A New Era of Lighting

The most efficient lights ever created

Sustainable & Efficient Lighting Solutions
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- **About our Lights**: A brief overview of our 3 core technologies
- **What makes our lights special?**: Behind our revolutionary AC powered & ballastless lights
- **Nano Optics Technology**: The benefits and why it saves
- **Cooling System**: An introduction to our heat distribution design
- **More Luxe for Less Wattage**: A comparison on the luxe vs wattage usage
- **Creating Savings**: Reviewing the many ways our lights save
- **Longer Lifespan**: A little behind our certifications and tests
- **Used Around The World**: Where our lights can be currently found
- **True Cost of Maintenance**: Reviewing the massive benefits from reduced maintenance costs
- **Product Line**: Lighting solutions we offer & some we are working on
- **Comparing to Other LED’s**: Side by side comparison to other LED lights
AC DOB is an LED lighting manufacturer that specializes in the production of the most advanced and efficient lights ever created.

THE NEXT BIG THING IN LIGHTING IS HERE

For the past 11 years, our scientists & engineers have worked tirelessly to create the most efficient lights ever developed. They are truly a revolution in not only the lighting, but the entire electric industry. They are certified, used worldwide and have surpassed testing standards that NO OTHER LIGHTS in history have passed before.

3 CORE TECHNOLOGIES

1. Our ACDOB technology allows our lights to function without a ballast/driver creating massive savings in maintenance and energy while expanding life span.

2. Using Nano optics developed in the camera industry, we can control the distribution of light.

3. We have created a proprietary cooling system that allows us to keep heat and energy usage low without the need for a large fixture or housing unit.

A REVOLUTIONARY PRODUCT THAT CREATES SAVINGS IN MANY WAYS

It's no secret that LED lights are by far the most efficient light source ever created, but to run directly on AC changes everything.

In some cases, saving up to a ridiculous 95% in operational costs.

LIGHTS THAT DON'T JUST SAVE, THEY PROVIDE A POSITIVE ROI

The benefits from the advancements in our technology are impossible to ignore when making a decision regarding lighting.

Typical outlook on the savings created with our lights

Substantial savings are made when maintenance costs are factored in along with energy savings.

<table>
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<th>Current Cost to Operate Lights</th>
<th>Cost to Operate ACDOB LED Lights</th>
<th>Amount redirected back to you</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Blue</td>
<td>Green</td>
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LED technology has drastically changed the worldwide lighting industry. The energy savings have proven to be massive but until now, the lights were still very flawed.

With ACDOB technology, we have finally eliminated the most expensive aspect of other LED lights... and it’s not the energy consumption.

While LED lights are known to save up to 85% in energy usage, they still require a ballast/driver/transformer to function. This component is not unique to LED’s and for the last 140 years, they have been required by ALL LIGHTS to function. They come in many shapes and sizes depending on the light but the one thing that’s constant about them is that they don’t last very long.

Most maintenance and lighting engineers will tell you that the ballast or driver replacement costs far outweigh the energy savings.

Some bulbs might indeed last 10 years, but the maintenance required to constantly change this required component keeps ongoing operating expenses very high. ACDOB technology eliminates the components that fail and require ongoing replacement. Our patented and innovative engineering breakthroughs enable us to offer LED lights that are certified for at least 13 years WITHOUT the need for maintenance.

Most high-pressure sodium lamps and current LED solutions utilize some type of mirroring system to redistribute and spread light. This system creates a lot of heat causing energy bills to spike.

Our lights use an optical lens technology, engineered by the same team that created the lenses for the Samsung Galaxy smart phone. This lens technology allows us to use a magnification effect for redistributing light. This uses much less energy, stays much cooler and allows our lights to last much longer than their contemporaries.

Control the Heat = Control the Energy

**SAVING ENERGY**

**NANO OPTICS LENS TECHNOLOGY**

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**COMPARING OPERATING COSTS**

This includes energy usage in addition to the maintenance required for upkeep for comparable street lights.
A BETTER SOLUTION FOR HEAT DISTRIBUTION

Our state-of-the-art designed aluminum alloy housing allows heat to be distributed on a much smaller surface than other LED lights. This, in turn allows a much more compact size while keeping a much cooler product.

A SAFER ENVIRONMENT

ACDOB provides brighter, highly controlled lighting that creates safer streets, sidewalks, parking lots, garages, alleys and work environments. Our breakthrough lens technology can focus the light and distribute it evenly while eliminating dark spots known in the industry as the zebra effect.

Many communities are concerned about unintended light pollution caused by typical LED deployments. Our lens technology directs light to improve safety without the typical “bleed” into unintended areas.

MUCH MORE LUXE FOR LESS WATTAGE

For one project, we replaced 175-watt metal halides that were creating 17 lux with 60 watts that produced 150 lux all while using 2/3 the amount of lights.

This isn’t a special case nor is it rare. In fact, these savings in energy while increasing the brightness is the norm for all ACDOB lights.

175 watts vs 60 watts

17

150

Amount of Luxe
CREATING MASSIVE SAVINGS

ACDOB lights save time and money while lasting longer and being more efficient. They also don’t discolor over time and maintain the same luminosity, while others lose about 20% their first 6 months.

No Ballast/Driver
Eliminates maintenance costs while saving energy.

Nano Optic Lens Technology
Controls light distribution while eliminating heat/energy created with mirrors.

Cooling System
Our state of the art heat sink design allows for better heat distribution.

More Efficient
Our lights are more efficient than our competitors in almost every relevant category (see below).

Certified for 13 years
Our lights last longer, need less replacement and are more durable than modern lights.

CERTIFIED FOR 13 YEARS

ACDOB lights are certified to last at least 50,000 hours, or 13.7 years, when used 10 hours per day.

- LM-80
- IP-67
- Wind Test: 175 miles/hour - PASSED
- Salt Test: PASSED
- UL Certified
- US Patented
- CE Certified
- Many more

*EXPLAINING THE LM-80 EVALUATION

The LM-80 is a conditions exam created to test a single diode of an LED light among different temperatures, moisture and humidity. While these certifications are awarded based on whether or not the individual diode survives, no light has ever been able to pass the test for all of its components, except ours. The combination of no ballast/driver and an IP-67 rating allows our lights to survive some of the harshest conditions.
LIGHTS IN USE AROUND THE WORLD

Our lights are currently being used worldwide and fitted for many different voltage requirements that is unique to each country.

60+ CERTIFICATIONS

We have over 60 certifications including the standard requirements for the United States, Korea, Japan, Europe, Colombia, Mexico, Saudi Arabia and more.
THE TRUE COST OF MAINTENANCE

Maintenance is usually an afterthought when it comes to purchasing LED lights. The emphasis is usually on the energy savings which can save up to $90 per light, every year when switching to LED. The cost of servicing the lights however, can be as high as $450 per light every year.

ENERGY SAVINGS vs MAINTENANCE SAVINGS

The maintenance savings can be up to 6 times as much as the energy savings.

SERVICING & MAINTENANCE COMPLAINTS

According to a recent survey, the reason for failure in LED lighting is the ballast/driver and housing unit. With our ACDOB technology, we have solved these two crucial issues while substantially reducing the collateral effects that cause the other two to fail.

<table>
<thead>
<tr>
<th>Component</th>
<th>Failure Rate</th>
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<tbody>
<tr>
<td>Ballast/Driver</td>
<td>52 %</td>
</tr>
<tr>
<td>Housing Unit</td>
<td>31 %</td>
</tr>
<tr>
<td>Control Circuit</td>
<td>7 %</td>
</tr>
<tr>
<td>LED Diodes</td>
<td>10 %</td>
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LIGHTING SOLUTIONS & PRODUCTS

- Street Lights
- Parking Lot Lights
- Parking Garage Lights
- High Bay
- ACDOB Smart System
- Stadium Lighting (Coming Soon)
- Explosion Proof Lights (Coming Soon)
Comparing to other LED STREET LIGHTS

PHILLIPS
180W
WEIGHT: 27 LBS

BALLAST/DRIER - REQUIRES MAINTENANCE

ACDOB
135W
WEIGHT: 6 LBS

NO BALLAST/DRIER - REQUIRES NO MAINTENANCE

AC DOB LED
VS
Current LED

Difference with Existing LED Street Lights

<table>
<thead>
<tr>
<th>Using a Ballast or SMPS</th>
<th>Lifespan with Certification (LM-80)</th>
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<tbody>
<tr>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>More than 50,000 hours</td>
<td>Less than 30,000 hours</td>
</tr>
<tr>
<td>(With LM-80 test)</td>
<td>(Without LM-80 test)</td>
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Weight comparison of a 90w Light

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<tr>
<th>5 Lbs (Lightest worldwide)</th>
<th>18 Lbs or Greater</th>
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Replacement for 250w Metal Halide

<table>
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<tr>
<th>90w</th>
<th>120w</th>
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Dimming System

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<tr>
<th>YES</th>
<th>NO</th>
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iP Class (Degree of Protection against contact, water, dust, etc.)

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<tr>
<th>IP-67</th>
<th>Nothing or less than IP-65</th>
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Efficiency (Amount of Lumens per Watt)

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<tr>
<th>120 lm/w</th>
<th>Less than 100 lm/w</th>
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Consistent Working Temperature

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<th>-45°F to 158°F</th>
<th>-4°F to 86°F</th>
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Power Factor (Amount of power used on the light itself)

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<th>99.4%</th>
<th>75% - 80%</th>
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Installation Time

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<th>5 minutes</th>
<th>More than 30 minutes</th>
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What the Father of LED lighting & Nobel Prize winning physicist says

ABOUT AC DOB TECHNOLOGY

Professor Nakamura Shuji of Santa Barbara University in California, who is also called the father of LED for his creation of blue LED, said that "AC DOB can be an alternative to make LED lights more compact, efficient and affordable." He also mentioned that "AC DOB is creating a lot of interest from many people."

Professor Nakamura explained that "Generally, LED lights use a different current (DC), and to change DC to AC, you would need to have a separate part called a converter but from the very beginning, AC based LED has not needed this component. The overall light is also simplified for compact design while improving the efficiency."

He also added that "The LED module size can also be reduced" and that "production costs can be lowered."

The professor stated that instead of building heterogeneous LED's upon a sapphire board, homogeneous layer filling technology would become a mainstream in the future. and argued that because of this, a gallium nitride board presents infinite possibilities and will be broadly used in many different applications.

"AC DOB technology can be an alternative to make LED lights more compact, efficient & affordable"

- Nakamura Shuji
  2014 Winner of Nobel Prize for Physics

Our company’s vision is to deliver a more efficient lighting solution that eliminates unnecessary costs, and challenges the status quo of technical standards.

Our technology was developed in South Korea and the company’s global headquarters is in Miami, Florida.

If you have any questions about a potential lighting project, please call us at 1-786-870-4172 or email us at info@acdob.com

ACDOB LED
1628 NW 82nd Avenue, Doral, FL 33126