

OrgaRail® - Illuminated Handrail

ROUND Ø 1.90in(48mm)



FEATURES

- Heavy duty stainless steel AISI 316 Satin Brushed.
- Dimensions: 1.9in(48mm) OD
- Curved handrail (10ft/3.04m radius or greater) is available upon request
- Energy efficient and simply slides into the internal aluminum channel. Straight handrails only
- Wall and Post Mounts are designed for quick and easy installation
- Available in various colors and luminous intensities
- Made in the USA
- ADA Compliant
- Bug Rating: B0-U0-G0

CUSTOM FINISHES

Custom finishes are available in Liquid Paint, Kynar Paint, Powder Coating #RAL and NEW Faux Wood Finishes. Information available upon request.

HOW TO SPECIFY YOUR ENERGY EFFICIENT HANDRAIL

As each lighting project is unique, all the components of the OrgaRail® illuminated Handrail are professionally customized. Therefore, it is of great importance to provide fully dimensioned plans, DWG files and detailed drawings, in addition to the useful nomenclature below.

ILLUMINATED HANDRAIL TECHNICAL DETAIL

Profile	Length	Output	CCT	Control	LED	Mount	Lens	Connector	Options	Certification
HR2	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
HR2 1.9in (48mm)	X Length in feet	D Deco P Power HP High Power P1 Photon 1200 P2 Photon 2000 P3 Photon 3000 P4 Photon 4000 NL Non-Lit	27 2700K 30 3000K 35 3500K* 40 4000K 50 5000K 65 6500K** RGBW27 RGBW27K RGBW30 RGBW30K RGBW40 RGBW40K A Wildlife Amber *D, P, HP only **Photon only	ND Non Dimming D1 0-10V TRI TRIAC DMX DMX	T Top S Side	P Post G Glass W Wall CU Custom	LC Clear LF Frosted LA Asym. (clear)	I Interior (IP40) E Exterior (IP67)	PR Post Return WR Wall Return EC End Cap SJ Seismic Joint CV2D Curved 2D CV3D Curved 3D(spiral) N None	BAA BAA BABA BABA N None

OPTICS

- Low output (Deco 35-38 lm/ft | 115-125 lm/m)
- Medium output (Power 117-127 lm/ft | 383-416 lm/m)
- High output (Power 198-216 lm/ft | 651-708 lm/m)
- Photon (275-1018 lm/ft | 745-3339 lm/m)
- Available in 2700K, 3000K, 3500K, 4000K, 5000K, 6500K and Wildlife Amber
- OrgaLED® Continuous run length up to 66ft(20m)
- Energy Efficient (120 -180 lm/watt)

CONNECTING

The maximum unit length of the handrail is 16.4ft and can easily be connected by ss glue or welding. All handrails can be applied indoor and outdoor.

MOUNTING

Wall, Post or Glass Mounts. Custom Mounts Available.

CURVES & SPIRAL CURVES

2D curved rails create horizontal curved rails. 3D curved rails for spiral stairways require horizontal and vertical bending with special alignment techniques with welded and polished sections according to the spiraling details.



ORGANIC LIGHTING®

Project

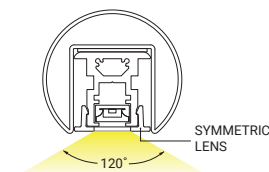
Date

AVAILABLE PROFILES

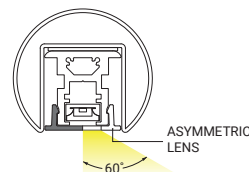
PATENTED SLIDE-FED

(OrgaLED Top only)
PATENT #US-12173887-B1

SYMMETRIC



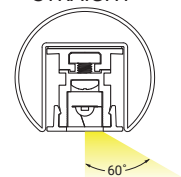
ASYMMETRIC



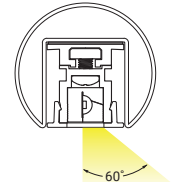
PUSH-FIT

(OrgaLED Side only)

STRAIGHT



2D/3D BENDING



SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.

Organic Lighting | 12203 Magnolia Avenue, Suite 1, Riverside CA 92503 | 626.969.6140 | www.organiclighting.com | 07/2025 V24

IK10 IP40 IP67 RoHS ETL

Page 1 of 7

OrgaRail® - Illuminated Handrail

ROUND Ø 1.90in(48mm)

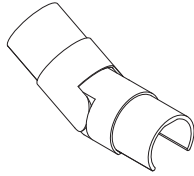
MOUNTINGS & ACCESSORIES

STANDARD & CUSTOMIZED ANGLES

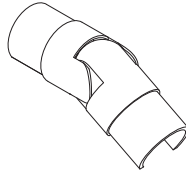
There are three standard angles for the OrgaRail® Handrails: 90°, Adjustable Up and Adjustable Down angles. Other angles can be customized upon request.



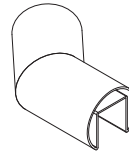
90° Post Return



Adjustable
Angle Up



Adjustable
Angle Down



Custom Angle

LENS



Clear Lens



Frosted Lens



Asymmetric Lens (Clear)
*light loss -50%

INFILLS & ACCESSORIES



Glass Bracket
(glass by others)



Cable Infill



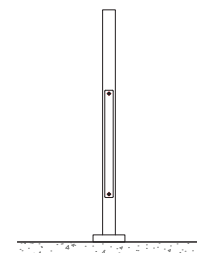
Railing Infill



Guardrail

ADDER ACCESSORIES

Part #	Description
HRGB	Glass Brackets Infill (sizes in inches: Ø1/4", Ø5/16", Ø3/8", Ø9/16")
HRRL	Railing Infill (sizes in inches: Ø1/2", Ø5/8")
HRCL	Cable Infill (sizes in inches: Ø1/8")
HRGR	Guardrail (42" height)
HRGMB	3rd Party Guardrail Mounting Brackets
012080-ID	1.9" OD Post Tube - Includes Integral Driver w/ Cover
012080-ID2	1.9" OD Post Tube - Includes Dual Integral Driver w/ Cover
HRFL	Base Flange w/ Cover cap



Integral Driver

ORGANIC LIGHTING®

Project

Date

SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.

Organic Lighting | 12203 Magnolia Avenue, Suite 1, Riverside CA 92503 | 626.969.6140 | www.organiclighting.com | 07/2025 V24

Page 2 of 7

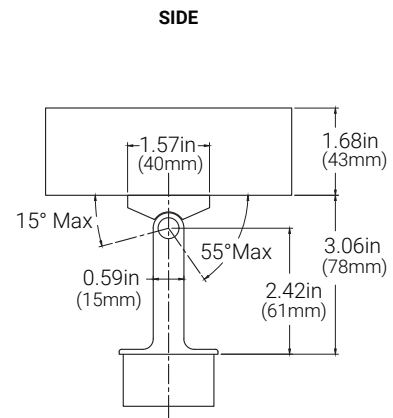
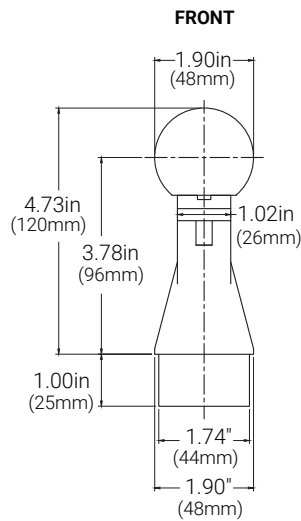
OrgaRail® - Illuminated Handrail

ROUND Ø 1.90in(48mm)

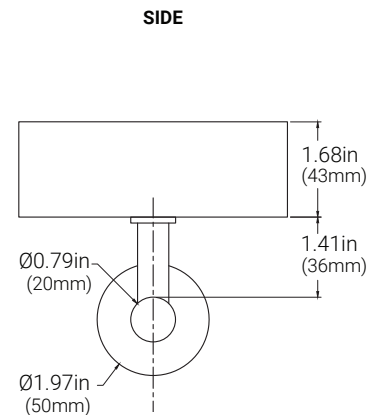
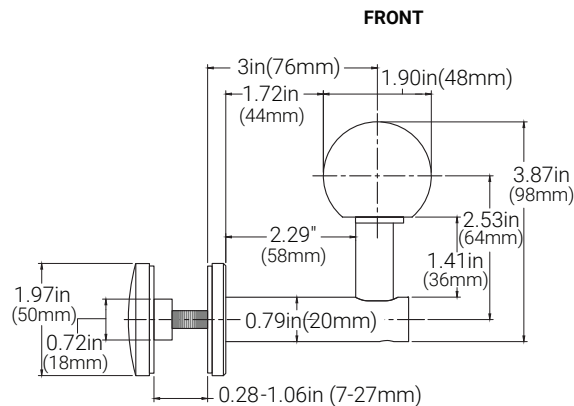
ORGANIC LIGHTING®

DIMENSIONS

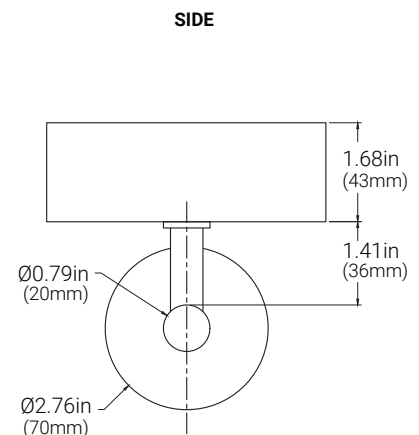
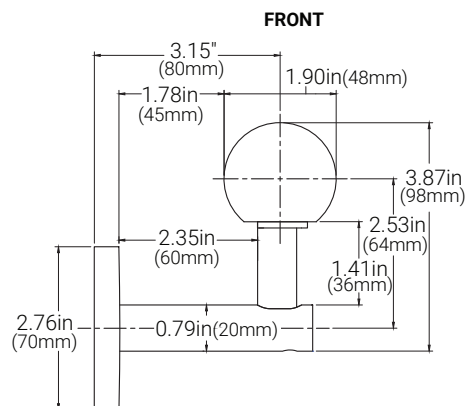
POST MOUNT



GLASS MOUNT



WALL MOUNT



SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.

Organic Lighting | 12203 Magnolia Avenue, Suite 1, Riverside CA 92503 | 626.969.6140 | www.organiclighting.com | 07/2025 V24

Page 3 of 7

OrgaRail® - Illuminated Handrail

ROUND Ø 1.90in(48mm)

SYMMETRIC LED STRIPS - 24V

Compatible with Slide-Fed Symmetric applications. Can be made Asymmetric with an Asymmetric lens. Flexible UV/IR protected PVC encapsulated LEDs with a continuous run length of up to 66ft (20.1m).

PART NUMBER & SPECIFICATIONS- SYMMETRIC

Part #	Color	CRI	Lm/ft	Lm/m	Max Run		W/ft	W/m
OrgaLED® Deco Top								
041101	2700K	>94	35.1	115.1	66ft	20.1m	0.3	0.98
041102	3000K	>94	36	118.1	66ft	20.1m	0.3	0.98
041103	3500K	>94	36	118.1	66ft	20.1m	0.3	0.98
041104	4000K	>94	38.1	125	66ft	20.1m	0.3	0.98
041105	5000K	>94	38.1	125	66ft	20.1m	0.3	0.98
OrgaLED® Power Top								
041201	2700K	>94	116.8	383.1	66ft	20.1m	1	3.3
041202	3000K	>94	120.1	393.9	66ft	20.1m	1	3.3
041203	3500K	>94	120.1	393.9	66ft	20.1m	1	3.3
041204	4000K	>94	127	416.6	66ft	20.1m	1	3.3
041205	5000K	>94	127	416.6	66ft	20.1m	1	3.3
OrgaLED® High Power Top								
041301	2700K	>94	198.6	651.4	66ft	20.1m	1.7	5.6
041302	3000K	>94	204.2	669.8	66ft	20.1m	1.7	5.6
041303	3500K	>94	204.2	669.8	66ft	20.1m	1.7	5.6
041304	4000K	>94	215.9	708.2	66ft	20.1m	1.7	5.6
041305	5000K	>94	215.9	708.2	66ft	20.1m	1.7	5.6
OrgaLED® RGBW Top								
041401	RGBW27K	>90	120.6	395.6	33ft	10m	2.2	7.2
041402	RGBW30K	>90	120.6	395.6	33ft	10m	2.2	7.2
041403	RGBW40K	>90	120.6	395.6	33ft	10m	2.2	7.2
OrgaLED® Photon 1200 Top								
051101	2700K	>94	275.4	903.3	23ft	7m	1.8	5.9
051102	3000K	>94	291.6	956.4	23ft	7m	1.8	5.9
051104	4000K	>94	324	1062.7	23ft	7m	1.8	5.9
051105	5000K	>94	315.9	1036.2	23ft	7m	1.8	5.9
051106	6500K	>94	311	1020.1	23ft	7m	1.8	5.9
OrgaLED® Photon 2000 Top								
051201	2700K	>94	459	1505.5	20ft	6m	3	9.8
051202	3000K	>94	486	1594.1	20ft	6m	3	9.8
051204	4000K	>94	540	1771.2	20ft	6m	3	9.8
051205	5000K	>94	526	1725.3	20ft	6m	3	9.8
051206	6500K	>94	518.4	1700.4	20ft	6m	3	9.8
OrgaLED® Photon 3000 Top								
051301	2700K	>94	703.8	2308.5	16ft	5m	4.6	15.1
051302	3000K	>94	745.2	2444.3	16ft	5m	4.6	15.1
051304	4000K	>94	828	2715.8	16ft	5m	4.6	15.1
051305	5000K	>94	807.3	2647.9	16ft	5m	4.6	15.1
051306	6500K	>94	794.9	2607.3	16ft	5m	4.6	15.1
OrgaLED® Photon 4000 Top								
051401	2700K	>94	887.4	2910.7	16ft	5m	6	19
051402	3000K	>94	939.6	3081.9	16ft	5m	6	19
051404	4000K	>94	1044	3424.3	16ft	5m	6	19
051405	5000K	>94	1017.9	3338.7	16ft	5m	6	19
051406	6500K	>94	1002.2	3287.2	16ft	5m	6	19

SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.

ORGALED® TOP ACCESSORIES



Straight Connector Cable
16ft (4.88m) | IP40 / IP67
#041002



Bottom Feed Connector Cable
16ft (4.88m) | IP40 / IP67
#041003



Jumper Cable 8in (203.2mm)
IP40 / IP67
#041004



Top End Cap | IP40 / IP67
#041001



L-Splice Connector | IP40 / IP67
#041005



Inline Connector | IP40 / IP67
#041006



PVC IP67 Waterproofing Kit
#011511



IP67 Factory Waterproofing
#011508

OrgaRail® - Illuminated Handrail

ROUND Ø 1.90in(48mm)

ASYMMETRIC LED STRIPS - 24V

Push-fit LEDs. Designed for 2D/ 3D Bending and Asymmetric applications. Flexible UV/IR protected PVC encapsulated LEDs with a continuous run length of up to 33ft(10.1m).

PART NUMBER & SPECIFICATIONS

Part #	Color	CRI	lm/ft	lm/m	W/ft	W/m
OrgaLED® Deco Side						
042101	2700K	>94	33.8	110.9	0.4	1.3
042102	3000K	>94	34.7	113.8	0.4	1.3
042103	3500K	>94	34.7	113.8	0.4	1.3
042104	4000K	>94	36.7	120.4	0.4	1.3
042105	5000K	>94	36.7	120.4	0.4	1.3
OrgaLED® Power Side						
042201	2700K	>94	118.1	387.4	1.4	4.6
042202	3000K	>94	121.5	398.5	1.4	4.6
042203	3500K	>94	121.5	398.5	1.4	4.6
042204	4000K	>94	128.4	421.2	1.4	4.6
042205	5000K	>94	128.4	421.2	1.4	4.6
OrgaLED® High Power Side						
042301	2700K	>94	202.5	664.2	2.4	7.9
042302	3000K	>94	208.2	683	2.4	7.9
042303	3500K	>94	208.2	683	2.4	7.9
042304	4000K	>94	220.1	721.9	2.4	7.9
042305	5000K	>94	220.1	721.9	2.4	7.9

ORGANIC LIGHTING®

ORGALED® PHOTON TOP ACCESSORIES



White Starter Cable 16ft(4.9m)
IP40 / IP67
#051002



Jumper Connector
IP40 / IP67
#051004



Top End Cap
IP40 / IP67
#051001



Silicone IP67 Waterproofing Kit
#011521

ORGALED® SIDE ACCESSORIES



**Side Starter Cable
16ft (4.88m)**
IP40 | IP67
#042002



**Side White Jumper Cable
8" (203.2mm)**
IP40 | IP67
#042004



Side End Cap | IP40 / IP67
#042001

SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.

Organic Lighting | 12203 Magnolia Avenue, Suite 1, Riverside CA 92503 | 626.969.6140 | www.organiclighting.com | 07/2025 V24

Page 5 of 7

OrgaRail® - Illuminated Handrail

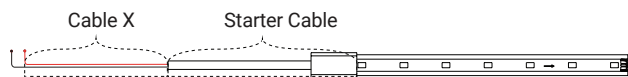
ROUND Ø 1.90in(48mm)

ORGANIC LIGHTING®

CABLE REQUIREMENT

The OrgaLED® LED strips need a minimum voltage at the beginning of the LED strip to function according to the specifications. The table below gives an indication of the maximum cable length based on the cable thickness. The standard OrgaLED® starter cable (20 AWG) has a cable length of 16ft (5m).

In case the required length is longer than the length mentioned in this cable, it is recommended to cut the starter cable down to 1ft and splice a larger gauge cable. Please contact your distributor for a detailed cable calculation.



Cable X Information	LED Strip	Max. Cable Length
OrgaLED Top		24V
20 AWG x 2	3.28ft / 1m	303ft / 92.4m
	16.4ft / 5m	57ft / 17.4m
	32.8ft / 10m	36ft / 11m
	49.2ft / 15m	20ft / 6.1m
	65.6ft / 20m	16ft / 4.9m
18 AWG x 2	3.28ft / 1m	457ft / 139.3m
	16.4ft / 5m	86ft / 26.2m
	32.8ft / 10m	56ft / 17.1m
	49.2ft / 15m	35ft / 10.7m
	65.6ft / 20m	25ft / 7.7m
16 AWG x 2	3.28ft / 1m	914ft / 278.6m
	16.4ft / 5m	172ft / 52.4m
	32.8ft / 10m	90ft / 27.4m
	49.2ft / 15m	60ft / 18.3m
	65.6ft / 20m	40ft / 12.2m
14 AWG x 2	3.28ft / 1m	1521ft / 463.6m
	16.4ft / 5m	287ft / 87.5m
	32.8ft / 10m	140ft / 42.7m
	49.2ft / 15m	96ft / 29.3m
	65.6ft / 20m	70ft / 21.3m

Cable X Information	LED Strip	Max. Cable Length
Photon 1200		24V
20 AWG x 2	3.28ft / 1m	490ft / 149.35m
	9.84ft / 3m	150ft / 45.72m
	22.96ft / 7m	60ft / 18.29m
18 AWG x 2	3.28ft / 1m	780ft / 237.74m
	9.84ft / 3m	250ft / 76.2m
	22.96ft / 7m	100ft / 30.48m
16 AWG x 2	3.28ft / 1m	1240ft / 377.95m
	9.84ft / 3m	400ft / 121.92m
	22.96ft / 7m	170ft / 51.82m
14 AWG x 2	3.28ft / 1m	1900ft / 579.12m
	9.84ft / 3m	640ft / 195.07m
	22.96ft / 7m	270ft / 82.3m

Cable X Information	LED Strip	Max. Cable Length
Photon 2000		24V
20 AWG x 2	3.28ft / 1m	280ft / 85.35m
	9.84ft / 3m	95ft / 28.96m
	19.68ft / 6m	46ft / 14.02m
18 AWG x 2	3.28ft / 1m	450ft / 137.16m
	9.84ft / 3m	150ft / 45.72m
	19.68ft / 6m	75ft / 22.86m
16 AWG x 2	3.28ft / 1m	720ft / 219.46m
	9.84ft / 3m	240ft / 73.15m
	19.68ft / 6m	120ft / 36.58m
14 AWG x 2	3.28ft / 1m	1150ft / 350.52m
	9.84ft / 3m	380ft / 115.82m
	19.68ft / 6m	190ft / 57.91m

Cable X Information	LED Strip	Max. Cable Length
Photon 3000		24V
20 AWG x 2	3.28ft / 1m	180ft / 54.86m
	9.84ft / 3m	60ft / 18.29m
	16.4ft / 5m	35ft / 10.67m
18 AWG x 2	3.28ft / 1m	290ft / 88.39m
	9.84ft / 3m	100ft / 30.48m
	16.4ft / 5m	60ft / 18.29m
16 AWG x 2	3.28ft / 1m	470ft / 143.26m
	9.84ft / 3m	150ft / 45.72m
	16.4ft / 5m	90ft / 27.43m
14 AWG x 2	3.28ft / 1m	750ft / 228.6m
	9.84ft / 3m	250ft / 76.2m
	16.4ft / 5m	150ft / 45.72m

Cable X Information	LED Strip	Max. Cable Length
Photon 4000		24V
20 AWG x 2	3.28ft / 1m	140ft / 42.67m
	9.84ft / 3m	45ft / 13.72m
	16.4ft / 5m	25ft / 7.62m
18 AWG x 2	3.28ft / 1m	220ft / 67.06m
	9.84ft / 3m	75ft / 22.86m
	16.4ft / 5m	40ft / 12.19m
16 AWG x 2	3.28ft / 1m	360ft / 109.73m
	9.84ft / 3m	120ft / 36.58m
	16.4ft / 5m	70ft / 21.34m
14 AWG x 2	3.28ft / 1m	575ft / 175.26m
	9.84ft / 3m	190ft / 57.91m
	16.4ft / 5m	110ft / 33.53m

SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.

Organic Lighting | 12203 Magnolia Avenue, Suite 1, Riverside CA 92503 | 626.969.6140 | www.organiclighting.com | 07/2025 V24

Page 6 of 7

OrgaRail® - Illuminated Handrail

ROUND Ø 1.90in(48mm)

POWER SUPPLIES, ENCLOSURES & CONTROLLERS

PART NUMBER & SPECIFICATIONS

*Forward Phase, Reverse Phase, & 0-10V Dimming Drivers. Remote enclosures available.

Part #	Ingress	Voltage	Wattage	Dimensions (inches/mm)	Description
POWER SUPPLIES - 24V					
045001	IP67	100-305V	20W	7.6 x 1.18 x 0.79 / 193 x 30 x 20	Dimmable LED Driver
045002	IP67	100-305V	40W	5.83 x 1.57 x 0.87 / 148 x 40 x 22	Dimmable LED Driver
045003	IP67	120-277V	60W	6.3 x 2.24 x 1.5 / 160 x 57 x 38	Dimmable LED Driver
045004	IP67	120-277V	75W	6.3 x 2.24 x 1.5 / 160 x 57 x 38	Dimmable LED Driver
045005	IP67	120-277V	96W	7.6 x 2.24 x 1.5 / 193 x 57 x 38	Dimmable LED Driver
045006	IP67	120-277V	200W	10.1 x 3.03 x 1.8 / 257 x 77 x 46	Dimmable LED Driver
045007	IP67	120-277V	300W	11.9 x 3.03 x 1.8 / 302 x 77 x 46	Dimmable LED Driver
012080-ID		120-277V	96W	Pre-Assembled in Post	Integral LED Driver (Non-Dimming)

Part #	Ingress	Dimensions (inches/mm)	Description
ENCLOSURES			
045008	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	20W Enclosure
045009	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	40W Enclosure
045010	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	60W Enclosure
045011	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	75W Enclosure
045012	IP67	11.02 x 4.05 x 2.2 / 280 x 103 x 56	96W Enclosure
045013	IP67	16.7 x 9.8 x 2.3 / 424 x 249 x 58	200W Enclosure
045014	IP67	16.7 x 9.8 x 2.3 / 424 x 249 x 58	300W Enclosure

Part #	Description
CONTROLLERS	
011344	180W Digital Controller
011345	720W Digital Controller
011341	Digital Controller & Power Supply Combination
011410	Nicolaude DE3 DMX 512 Controller
011403	Nicolaude DINA-DR1 DMX 512 Controller
011396	Switchex 40W Wall Mount Dimmable Power Supply
011397	Switchex 100W Wall Mount Dimmable Power Supply

ORGANIC LIGHTING®

Project

Date



20W Dimmable Driver



75W Dimmable Driver



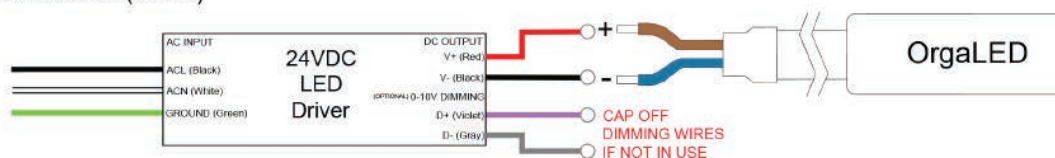
Digital Controller (180W, 720W)



Nicolaude DE3 DMX 512 Controller

ELECTRICAL DETAILS

*Regular Connection (Mono)



SLIDE-IN LIGHTING DESIGN PATENT #US 12,173,887 B1

Specifications may be modified or improved without notification.