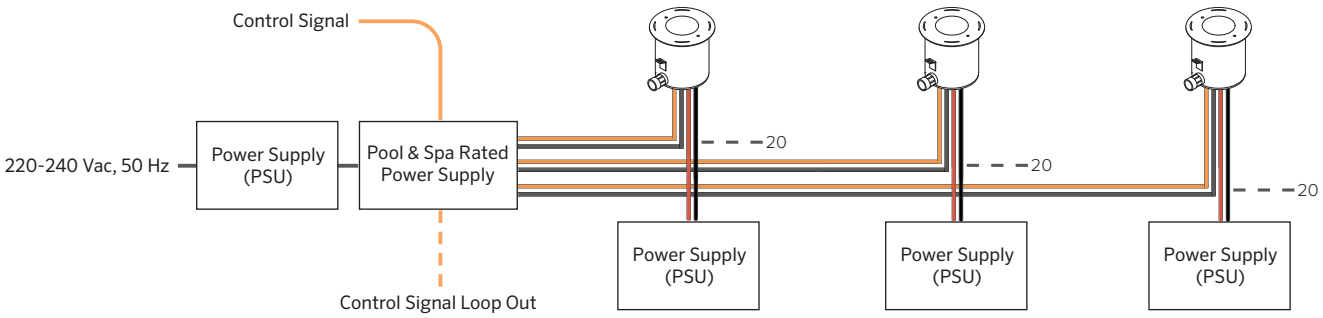
[1] Not available in RGB
[2] Requires appropriate power supply

Cable Length	Code
16'	016
26'	026
48'	048
65'	065
82'	082

For custom cable lengths, contact Lumascape. Cable cannot be field installed.

INTERNATIONAL

Network Topology – Static Color (DMX)



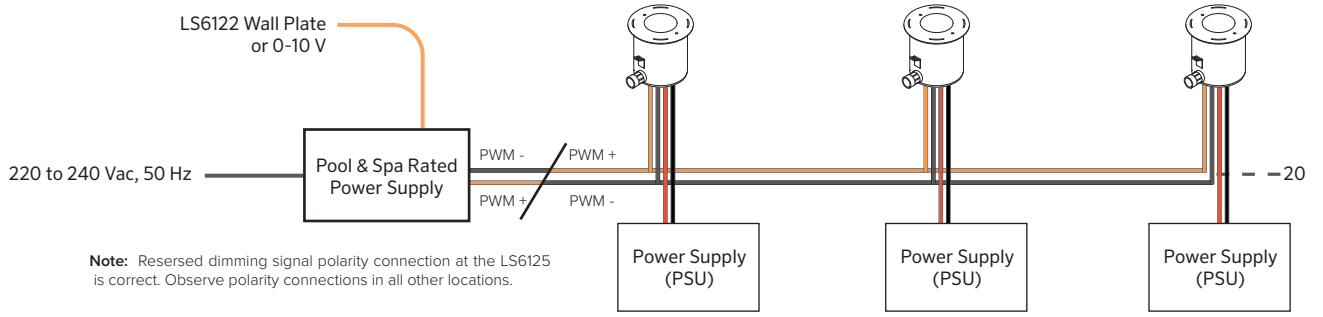
Up to 20 luminaires per run under the following conditions:

- Up to three (3) individually addressed dimmable channels
- Up to twenty (20) luminaires per dimable channel
- Luminaires driven by integral LED drivers
- Luminaires powered through individual power supplies or
- Luminaires powered through LS67100 PWM controller only (up to 100 W total)
- Suitable for installation into swimming pools in Australia
- Refer to 'Maximum Circuit Load' table for circuit limitations
- Always observe local electrical codes for branch circuit current limitations

Control Protocols

DMX — For DMX control signal, use LS67100 DMX to PWM converter

Network Topology – Static Color (0-10 V)



Note: Resersed dimming signal polarity connection at the LS6125 is correct. Observe polarity connections in all other locations.

Up to 20 luminaires per run under the following conditions:

- Stand-alone static color dimming solution
- Up to twenty (20) luminaires dimmed together
- Luminaires driven by integral LED drivers using LS6122 wall plate dimmer
- Suitable for installation into swimming pools in Australia
- Refer to 'Maximum Circuit Load' table for circuit limitations
- Always observe local electrical codes for branch circuit current limitations

Control Protocols

0-10 V — For 0-10 V control signal, use LS6125 0-10 V converter

Maximum Circuit Load

	24 Vdc Power Supplies		
Input Voltage	100-240 Vdc, 50/60 Hz		
Output Voltage	24 Vdc		
Wattage	40 W	100 W	150 W
LS333ANS-2LED, 3 W	5	18	23
LS333ANS-2LED, 6 W	3	10	14
LS333ANS-2LED, 9 W	-	6	9

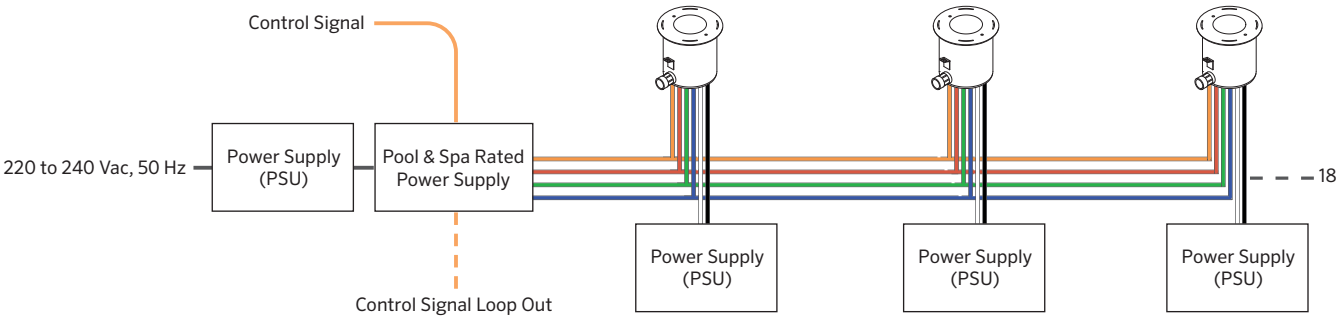
*** NOTE:**

Diagrams are intended to show electrical pathways between luminaires and ancillary device. These diagrams are not intended to show type or color of cord/wire, luminaire input voltage rating, wire gauge or approved use of the cord/wire supplied with luminaires.

Compatibility with each driver is indicated by the value shown in the table, representing the maximum number of luminaires that may be powered from each driver based on a maximum cable run of 328' (100 m) and a trunk cable size of 3.3mm^2. Please note, this does not take into consideration voltage drop beyond a distance of 328' (100 m) or ampacity limits of the branch circuit. For assistance, contact Lumascape.

INTERNATIONAL

Network Topology – Dynamic Color (DMX)



Up to 18 luminaires per run under the following conditions:

- Up to eighteen (18) luminaires addressed and controlled together
- Luminaires driven by integral LED drivers
- Luminaires powered through individual power supplies
- Suitable for installation into swimming pools in Australia
- Refer to 'Maximum Circuit Load' table for circuit limitations
- Always observe local electrical codes for branch circuit current limitations

Control Protocols

DMX

For DMX control signal, use LS67100 DMX to PWM converter

Maximum Circuit Load

	24 Vdc Power Supplies		
Input Voltage	100-240 Vdc, 50/60 Hz		
Output Voltage	24 Vdc		
Wattage	40 W	100 W	150 W
LS333ANS-2LED, 3 W	5	18	23
LS333ANS-2LED, 6 W	3	10	14
LS333ANS-2LED, 9 W	-	6	9

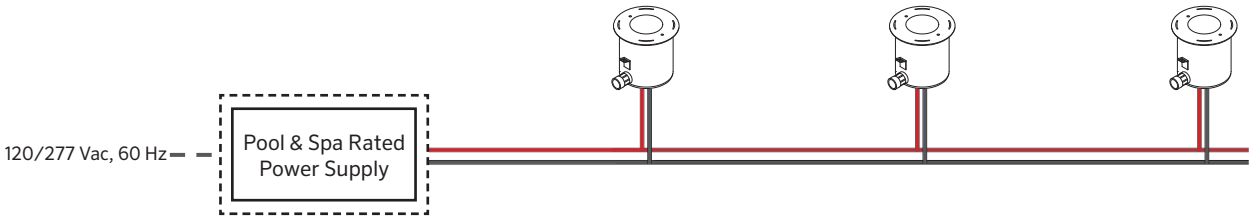
*** NOTE:**

Diagrams are intended to show electrical pathways between luminaires and ancillary device. These diagrams are not intended to show type or color of cord/wire, luminaire input voltage rating, wire gauge or approved use of the cord/wire supplied with luminaires.

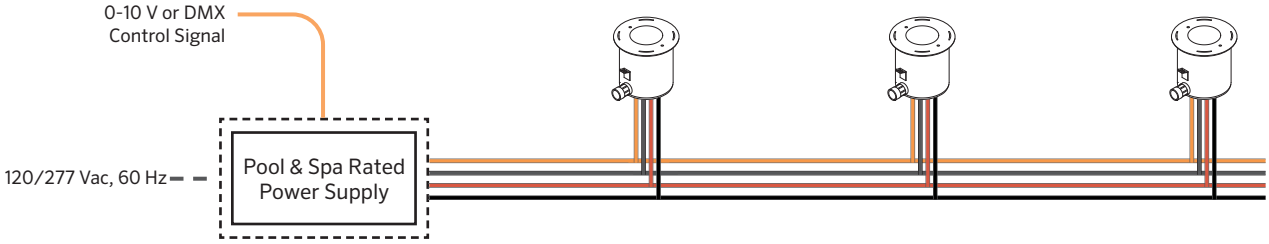
Compatibility with each driver is indicated by the value shown in the table, representing the maximum number of luminaires that may be powered from each driver based on a maximum cable run of 328' (100 m) and a trunk cable size of 3.3mm². Please note, this does not take into consideration voltage drop beyond a distance of 328' (100 m) or ampacity limits of the branch circuit. For assistance, contact Lumascape.

NORTH AMERICA

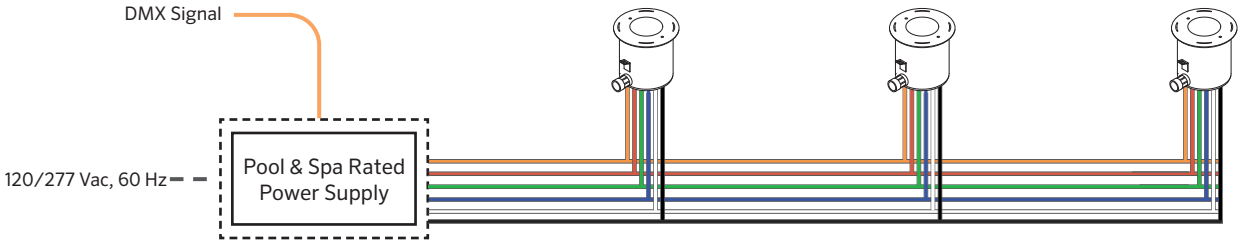
Network Topology – Static Color Non-Dimming



Network Topology – Static Color (PWM)



Network Topology – Dynamic Color (PWM)



Control Protocols

0-10 V — For 0-10 V control signal, use LS6510 0-10 V converter

DMX — For DMX control signal, use LS67100 DMX to PWM converter

Maximum Circuit Load

	24 Vdc Power Supplies		
Input Voltage	100-240 Vdc, 50/60 Hz		
Output Voltage	24 Vdc		
Wattage	40 W	100 W	150 W
LS333ANS-2LED, 3 W	5	18	23
LS333ANS-2LED, 6 W	3	10	14
LS333ANS-2LED, 9 W	-	6	9

*** NOTE:**

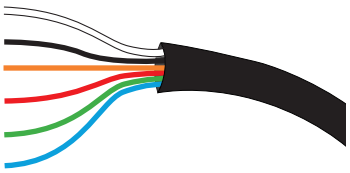
Diagrams are intended to show electrical pathways between luminaires and ancillary device. These diagrams are not intended to show type or color of cord/wire, luminaire input voltage rating, wire gauge or approved use of the cord/wire supplied with luminaires.

Compatibility with each driver is indicated by the value shown in the table, representing the maximum number of luminaires that may be powered from each driver based on a maximum cable run of 328' (100 m) and a trunk cable size of 3.3mm^2. Please note, this does not take into consideration voltage drop beyond a distance of 328' (100 m) or ampacity limits of the branch circuit. For assistance, contact Lumascape.

Luminaire Wire Colors & Designations

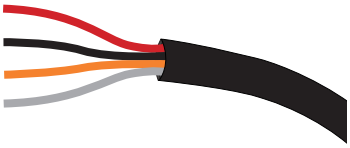
Color-Changing

Designation	Color
Positive	White
Negative	Black
PWM Common	Orange
PWM Red	Red
PWM Green	Green
PWM Blue	Blue



Single Color Dimming

Designation	Color
Positive	Red
Negative	Black
PWM +	Orange
PWM –	Grey



Single Color Non-Dimming

Designation	Color
Positive	White or Red
Negative	Black