## **DL-AC-FLEX** "INFINATM" Indoor/Outdoor LED Strip

#### What is it used for?

The simple answer to that question today is "almost anything".

JESCO Lighting was one of the first lighting companies to bring LED light strips to the US market – we originally intended it to be used for display cases and also for cove lighting. Today the INFINA™, DL-AC-FLEX, LED light strip is changing market once again. INFINA™ is used for a million applications – anything where a small and very bright source of light is needed. The most common uses remain under/above cabinet, cove and display case illumination. INFINA™ can be used both indoors and out. If you have an idea for a novel lighting use, this product line will allow you to achieve it.

#### What is unique about it?

The important differences between JESCO INFINA<sup>TM</sup> and other similar-looking products are as follows:

- 1) No Remote Drivers INFINA<sup>TM</sup> is powered by 120V (line voltage) and does not need a remote driver. No in-line or remote drivers mean that the weakest link in the LED system is eliminated guaranteeing a true 50,000 hour lifetime. No remote drivers also mean lower upfront costs, lower installation and labor costs, and lower maintenance costs. The longer the run, the greater the savings.
- 2) **Up to 150' Runs** Just one outlet can power a run 150' long without any additional power supply or amplifiers required.
- 3) **Plug in to power** To power INFINA™ just plug the polarized plug into an outlet. To dim it, connect that outlet to an Electronic Low Voltage dimmer. Simple connections and dimming.
- 4) **ETL listing** INFINA<sup>TM</sup> is ETL listed for indoor and outdoor applications.
- 5) **Technology** INFINA<sup>TM</sup> has high performance, LED drivers chips locally mounted, board-mounted to the strip which means that each LED is carefully supervised by its own LED driver. This method ensures consistent operation and longevity combined with immunity to local power supply fluctuation and power distribution shortcomings a JESCO innovation unmatched in the industry.

Reliable, sophisticated, and installation-friendly. All of which add up to a turnkey product line that remains the industry leader today.

#### Can I dim it?

Can I connect it to my building control system?

Yes. INFINA<sup>TM</sup> smoothly dims with standard electronic low voltage dimmers. Refer to the <u>specification</u> sheet for recommended dimmers.

From the very simplest knob mounted under a counter through to interfacing with complex energy management systems JESCO has a solution – contact <u>JESCO customer service</u> for assistance with your next lighting control specification.

#### What is the standard operating voltage for the INFINA<sup>TM</sup>?

120 volts AC is the standard operating voltage for the product line.

To power  $\mbox{INFINA}^{\mbox{\scriptsize TM}}$  just plug the polarized plug into an outlet.

#### What is the maximum run length possible using INFINA<sup>TM</sup>?

The maximum continuous installed run length is 150 feet per each home run to a power supply.

#### Is there a minimum installed run length for the INFINA™ series?

4" is the minimum length that can be purchased from JESCO.

## Can I cut the INFINA<sup>TM</sup> tape?

What can I do if I need less than a standard 12" segment to complete a run?

INFINA<sup>TM</sup> is sold by the foot. The light strip is custom cut to-order in increments of 4". Your entire selection is custom cut, connected and sealed with water proof and UV stable silicone in our factory and delivered to you ready to install.

# How can I connect lengths around obstacles? Do you have a jumper cable?

To get around obstacles we offer flexible connecting cables in lengths of 3", 6", 12" and 24" (<u>DL-AC-FLEX-CCx</u>). Connectors are typically used to create unlit sections and/or to jump power around obstacles. All the connectors are pre-installed and siliconed in our factory then delivered to you ready to install.

#### How do I mount the INFINATM?

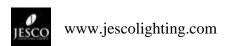
The DL-AC-FLEX can be mounted using mounting clips ( $\underline{DL\text{-}AC\text{-}FLEX\text{-}MC}$ ) or field cuttable channels in 4' or 8' lengths ( $\underline{DL\text{-}AC\text{-}FLEX\text{-}CHx}$ ). Both are plastic with UV inhibitors. The INFINA<sup>TM</sup> is designed to simply snap into the mounting clips or channels. For more information reference the <u>Instruction Sheet</u>. Note: we recommend that channels be used when mounting the INFINA in a face down application.

## Can I bend the INFINATM when mounting it?

Yes you can. The flexible strip can be bent to most curved surfaces. For bends of 90° or more, the bends should be done at the cutting marks (found at each 4" increment) so as to not affect the LED chip.

## Is the INFINA™ waterproof?

Yes. The DL-AC-FLEX is ETL listed and can be used indoors or out. *Please note that INFINA is not submersible and not intended for applications where water can puddle or the product can be covered by snow.* 



#### How do I order the INFINA™?

Ordering the INFINA<sup>TM</sup> is simple.

- 1) Determine the length or lengths needed INFINA<sup>TM</sup> is sold by the foot. The light strip is custom cut to-order in increments of 4".
- 2) Select the Mounting Option either a 4' or 8' clear, snap-in <u>Channel</u> (which can be field cut) or individual <u>'U' clips</u>. Both are plastic with UV inhibitors. We recommend that channels be used when mounting the INFINA<sup>TM</sup> in a face down application.
- 3) Select the Termination Options for each end either a 2' or 6' plug-in <u>Power Plug cable</u> or <u>End cap</u> to finish runs. For runs over 75' select the DL-AC-FLEX-100-PC2 power plug cable. Note, the Power Plug cable has an in-line surge protector that cannot be removed from the system.

If your application requires bends around corners or needs to get around obtrusions, we offer <u>Connecting Cables</u> in lengths of 3", 6", 12" and 24".

Your entire selection is cut, connected and sealed with water proof and UV stable silicone in our factory and delivered to you ready to install.

#### What are the different color temperatures of the INFINA<sup>TM</sup>?

We offer INFINATM in Kelvin color temperatures of 2700°K, 3000°K, 4000°K.

The lower the color temperature the warmer the color - 2700°K is considered warm white and 4000°K is considered cool white.

For other color temperatures contact our factory for details.

## Can I plug the INFINA™ directly in to a standard 120V US outlet?

To power INFINA<sup>TM</sup> just plug the polarized plug into an outlet. To dim it, connect that outlet to an Electronic Low Voltage dimmer. Simple connections and simple dimming.

## Do you offer a hardwire version of the INFINA™?

The UL approved Hardwire version will be available in January 2015.

## Can I cut the surge protector off the Power Plug Cable?

No, the surge protector is required to protect the INFINA<sup>TM</sup> for long lasting use. Reference the <u>Instruction Sheet</u> for further electrical questions.

#### What type of LEDs are used in the INFINA<sup>TM</sup>?

INFINA™, powered by MagLED, provides an ultra-high output of up to 555 lumens or 112 lumens/watt using only 4.95W/foot.

Incorporating 3-Step MacAdam LEDs matched with our patent pending Constant Current IC design provides consistent color output and intensity across the entire run while the refined binning process provides precise matching of color temperatures between multiple production batches.

Even higher lumen outputs up to 1000 are also an option - call our factory for details.

#### What are the recommended applications for the INFINA<sup>TM</sup>?

Recommended applications for the INFINA<sup>TM</sup> series include coves, display cases, offices stores and restaurant, architectural features, corporate showrooms and exhibition display, residential shelves and counters, accenting point of purchase display, signage applications, backlighting of glass and acrylic panels or cut out forms, lighting toe-kick areas, undercabinet task lighting, under roof eaves or deck rails. INFINA<sup>TM</sup> can be used indoors or out. *Please note that INFINA is not submersible and not intended for applications where water can puddle or the product can be covered by snow.* 

## How long do your LEDs last?

JESCO LEDs in the DL-AC-FLEX family are designed to meet or exceed a Rated Lumen Maintenance Life or  $L_{70}$  of 50,000 hours (Meaning the LEDs will maintain at least 70% of their original light output after the fixture has been on for 50,000 hours). No in-line or remote drivers mean that the weakest link in the LED system is eliminated guaranteeing a truly long lifetime.

That being said, exceeding the operating temperature values may damage the LEDs by reducing the lifespan, lumen output, and/or adversely impact color consistency. It is recommended that adequate airflow and heat sinking be taken into consideration in the installation and application of this product. Improper thermal management may lead to premature product failure and void the warranty. See the product specification sheets for more information.

## Do the colors of your LEDs vary?

All our LEDs are designed to maintain their color over time and across the maximum length of a run.

Incorporating 3-Step MacAdam LEDs matched with our patent pending Constant Current IC design provides consistent color output and intensity across the entire run while the refined binning process provides precise matching of color temperatures between multiple production batches.

INFINA<sup>TM</sup> has high performance, LED drivers chips locally mounted, board-mounted to the strip which means that each LED is carefully supervised by its own LED driver. This method ensures consistent operation and longevity combined with immunity to local power supply fluctuation and power distribution shortcomings – a JESCO innovation unmatched in the industry.

#### Why choose LED over any other type of lighting?

LEDs have caused a revolution in lighting. JESCO has helped lead that revolution. We were one of the first manufacturers to make the shift to the LED light source many years ago. Our LEDs are of the highest quality and they are time-tested to be dependable.

There are many reasons to make the switch to LED products. Some of the reasons include:

#### Technological Impact

LEDs are solid state, light emitting chips that are not encased in fragile glass enclosures or use delicate and inefficient filaments. LEDs are vibration resistant. They also do not need to warm up as they are an instant-on light source. LEDs currently offer life expectancy of 50,000 hours, on average. LEDs offer much more control of correlated color temperatures and provide the option to add color(s) either monochromatically or through RGB technology. The chips are miniscule in size which allows manufacturers to design much smaller fixtures and allows designers and end users much greater flexibility incorporating and installing these fixtures on their projects.

#### Financial Impact

The long life expectancy means a higher rate of return on investment – installed fixtures can last, at least, 10 years (depending on the design, the lifespan of the power source and the duty cycle of the fixture) with no maintenance. No maintenance means no labor costs and no replacement lamp costs associated with installed fixtures and lamps over the life of the fixture. Fixtures mounted in high or hard-to-reach locations are the prime candidates for LED lighting. LEDs are very efficient light sources and are cool to the touch unlike incandescent light sources which release 90% of their energy generated as heat. Due to the inherent cooler running temperatures of LEDs, HVAC system design loads can be scaled down. LEDs use much less energy per fixture than standard light sources guaranteeing savings in electrical costs far into the future. Lastly, many local energy providers are currently offering rebates to customers making the switch to LED fixtures.

#### **Environmental Impact**

LEDs are easily recyclable. They contain no mercury or lead which require special handling and disposal. LEDs do no emit harmful UV/IR which discolors fabric, furniture and artwork. The U.S. Department of Energy <u>estimates</u> that rapid adoption of LED lighting in the U.S. by 2027 could deliver savings of about \$265 billion, avoid the building of 40 new power plants and reduce lighting electricity demand by 33% in 2027.

All or even one of the above stated reasons may be the right reason for you to choose a fixture with an LED light source.

The last important factor when choosing an LED fixture is scrutinizing the manufacturer of the LED chip and the incorporation of this chip into the design of the lighting fixture. As the United States EPA and DOE Energy Star program states on its website "Bad design can lead to a wide range of problems, some immediately observable and some not. Poorly designed products often come with exaggerated claims while failing to deliver on the quality specifications provided." Our LED products are designed around the LED light source and not the other way around making for a well-designed, color consistent and extra long-life fixture with a proven track record. With all our LED products, JESCO offers layout assistance and technical support helping make specification, as well as installation, simple.

Therefore, always look for reputable and trusted sources of LEDs and LED fixtures - be it JESCO Lighting or anyone else.

