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## Top Diffuse ½"

The OrgaLED® Top Diffuse ½" LED strip (IP68) is a high quality, flexible LED strip with a unique diffused co-extrusion technology. The combination of high quality and exceptional flexibility, allows for an endless range of indoor and outdoor applications. The strip comes with a pre-assembled mirror welded connector for instant waterproof IP68+/IP69 usage.

For the latest version of this datasheet, visit our website:

[www.organiclighting.com](http://www.organiclighting.com)

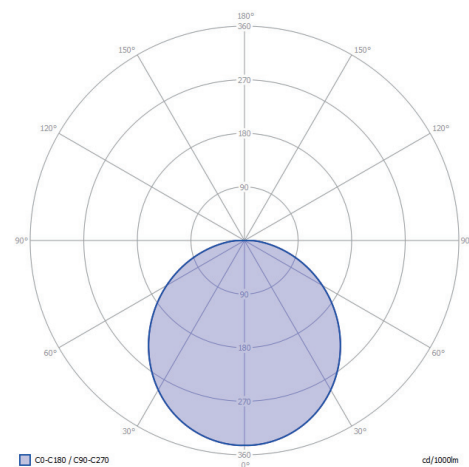
## Available Colors

- OrgaLED® Top 2400K Diffuse ½"
- OrgaLED® Top 2700K Diffuse ½"
- OrgaLED® Top 3000K Diffuse ½"
- OrgaLED® Top 4000K Diffuse ½"
- OrgaLED® Top 6500K Diffuse ½"

## Features

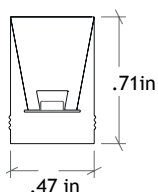
- Made in USA/EU
- Unique diffused co-extrusion technology (hollow chamber)
- UV, frost, seawater & chlorine vapor resistant
- IP68
- Flexible (bend radius > 5.9")
- Dimmable
- Effective heat dissipation
- Excellent lumen/ Watt ratio
- Binning ± 50K
- Available in long lengths
- Available in various colors
- Extensive range of accessories
- Plug & Play

## Symmetric Diagram



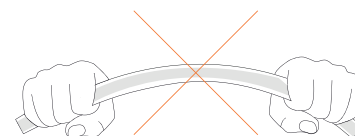
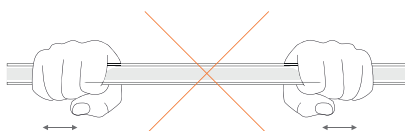
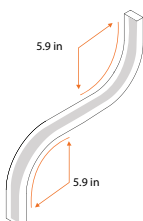
## Product Codes & Characteristics

	Top Diffuse ½" 2400K	Top Diffuse ½" 2700K	Top Diffuse ½" 3000K	Top Diffuse ½" 4000K	Top Diffuse ½" 6500K
Product code	011829	011830	011831	011832	011833
Power (24 V DC)	2.7 W/ft	2.7 W/ft	2.5 W/ft	2.6 W/ft	2.6 W/ft
Power (25 V DC)	2.8 W/ft	2.8 W/ft	2.6 W/ft	2.7 W/ft	2.7 W/ft
CRI	88	91	90	92	92
Luminous flux	51 lm/ft	56 lm/ft	51 lm/ft	55 lm/ft	56 lm/ft
Luminous efficiency	19 lm/W	21 lm/W	20 lm/W	21 lm/W	21 lm/W
Spool length	Max. 32.8 ft				
Section length	2 in				
LED	Duris™ E 3				
Number of LEDs	6 per section /36.5 per ft				
Max. connection length	32.8 ft				
Operation voltage	24 V DC				
Max. operation voltage	25 V DC				
Beam angle	110°				
Dimensions	0.47 x 0.71 in				
Dimmable	PWM dimming, 0-10V dimming				
Binning	± 50K				
Weight	2.6 oz/ft				
Expected lifetime	B50/L70 > 50,000 hours @ 104 °F				
Degree of protection (IP)	IP68 +/- IP69 with mirror welded connector				
Storage temperature	-4 °F - 131 °F				
Operation temperature	-22 °F - 131 °F1				
Minimal bending radius	5.9 in				
Max. connection length between -4 °F and -22 °F is 23 ft					



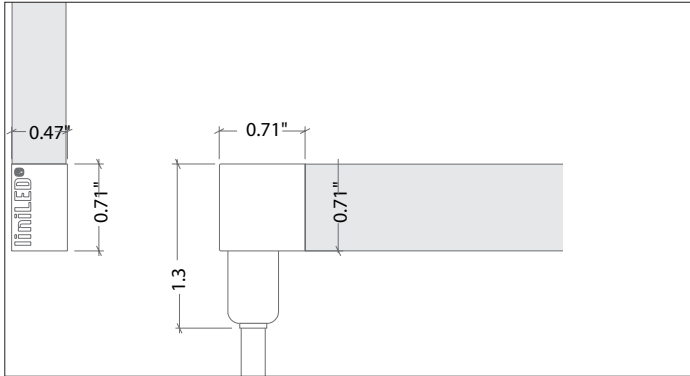
## Bending Radius

Maximum bending radius is 5.9 in. Solely bend up or downward. Do not compress, stretch or bend the LED strip.

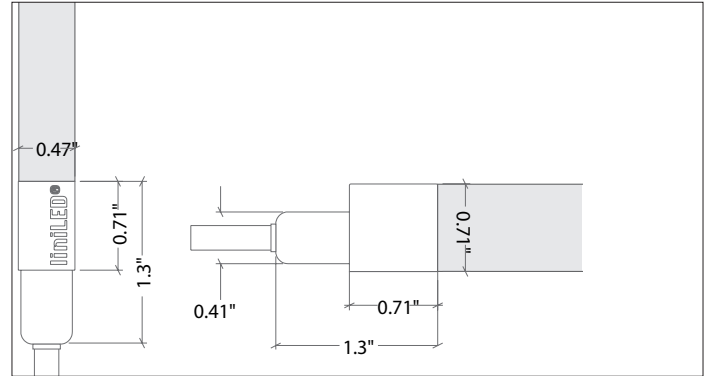


## Connectors - Pre assembled

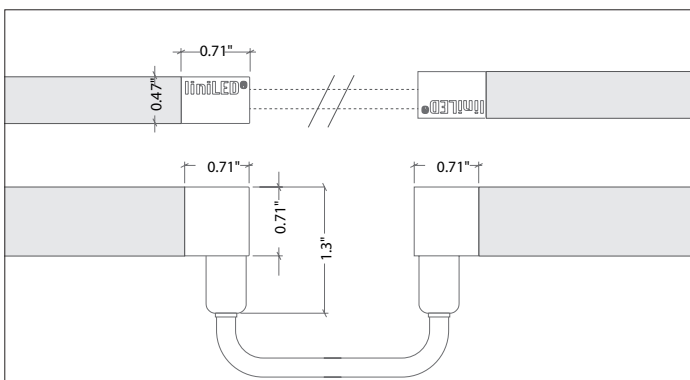
OrgaLED<sup>®</sup> Diffuse Connector 90° Angle ½"



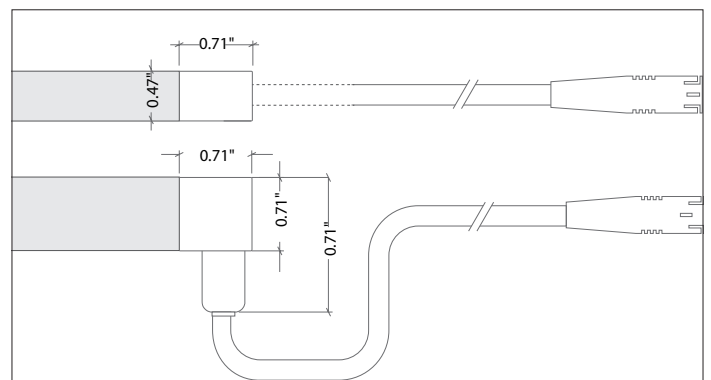
OrgaLED<sup>®</sup> Diffuse Connector Straight ½"



OrgaLED<sup>®</sup> Diffuse Extension Cord ½"

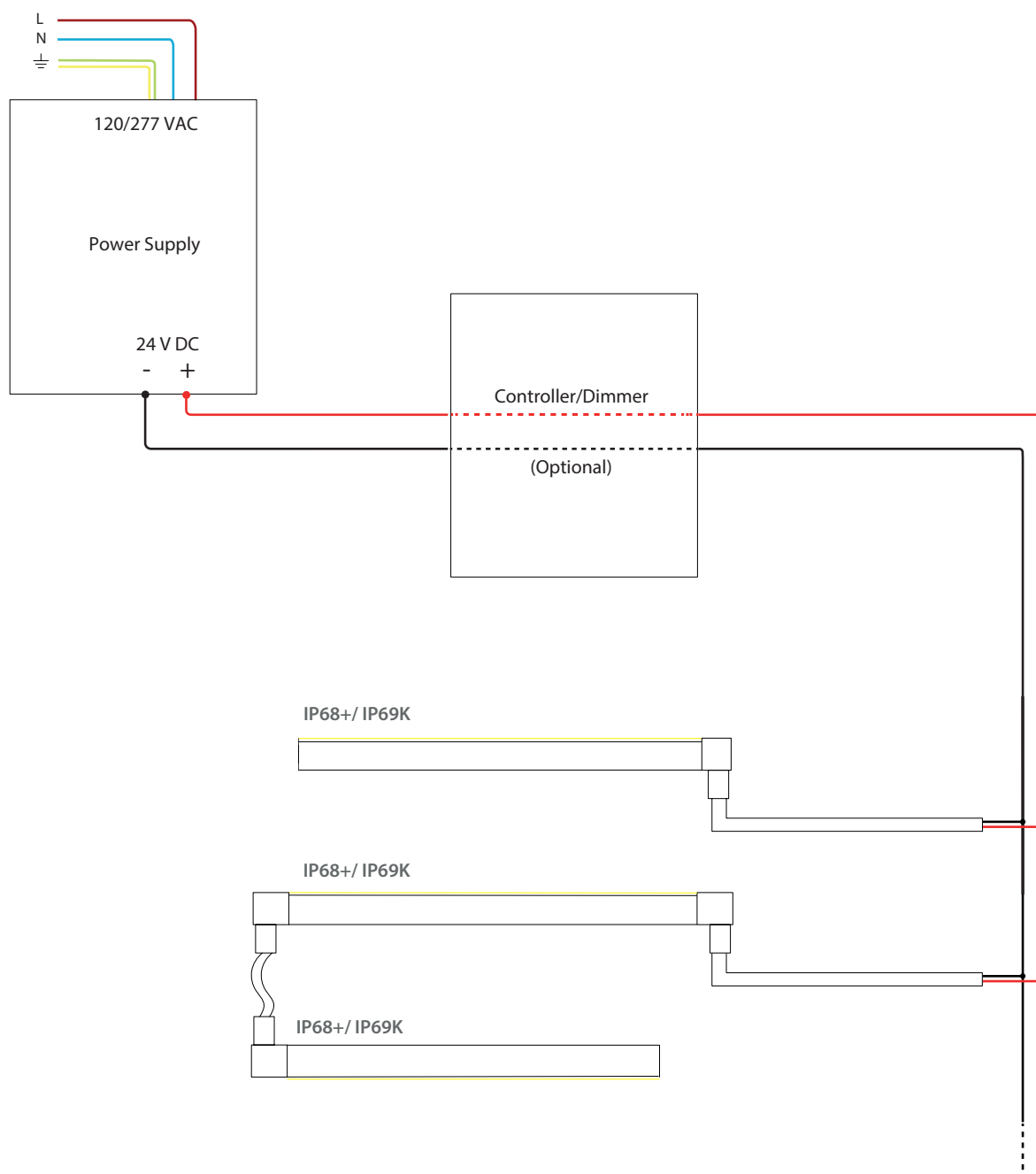


OrgaLED<sup>®</sup> Diffuse Connector Male/Female ½"



For more information about the OrgaLED<sup>®</sup> Top Diffuse ½" Connectors see the Datasheet of the OrgaLED<sup>®</sup> Diffuse Connectors.

## Power & Connection Diagram



## Power Supply - 24V DC

To calculate the power consumption of a single length of LED strip, use the equation below.

$$P_{STRIP} = W_{WATTS} \times X_{LENGTH} \times 110\%$$

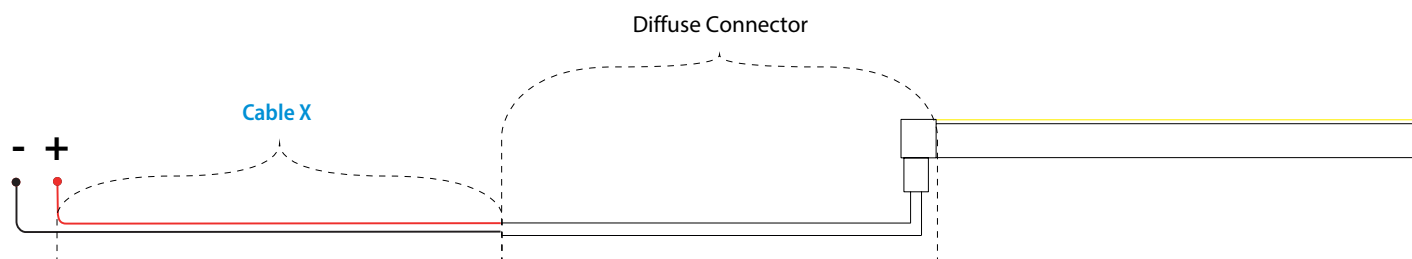
$P_{STRIP}$	Calculated power consumption of one LED strip in Watt
$W_{WATTS}$	Typical power consumption in Watt per foot of the selected LED strip This value can be found under 'Product characteristics' on page 2
$X_{LENGTH}$	Length of the connected LED strip in feet
110%	Safety margin to buffer differences over all production batches

## Cable Selection

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 and power supply voltage. The connection between the cable and LED strip is with a cable length of 3.28 ft.

In case the required length is larger than the length mentioned in this table, the supply voltage is different or if a detailed wire plan with branches is planned, please contact your distributor for a detailed cable calculation.

Wire Gauge	LED strip	Max. <b>cable x</b> length	
		@ 24 V DC	@ 25V DC
<b>20 AWG x 2</b>	3.28 ft	110.00 ft	215.12 ft
	16.4 ft	18.63 ft	39.63 ft
	32.8 ft	7.18 ft	17.71 ft
<b>18 AWG x 2</b>	3.28 ft	165.51 ft	323.62 ft
	16.4 ft	28.01 ft	59.64 ft
	32.8 ft	10.82 ft	26.64 ft
<b>16 AWG x 2</b>	3.28 ft	331.03 ft	647.24 ft
	16.4 ft	56.03 ft	119.29 ft
	32.8 ft	21.68 ft	53.31 ft
<b>14 AWG x 2</b>	3.28 ft	550.91 ft	1077.19 ft
	16.4 ft	93.30 ft	198.55 ft
	32.8 ft	36.08 ft	88.71 ft



## Symbols

-  UL is a world leader in product safety testing and certification. UL sets standards and tests products to make sure they meet standards.
-  The ETL Listed mark indicates that your product has been tested by Intertek and found in compliance with accepted UL standards.
-  Electro Static Discharge (ESD) sensitive device, apply standard ESD precautions when handling the product.
-  Manufacturer's declaration that the product meets the applicable EC directives.
-  Suitable for mounting on all surfaces and suitable to cover with insulating material.
-  Restriction of Hazardous Substances (RoHS): product complies with the RoHS directive and each homogeneous material does not exceed the limits for the materials mentioned under the RoHS directive (Pb, Hg, Cd, Cr6+, PBB and PBDE).
-  This product can be both IP40 and IP68 depending on the configuration and application. See the documentation for the exact IP rating.
-  Bending of the LED strip is possible with a radius of  $\geq 5.9$  inches in the specified direction.
-  Electrical appliance class III: this product is designed to be supplied from an extra-low voltage ( $\leq 60.0$  V DC or  $\leq 42.4$  V AC).
-  System guarantee of 5 years when the complete system consist of OrgaLED® products with the 5 year system warranty logo.
-  Product is resistant against ultraviolet (UV) light or sunlight. Non-UV resistant products can degrade or discolor fast when exposed to UV.
-  Product can be cleaned with normal cleaning agents as specified in the datasheet under 'chemical compliances.'
-  This product can be stored and used below 32 degrees Fahrenheit. Verify the minimum storage and operation temperature in the datasheet for the lowest temperature allowed.
-  This product can be applied in seawater and its environment. Elements in seawater will have no harmful effect on the product. For chemical specifications see datasheet. Verify the IP rating for proper use.
-  This product can be applied inside swimming pool environments. Elements in the air will have no harmful effect on the product. For chemical specifications of these elements see datasheet. Verify the IP rating for proper use.
-  This product is available on request and can be submerged n swimming pools and their environments. Disinfectants will have no harmful effect on product. For chemical specifications of these elements see datasheet. Verify the IP rating for proper use.
-  The CRI value of this product is 80 or higher.
-  The binning tolerance of this product is 2 MacAdam.

## Disclaimer

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