



TRANSCEND LIGHTING

TECHNOLOGY FOR A BETTER WORLD

LED LIGHTING FROM A PROVEN TECHNOLOGY LEADER

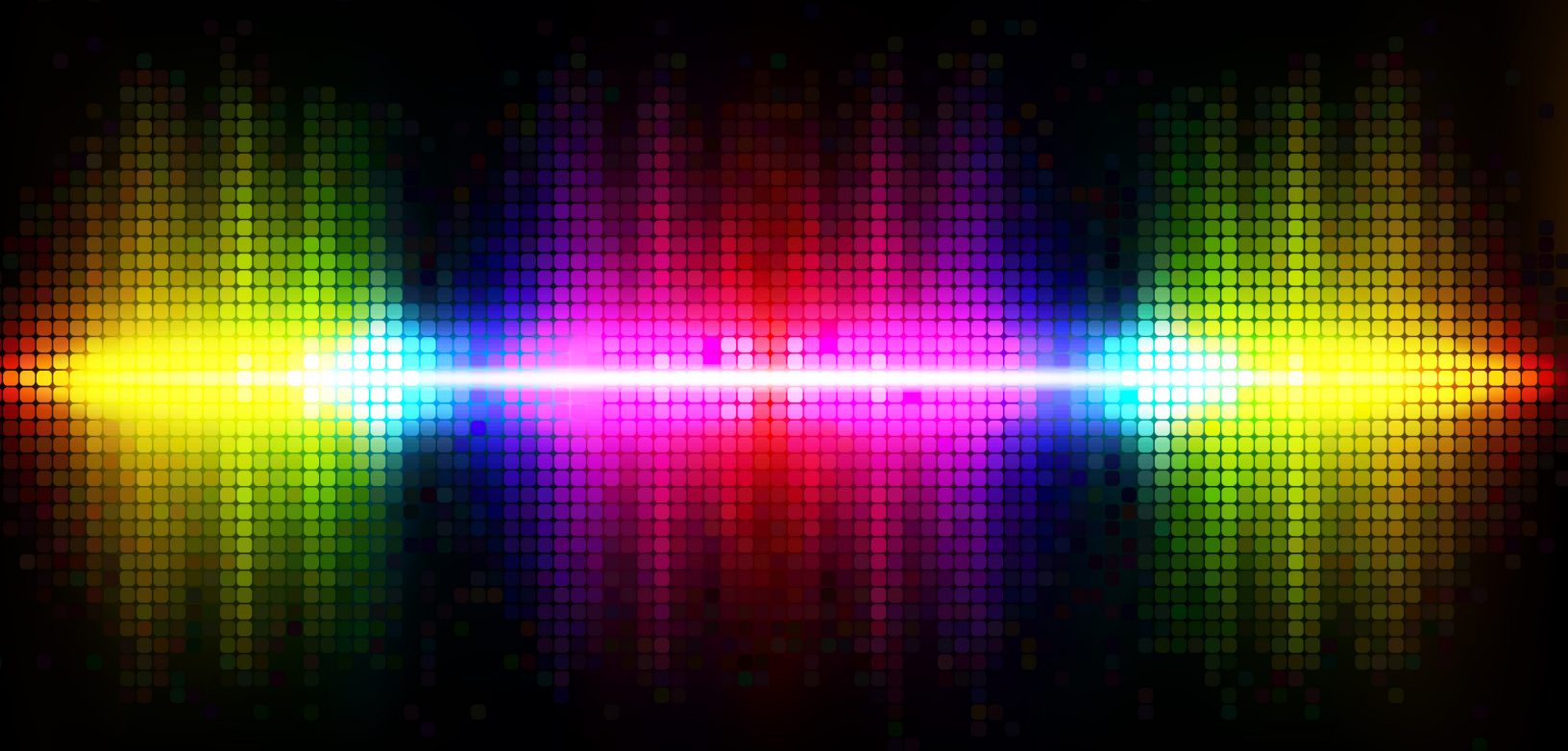
Transcend Lighting is a mission driven **technology company** working to make indoor agriculture more sustainable. We are committed to designing and manufacturing the highest performance and most reliable LED lighting products to enable efficient and profitable indoor farming.

All of our products are designed and **manufactured in the USA** and we actively invest in our employees and communities. We take pride in knowing that our products aren't part of an opaque supply chain with questionable impact on the environment and human rights.

As a technology company we have a rapidly expanding portfolio of **intellectual property**. All of our products use proprietary LED phosphor technology to efficiently and precisely emit photosynthetic light to optimize plant growth and crop yield.

We are a **venture capital backed company**, supported by premier investors including the world-renowned Silicon Valley incubator, Y-Combinator. With the support of our investors and partners we have already helped save millions of watts of energy.

We are excited to help shape a world where sustainable indoor agriculture is a thing of the present.



Simple bulb swap – works with any T5 fluorescent fixture



SPECIFICATIONS	TRANSCEND LED T5	FLUORESCENT T5
Power Consumption	30 W	54 W
Product Lifetime	50,000 HRS	20,000 HRS
Warranty	5 YEARS	<1 YEAR
UL Listed	YES	YES
Recyclable	YES	NO
Mercury - Free	YES	NO



Plug-and-Play, direct replacement for fluorescent T5



Equivalent PAR output with 45% less energy



45% less heat reduces power consumption by HVAC



Optimized spectral output to promote plant growth

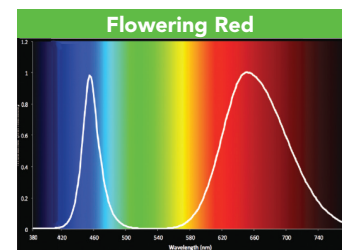
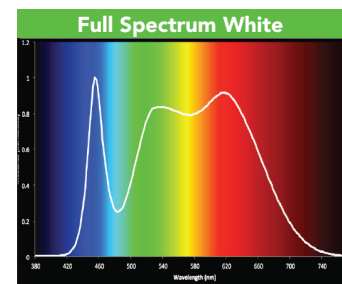


Mercury-free

Mercury – free, shatterproof



Designed and manufactured in USA with 5-year warranty



Institute Of Culinary Education

LED Direct Replacement T5



TRANSCEND LIGHTING LED T5 lamp

When the Institute of Culinary Education in New York City decided to convert to LED grow lights, they chose **Transcend Lighting's LED T5 lamp**.

Not only is there a big savings in electricity usage, and a much longer lifetime, but the optimized spectrum from the LED lamp had a profound impact on food quality.

"The red cultivars are showing much more red coloring than they did under the fluorescents. To me, this indicates the LED lamp is putting out more useful light." – **David Goldstein, Hydroponicist**



THE CHALLENGE

The Institute of Culinary Education (ICE) was looking to increase system efficiency and increase the quality of their lighting system.

THE SOLUTION

Transcend Lighting and Boswyck Farms installed 120 single lamp Sunblaster T5 high output fixtures and replaced 54W fluorescent T5 lamps with full spectrum 30W LED T5 LED lamps. The TL-T5HO-FSW were easily installed without any rewiring.

THE RESULT

Light levels increased and energy consumption was reduced by 45% resulting in 2.9kW demand reduction and over 16,000 kWh saved per year. New York City electricity costs \$0.24 per kWh yielding over \$4,000 savings per year. Simple payback occurs in less than 18 months. Total 5-year savings projected over \$120 per lamp and total 5-year project return-on-investment over \$14,000.

MJardin Analysis of Transcend Lighting's T5 LED

BACKGROUND

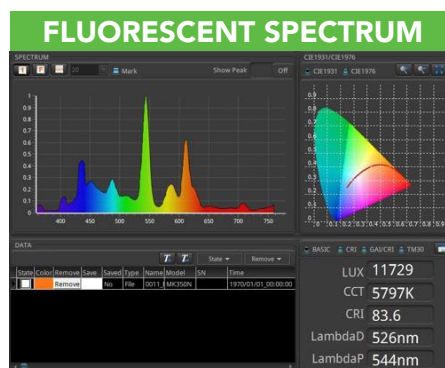
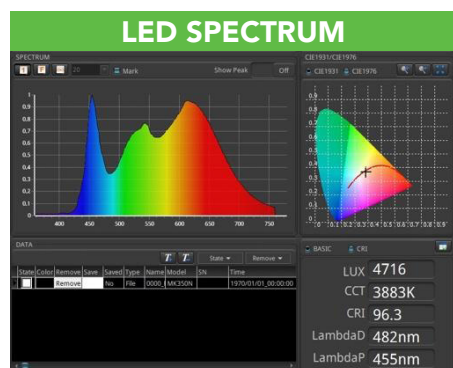
MJardin investigated the performance of Transcend Lighting's T5 LED lamp to determine suitability as a 1:1 replacement of high output fluorescent lamps for cannabis production. MJardin is a professional management company that provides select cannabis businesses across the U.S. with turnkey cultivation services.

EXPERIMENTAL SETUP

Transcend Lighting's 30W T5 LED tubes were installed in a 40-day controlled experiment alongside traditional 54W fluorescent T5 tubes in propagation areas in a medical cannabis cultivation facility located in Denver, CO. Plant performance and rooting rates were measured to quantify any differences between the lighting technologies.

Parameter	LED	Fluorescent	Units
Electrical	30	54	Watts
Light Intensity	100-120	80-100*	umoles m ⁻² s ⁻¹
Time to First Root	4-5	5-6	Days
Time to Full Root	Similar	Similar	Days
Root Structure	Similar	Similar	
Cutting Health	Similar	Similar	

*Note: Lower light intensity of the fluorescent lamp may have resulted from early lumen depreciation.



"The Transcend LED T5 tube is an excellent option for several applications. It is a great solution for situations where there is very little mounting height for other lighting technologies to get proper spread and uniformity. Another great benefit is the ease of installation. Fixture removal, electrical work, and other infrastructure modifications are not necessary, which helps avoid many of the renovation costs typically associated with the installation of efficient lighting technologies."

- Ben Franz,
Director of Research & Development, MJardin

Customers / Partners

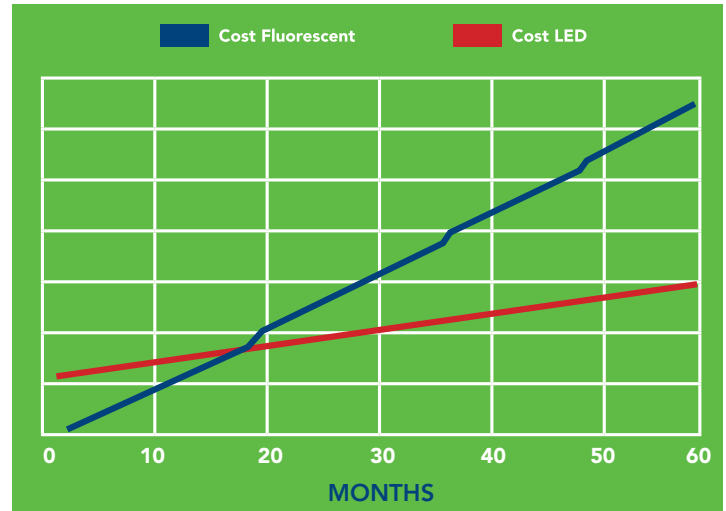


"Euroquatics and Gavita are excited to be partnering with the team at Transcend Lighting"

LED T5 - The Lowest Total Cost

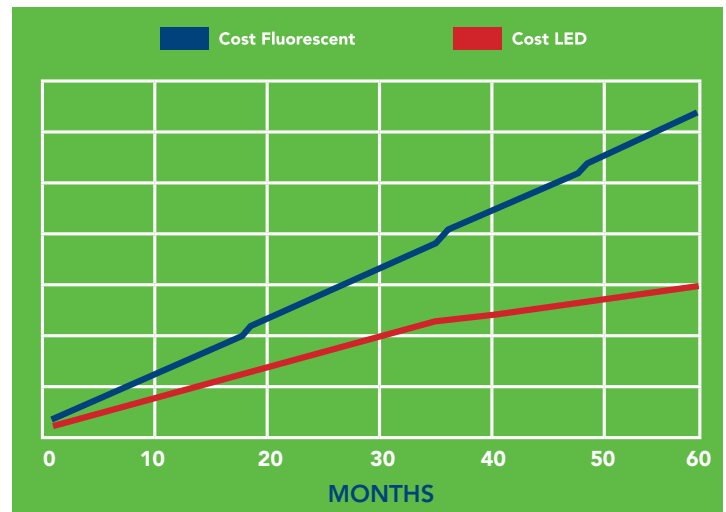
Cost of Energy

Although LED lighting has a higher up front cost, the cost savings from lower electric bills are far greater. Not only do our customers save 45% on their energy bills for lighting, but the reduced heat load results in substantial HVAC energy & cost savings. Typical payback is 9-18 months.

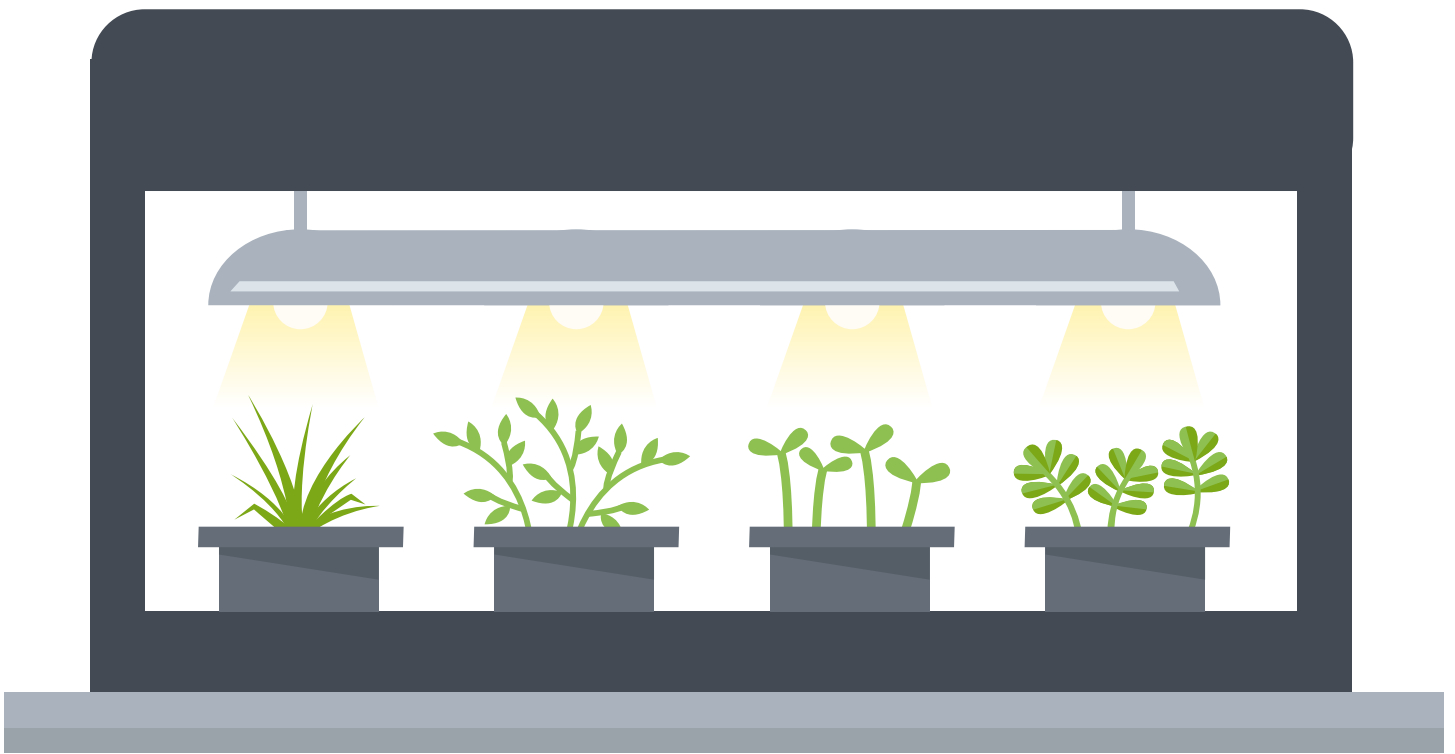


Cash Flow Positive from Day 1

The LED lighting revolution is upon us, but LED solutions typically have higher up-front cost. We have partnered with Noesis Energy to provide financing options for our customers. We are able to finance lighting projects up to and beyond \$5 million. By financing the up-front cost, we enable positive cash generating projects from Day 1.



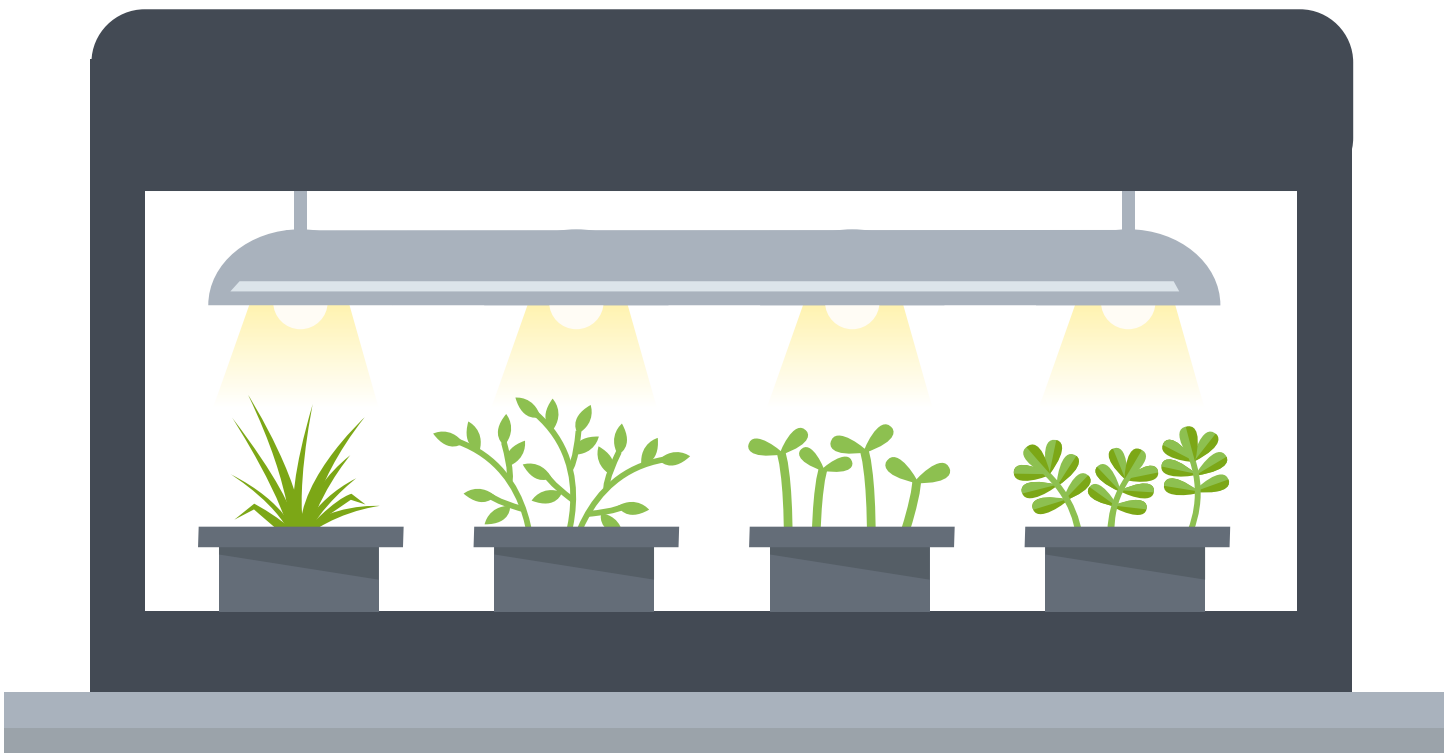
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