



The LS9404LED provides a quick, simple and low profile method of retaining the luminaire into a ceiling or wall cavity, and features advanced dimming and control via Lumascope d5 driver technology: When high output is required, it can be deployed in its full output, 2W configuration; If a dot of light is required, it can be set as low as 0.2W, (either by the factory or in the field). Alternatively, the luminaire can be dynamically dimmed via Lumascope d5 driver technology. Constructed in part from 316 Marine Grade Stainless Steel, this luminaire also comes with Lumascope proprietary **ElectroPolishPlus™** surface treatment as standard.

### Performance

Static White & Colour	Lumen Output (lm)	Efficacy (lm/W)	Peak Intensity (cd)
● 3,000 K (80 CRI)	169	60	1,989
● 4,000 K (80 CRI)	184	66	2,066
● Blue (470nm)	-	-	-

Static white lumen output values are based on 2W luminaire with 14° lens.

<b>Beam Angles</b>	14°, 20°, 30°, 10° x 40°, Flood
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### Electrical

<b>LED Power</b>	1W, 2W
<b>Consumption</b>	2.8W (maximum for 2W)
<b>Input Voltage</b>	Low Voltage    24V DC (International) 12-15V AC, 12-24V DC (North America)

### Control

<b>Protocols</b>	PWM (0-10V to PWM, DMX to PWM and DALI to PWM converters available)
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### Physical

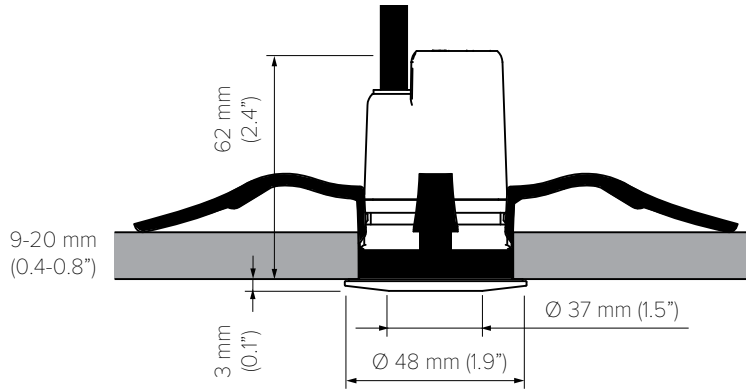
<b>Housing</b>	316 Marine Grade Stainless Steel bezel with polymer housing
<b>Installation</b>	Ceiling or wall cavity mount Mounting clip supplied as standard
<b>Ambient Operating Temperature</b>	-20°C to +50°C (-4°F to 122°F)
<b>Surface Temperature</b>	≤65°C (≤149°F) <b>HumanTouch™</b> Compliant

### Certification & Compliance

<b>IP Rating</b>	IP65
<b>Certifications</b>	CE, ETL



Luminaire Dimensions



Power		Code
1W		1
2W		2

Static White & Colour		Code
3,000 K (80 CRI)		H6
4,000 K (80 CRI)		W4
Blue (470nm typical)		B4

Beam		Code
Narrow	14°	NR
Medium	20°	ME
Wide	30°	WD
Linear	10° x 40°	LN <sup>(1)</sup>
Flood		FL

(1) Linear with wall wash filter creates a linear horizontal beam.

Tilt		Code
Standard		U
Wall wash		W <sup>(1)</sup>

(1) Not applicable with FL beam.

Input Voltage (International)		Code
PWM Dimmable Driver, 24V DC		27 <sup>(1)</sup>

(1) Requires appropriate power supply

Cable Length		Code
2m		02
8m		08
15m		15
20m		20
25m		25

Input Voltage (North America)		Code
PWM Dimmable Driver, 12-15V AC, 12-24V DC		23 <sup>(1)</sup>

(1) Requires appropriate power supply

Cable Length		Code
6ft		006
26ft		026
48ft		048
65ft		065
82ft		082

Photometric data is based on test results from a NIST traceable testing lab. IES data is available at [www.lumascap.com](http://www.lumascap.com)  
 Note: No depreciation factor is applied to the data shown.

**LS9404LED**  
 2W  
 4,000K (80CRI)  
 14° Beam Angle

Power Input	2.8W
Lumens	184lm
Efficacy	66lm/W

m	Centre Beam lx	Beam Ø
2	517	0.5 m
5	83	1.2 m
10	21	2.5 m
12	14	3.0 m
15	9	3.7 m

ft	Centre Beam fc	Beam Ø
5	82.6	1 ft
15	9.2	4 ft
30	2.3	7 ft
40	1.3	10 ft
50	0.8	12 ft

**LS9404LED**  
 2W  
 4,000K (80CRI)  
 20° Beam Angle

Power Input	2.8W
Lumens	176lm
Efficacy	63lm/W

m	Centre Beam lx	Beam Ø
2	229	0.7 m
5	37	1.9 m
10	9	3.7 m
12	6	4.5 m
15	4	5.6 m

ft	Centre Beam fc	Beam Ø
5	36.6	2 ft
15	4.1	6 ft
30	1	11 ft
40	0.6	15 ft
50	0.4	19 ft

**LS9404LED**  
 2W  
 4,000K (80CRI)  
 30° Beam Angle

Power Input	2.8W
Lumens	148lm
Efficacy	53lm/W

m	Centre Beam lx	Beam Ø
2	97	1.2 m
5	16	3.1 m
10	4	6.2 m
12	3	7.4 m
15	2	9.2 m

ft	Centre Beam fc	Beam Ø
5	15.5	3 ft
15	1.7	9 ft
30	0.4	18 ft
40	0.2	25 ft
50	0.2	31 ft

**LS9404LED**  
 2W  
 4,000K (80CRI)  
 Flood

Power Input	2.8W
Lumens	48lm
Efficacy	17lm/W

m	Centre Beam lx	Beam Ø
2	6	4.4 m
5	1	10.9 m
10	0	21.8 m
12	0	26.2 m
15	0	32.7 m

ft	Centre Beam fc	Beam Ø
5	0.9	11 ft
15	0.1	33 ft
30	0	65 ft
40	0	87 ft
50	0	109 ft

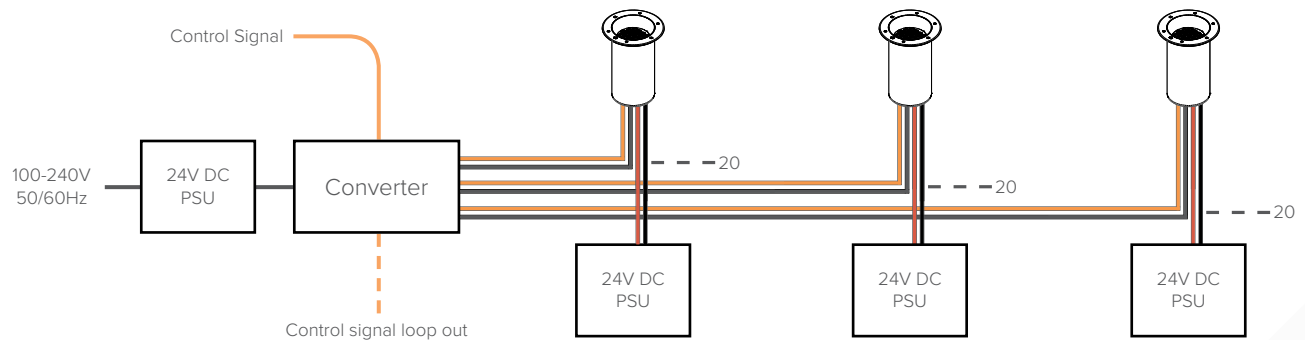
**LS9404LED**  
 2W  
 4,000K (80CRI)  
 10°x 40° Beam

Power Input	2.8W
Lumens	194lm
Efficacy	69lm/W

m	Centre Beam lx	Beam W	Beam L
2	244	.5 m	1.6 m
5	39	1.3 m	3.9 m
10	10	2.6 m	7.9 m
12	7	3.1 m	9.5 m
15	4	3.9 m	11.8 m

ft	Centre Beam fc	Beam W	Beam L
5	39.1	1 ft	4 ft
15	4.3	4 ft	12 ft
30	1.1	8 ft	24 ft
40	0.6	10 ft	23 ft
50	0.4	13 ft	39 ft

Wiring Diagram - Static Colour (DMX / DALI)



Control Protocols

DMX

For DMX control signal, use LS67100 DMX to PWM converter

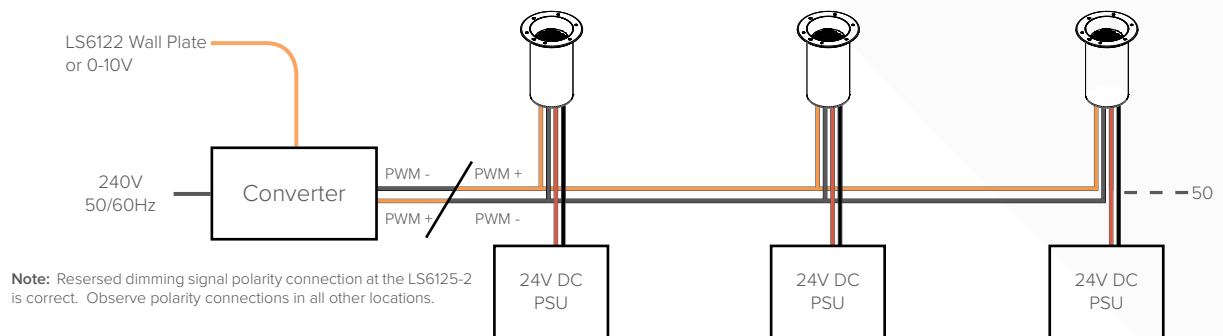
DALI

For DALI control signal, use LSLED-RGBDIM-DALI converter

Up to 20 luminaires per run under the following conditions:

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

Wiring Diagram - Static Colour (0-10V)



**Note:** Resersed dimming signal polarity connection at the LS6125-2 is correct. Observe polarity connections in all other locations.

Control Protocols

0-10V

For 0-10V control signal, use LS6125-2 0-10V to PWM converter

Up to 50 luminaires per run under the following conditions:

- Stand alone static colour dimming solution
- Up to 50 luminaires dimmed together
- Luminaires driven by integral LED drivers using LS6122 wall plate dimmer
- Luminaires powered through individual or shared power supplies
- Refer to 'Maximum Circuit Load' table for circuit limitations
- Always observe local electrical codes for branch circuit current limitations

Maximum Circuit Load

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 100m (328ft) and a trunk cable size of 3.3mm<sup>2</sup>. Please note, this does not take into consideration voltage drop beyond a distance of 100m or ampacity limits of the branch circuit. For assistance, please consult factory.

LSLED-24V Power Supplies			
Input Voltage	100-240V, 50/60Hz		
Output Voltage	24V DC		
Wattage	40W	100W	150W
LS9404LED, 1W	20	45	75
LS9404LED, 2W	10	26	36

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

## Power Supply Specifications

### DC Power Supplies

#### LSLED-24V100W240

##### 24V DC Ripple Free Power Supply

Input	170-250V AC, 50/60Hz
Output	100W, 24V DC, 4.2A
Ambient Temperature Rating	-10°C to 50°C
Compliance	IEC61347-2-13, CE
IP Rating	IP66
Short Circuit Protection	Yes
Open Circuit Protection	Yes
Protection Class	Class II CE

#### LSLED-24V150W240

##### 24V DC Ripple Free Power Supply

Input	90-305V AC, 50/60Hz
Output	150W, 24V DC, 6.3A
Ambient Temperature Rating	-10°C to 50°C
Compliance	IEC61347-2-13, CE
IP Rating	IP66
Short Circuit Protection	Yes
Open Circuit Protection	Yes
Protection Class	Class II CE

#### LSLED-24V40W240

##### Electronic DC Power Supply - wall mounted

Input	100-240V AC, 50/60Hz
Rating	40W / 1.67A
Output	24V
Ambient Temperature Rating	-25°C to 60°C (-13°F to 140°F)
Output Circuits	1
Approvals	CE, EN60950-1, EN61347-2-13
IP Rating	IP65/67
Dimensions	H 171mm W 62mm L 37mm (H 6.7" / W 2.4" / L 1.5")
Weight	0.7kg (1.6lb)

## Control Related Equipment

#### LS6125-2

##### 0-10V to PWM translator - wall mounted

Input	100-240V AC, 50/60Hz
Rating	20W / 0.83A
Output	24V
Ambient Temperature Rating	-10°C to 50°C
Open Circuits	1
Control Protocol	0-10V
Approvals	CE
IP Rating	IP65/67
Dimensions	H 204mm W 166mm L 91mm (H 8.0" / W 6.5" / L 3.6")
Weight	0.5kg (1.1lb)

#### LS67100

##### DMX to PWM translator

Input	24V DC
Rating	4 x 60W max
Output	4 x 2.5A max
Open Circuits	4
Approvals	CE, UL
IP Rating	IP65
Dimensions	H 286mm W 117mm L 82mm (H 11.25" / W 4.6" / L 3.2")
Weight	0.2kg (0.5lb)

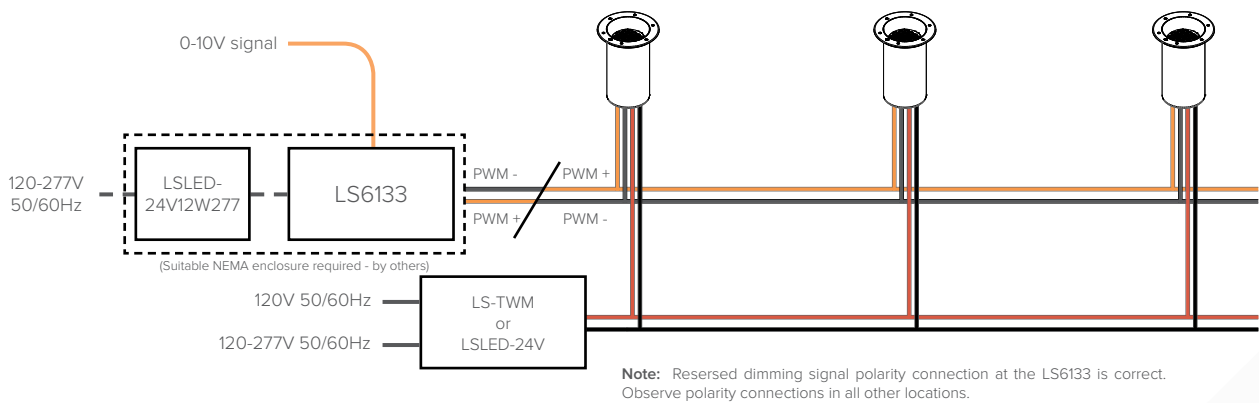
**Control Related Equipment cont...**

LSLED-RGBDIMDALI

DALI converter

<b>Input</b>	24V DC
<b>Rating</b>	30W max
<b>Output</b>	24V DC PWM (Inverted)
<b>Ambient Temperature Rating</b>	50°C
<b>Output Channels</b>	3
<b>Control Protocol</b>	DMX512A, DALI, DSI, RDM
<b>Approvals</b>	CE Ctick EN6137-1 , EN61347-2-13, IEC 62384
<b>IP Rating</b>	IP67
<b>Weight</b>	0.75kg

**Wiring Diagram - Static Colour (0-10V)**

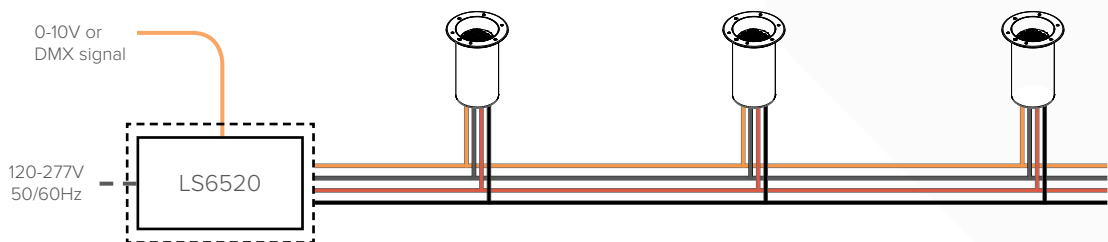


**Control Protocols**

**0-10V** For 0-10V control signal, use LS6133 0-10V to PWM converter

**Wiring Diagram - Static Colour**

Please note: The use of a GFCI may be required. Consult local wiring rules.



**Maximum Circuit Load**

Compatibility with each transformer or power supply is indicated by the value shown in the table, representing the maximum number of luminaires that may be powered from each transformer or power supply. Please note, this does not take into consideration voltage drop or ampacity limits of the branch circuit. In addition, dimming circuit total wire length must be kept under 328' (100m). For assistance, please consult factory.

	Transformer / Power Supplies								
	LS-TWM-1-300	LSLED-24V75W277	LSLED-24V96WD277	LSLED-24V 120 / 240 / 320 P09			LS6520		
Input Voltage	120V, 60Hz	120-277V 50/60Hz	120-277V 50/60Hz	120-277V 50/60Hz			100-277V, 50/60Hz		
Output Voltage	12/13/14V, 60Hz	24V DC	24V DC	24V DC			24V DC		
Wattage	1 x 300W circuit	75W	96W	120W	240W	320W	120W	240W	320W
LS9404LED, 1W	96	40	60	72	145	195	72	145	195
LS9404LED, 2W	54	20	30	36	73	98	36	73	98

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

**Transformer / Power Supply Specifications**

Class 2 LED Power Supplies

LSLED-24V96WD277

Electronic DC Power Supply - wall mounted

Input	120-277V, 50/60Hz
Output	24V DC, 4A max
Efficiency	86% typ.
Ambient Temperature Rating	-22°F to 140°F (-30°C to 60°C)
Connections	6 x 1/2" entries (3 in / 3 out)
UL Classification	UL 8750
Location	Dry / Damp location only
IP Rating	IP66 (NEMA 3)
Dimensions	<b>H 1.3" W 3.0" L 11.46"</b> (H 33mm / W 76mm / L 291mm)

LSLED-24V75W277

Electronic DC Power Supply - wall mounted

Input	120-277V, 50/60Hz
Output	24V DC, 3.13A, (0.05A min)
Efficiency	
Ambient Temperature Rating	-40°F to 140°F (-40°C to 60°C)
Connections	2 x 1/2" entries (in / out)
UL Classification	Class 2, UL1012 / 1585, UL1310
Location	Dry / Damp / Wet locations
IP Rating	IP66 (NEMA 3)
Dimensions	<b>H 1.67" W 2.95" L 11.22"</b> (H 42mm / W 75mm / L 285mm)

Low Voltage DC Power Supplies

LS6520

Power Unit for Wet Locations

Input	100-277V, 50/60Hz
Output	24 or 30V DC
Output Circuits	1
Approvals	UL2108, CSA C22.2 No. 250.0
IP Rating	IP65, suitable for wet locations
Dimensions	<b>H 5.3" W 13.4" D 9.3"</b> (H 134mm / W 341mm / D 236mm)
Weight	13.2lb (6.0kg)

LSLED-24V120WP09

Electronic DC Power Supply - wall mounted

Input	120-277V, 50/60Hz
Rating	120W
Output	24V or 30V
Ambient Temperature Rating	-40°F to 122°F (-40°C to 50°C)
Connections	2 x 3/4" entries (power in / out) 2 x 3/4" entries (low voltage out)
UL Classification	ANSI / UL2018, CSA C22.2 No. 250.0 - Listed Power Unit
Location	Dry / Damp / Wet locations
IP / NEMA Rating	1, 3R, 4X, 6P, 12
Dimensions	<b>H 4.47" W 11.35" D 9.41"</b> (H 120mm / W 288mm / D 293mm)
Weight	7.5lb (3.4kg)

LSLED-24V240WP09

Electronic DC Power Supply - wall mounted

Input	120-277V, 50/60Hz
Rating	240W
Output	24V or 30V
Ambient Temperature Rating	-40°F to 122°F (-40°C to 50°C)
Connections	2 x 3/4" entries (power in / out) 2 x 3/4" entries (low voltage out)
UL Classification	ANSI / UL2108 Wet Location Listed
Location	Dry / Damp / Wet locations
IP / NEMA Rating	1, 3R, 4X, 6P, 12
Dimensions	<b>H 5.22" W 13.41" D 11.43"</b> (H 133mm / W 341mm / D 290mm)
Weight	10.9lb (5.0kg)

LSLED-24V320WP09

Electronic DC Power Supply - wall mounted

Input	120-277V, 50/60Hz
Rating	320W
Output	24V or 30V
Ambient Temperature Rating	-40°F to 104°F (-40°C to 40°C)
Connections	2 x 3/4" entries (power in / out) 2 x 3/4" entries (low voltage out)
UL Classification	ANSI / UL2108 Wet Location Listed
Location	Dry / Damp / Wet locations
IP / NEMA Rating	1, 3R, 4X, 6P, 12
Dimensions	<b>H 5.22" W 13.41" D 11.43"</b> (H 133mm / W 341mm / D 290mm)
Weight	12.1lb (5.5kg)



**Transformers for Landscape Lighting Applications**

LS-TWM-1-300

Magnetic Transformer - wall mounted

Input	120V
Rating	300W
Output	12 / 13 / 14 / 15V
Output Circuits	1
Protection	Electrostatic shield, magnetic breaker
Approvals	UL, CUL
NEMA Rating	3R
Construction	Stainless steel
Dimensions	H 17.6" W 6.8" D 6.19" (H 447mm / W 173mm / D 157mm)
Weight	27lb (12.3kg)

**Control Related Equipment**

LS6133

0-10V to PWM translator - NEMA enclosure required (by others)

Input	24V DC
Rating	96W max
Output	4A max
Output Circuits	1
Approvals	UL, CUL Recognised, Class 2
IP Rating	IP66
Dimensions	H 5.2" W 1.3" D 1" (H 132mm / W 33mm / D 25mm)
Weight	0.2lb (0.1kg)

LSLED-24V12W277

Electronic DC Power Supply - NEMA enclosure required (by others)

Input	120-277V, 50/60Hz
Rating	12W / 0.5A
Output	24V DC
Output Circuits	1
Approvals	UL, CUL Recognized, Class 2
IP Rating	IP66
Location	Wet location
Dimensions	H 3.35" W 1.42" D 0.91" (H 85mm / W 36mm / D 23mm)
Weight	0.282lb (0.1kg)