

EXTERIOR Lighting and Signage FAQ

We have compiled a list of Frequently Asked Questions below that will help you understand the basics of upgrading to LED.

1. What are the components of traditional exterior lighting and signage?

Traditional exterior lighting and signage are generally comprised of 3 major components:

- Mercury filled fluorescent tubes or Sodium or Metal Halide lamps.
- A magnetic ballast that regulates voltage to the tubes or lamps and assists with tube and lamp start up.
- Fixture or sign housing containing the tubes or lamps, the ballast and any glass or plastic lensing.

2. Why should I upgrade my fluorescent tubes?

A fluorescent tube uses 8-13 Watts/ft. When retrofitted, it can use as little as 2 Watts/ft.

A fluorescent lamp is a low-pressure mercury-vapor gas-discharge lamp that uses fluorescence to produce visible light. When broken the mercury can cause environmental damage. Relight ensures proper disposal of all lamps, ballasts and housings.

3. Why should I upgrade my existing wall packs?

A traditional wall pack uses 150-400 Watts. When retrofitted, they can use as little as 50-150 Watts.

Another drawback to traditional wall packs is the warm up time. Some lights take 10-15 minutes to fully illuminate. LEDs have instant on/off capability.

Traditional wall packs are also expensive to maintain and much of the energy they produce is wasted as heat. Their lamps also include gases hazardous to the environment when broken or disposed of improperly.



4. What is a Ballast?

A ballast is a type of electrical power regulator used in fluorescent light systems. Magnetic ballasts are essentially an electromagnet housed inside a box where the electrical current is channeled into a single induction coil to power a lamp.

5. What are the benefits of converting to LED?

- An immediate reduction in your electricity bill.
- Less heat. LED fixtures are extremely efficient converting electricity into light.
- LED's last a very long time, typically 50,000 to 100,000 hours.
- LED's produce a uniform stable light in any colour and will not flicker or dim in colder weather
- LED's are virtually indestructible.
- LED's do not contain mercury or other hazardous materials
- LED's are highly recyclable - with no hazardous parts, you can easily reclaim most of the parts in an environmentally safe way.
- Reduced maintenance costs. Traditional exterior lighting requires consistent tube or lamp changes as well as the need to replace ballasts regularly.

6. What sort of Energy Savings can I look forward to after retrofitting my exterior lighting?

The average traditional exterior metal halide wall pack light fixture consumes 150W of energy. The LED version of the same fixture will put out the same if not better lighting for about 50W of energy consumed. That is a savings of over 65% on the energy required to operate the fixture.

Similarly the average traditional post light fixture consumes 400W of energy. The LED version of the same fixture will put out the same if not better lighting for about 150W of energy consumed. Again, this is a savings of over 65% on the energy required to operate the fixture.

A conversion to LED will save over 65% of the energy needed to operate your fixtures after retrofit.

7. What sort of Energy Savings can I look forward to after retrofitting my signage?

We will use an example of a 20' x 3' traditional exterior sign containing traditional fluorescent lighting.

A common energy consumption used in the industry for fluorescent signage is 13W/foot. The quick math on existing energy consumption will be **20 feet x 3 Rows Of Lamps x 13W/Foot = 780W**

Using LED to retrofit the same sign will give us a new consumption rate of 2W/foot

The quick math on LED energy consumption will be **20 feet x 3 Rows Of LED x 2W/foot = 120W**

A conversion to LED will save 85% of the energy needed to operate the sign after retrofit.

8. I've heard the term 'Dark Sky Initiative' when talking about exterior lighting. What is it?

The Dark Sky Initiative is an effort made by government and non-government organizations to put into place guidelines, policies, and educative materials that will minimize light pollution. When installing or upgrading exterior lighting, the aim is to prevent light from radiating upward and outward which decrease star and sky visibility at night. Many new LED fixtures come with a Dark Sky rating enabling your retrofit to meet the new government guidelines.

9. Can I purchase and install the LED's myself?

It is strongly recommended that you contact a professional service such as Relight Solutions to handle the retrofit for you. We can handle every aspect of the retrofit from sourcing the best product, obtaining electrical permitting, installation, operational verification and environmental disposal of any waste generated.

Relight Solutions also warranties all of the work that we do. This means no worry for you as the customer if there are any defects in the product or unforeseen product failures after installation. We offer a 5 year worry free warranty on all product that we install.

We have a long track record of successful retrofits with satisfied clients throughout Canada.



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10. Will I need to be ASHREA 90.1 compliant?

Relight will ensure you are compliant on all City of Vancouver bylaws including ASHREA 90.1.

11. How can I contact Relight Solutions?

- By Phone - (604) 628-5267
- By Email - info@relightsolutions.com
- Website - www.relightsolutions.com

We would be more than happy to assist you with your retrofit project!