

The logo features the text "ANCRAM'S BRIGHT IDEA" in a bold, sans-serif font. "ANCRAM'S" is in yellow, "BRIGHT" is in white, and "IDEA" is in white with a yellow outline. The text is set against a dark teal background with a stylized white and yellow lightbulb graphic behind the word "IDEA".

ANCRAM'S BRIGHT IDEA

LED'S – Frequently Asked Questions

WHAT IS AN LED LIGHT BULB? HOW IS IT DIFFERENT THAN OTHER LIGHT BULBS? – LED is an acronym for Light Emitting Diode. It is an electronic semiconductor that produces light as electric current passes through. Comparatively, an incandescent bulb produces light through a heating process. There are many benefits to LED's, including increased energy efficiency, longer life, smaller size and more robust construction.

HOW MUCH LIGHT DOES AN LED BULB PRODUCE AS COMPARED TO MY INCANDESCENT BULB? There are many types of LED bulbs produced today, including those that are designed to replace standard incandescent bulbs. These follow a familiar pear shape form and produce the equivalent amount of light to standard incandescent bulbs. You will find on most LED bulb packaging, in the Lighting Facts label, information that clarifies how much light the LED produces (measured in lumens) as compared to incandescent.

WHAT IS LUMENS VERSES WATTS? – Lumens is the measurement of brightness that a bulb produces. Wattage is the measurement of energy consumption. We are accustomed to referring to wattage and brightness as being the same based upon our familiarity of the incandescent light bulb. This is why you commonly see on LED bulb packaging a listing of its "equivalent" incandescent wattage counterpart. Ancram's Bright Idea program is starting with 60W equivalent bulb replacements. You can also refer to the Lighting Facts for additional information.

HOW MUCH LESS ENERGY DOES AN LED USE VERSES INCANDESCENT? – LED bulbs are much more energy efficient than incandescent bulbs due to how light is produced (semi-conductor verses heating element). LED's are commonly rated as being 80% more efficient than incandescent. This means that you can replace a 100W incandescent bulb with a 20W LED bulb and it will produce the same amount of light.

HOW MUCH MONEY WILL I SAVE ON MY ENERGY BILL? – This varies greatly based upon how often you use your lights and the cost of energy from your local utility. However, the U.S. Department of Energy estimates that if you operate a single 60-watt incandescent bulb for 3 hours per day, you will save approximately \$6.00 annually if you change this to an LED bulb that produces the same amount of light but only consumes 11 watts of energy. If you consider that an LED bulb has an estimated life expectancy of over 20 years, this is \$120+ total savings over the life of each light bulb that you change to LED. An extra cost savings bonus to you is that

you're receiving free LED bulbs through Ancram's Bright Idea program. That's a great benefit to your monthly expenses.

LED BULBS HAVE DIFFERENT LIGHT APPEARANCE (SOME ARE COOL IN TONE, SOME ARE WARM). HOW DO I DETERMINE WHAT LIGHT APPEARANCE TO USE? – Light Appearance refers to the warm or cool tone of light that your bulb emits. Incandescent bulbs are considered to have very warm color, which is rated at 2700 Kelvins (K). Numbers higher than this, such as 4000K or 5000K shift to cooler tones that are commonly compared to daylight. You should consider the Light Appearance in relation to the space where you will use the bulbs. If you are using LED bulbs in your home, you should probably use 2700K bulbs so that they will produce the warm and cozy light that is consistent with incandescent bulbs. This information is listed on the bulb packaging in the Lighting Facts label.

WHAT IS COLOR RENDERING INDEX AND HOW DO I DETERMINE WHAT IS BEST FOR MY APPLICATION? - Color Rendering Index (CRI) is a qualitative rating for comparing how well light sources render color of objects. The rating is a percentage range from 0% - 100%, with 100% being the best. CRI ratings in the 80% and 90% range are typical and generally indicate the bulb is good quality. The higher the number, the better your light source will make your home look. For use in your home, we recommend 90 CRI or higher.

I LIKE THE QUALITY OF INCANDESCENT LIGHT. WILL THE LED BULB BE THE SAME? – LED bulbs will not be the same as incandescent bulbs as they produce light through very different technological processes. However, LED bulbs are produced to emulate the characteristics of incandescent light very closely. In most instances, you will not be able to tell the difference. If you desire to purchase LED bulbs close to the qualities of incandescent, you should look at the Lighting Facts to ensure that the Light Appearance is 2700K and the Color Rendering Index is at least 90 CRI.

WHERE SHOULD I FIRST INSTALL MY NEW LED BULBS SO THAT I CAN SEE IF I LIKE THEM? – We recommend that you begin with a room or series of rooms where all the lights, or at least the majority of the lights, can be changed to LED. This might include your kitchen, living room, basement, etc. This will allow you to more distinctly see the benefits of your new LED bulbs. In some instances, you might consider mixing your LED bulbs with incandescent bulbs, such as table lamps on each side of your bed. We don't recommend that you install only one LED bulb in a room that is otherwise illuminated with incandescent bulbs as this may exaggerate any slight variations of light appearance or color rendering between the technologies.

HOW LONG WILL AN LED BULB LAST? – LED's have a very long projected life. Under optimal circumstances, LED's should last more than 20 years. However, there are some situations that may cause premature failure, such as overheating. Thus, you should consider where you install your LED bulbs so that they do not overheat.

HOW MUCH WILL AN LED BULB COST? – This varies greatly upon retailers and quality of manufacturing. We recommend that you look for bulbs made by primary manufacturers such as

Cree, GE, Sylvania and Philips. LED bulbs from these manufacturers will likely cost between \$3.00 - \$10.00 each depending upon quality level and specific model. You should have good luck finding these bulbs at big box retailers, such as Home Depot, and your local hardware store.

CAN I USE THE SAME DIMMER FOR MY NEW LED BULBS THAT I'VE USED WITH MY INCANDESCENT BULBS? - This starts to get a little bit tricky. Most LED replacement bulbs sold today are compatible with your incandescent dimmers, including those offered through the Ancram's Bright Idea program. However, to be sure, you should check the packaging before you purchase your bulbs. In some instances, you may need to purchase a different dimmer. A regular switch will work fine for any light bulb.

IS THERE A PLACE WHERE I SHOULD NOT USE AN LED BULBS? – Yes, conditions where the bulb will be subject to heat for extended periods and direct contact to moisture are not good and may result in premature failure of your bulbs. This might include light fixtures that do not have ventilation holes, areas subject to high heat, such as in an exhaust hood over your stove, or exterior areas where your bulb will be directly exposed to rain. Remember that an LED bulb is a semiconductor (small computer chip). It has the same characteristics as your computer or smart phone as far as limited exposure to heat and moisture. Otherwise, you can use LED bulbs in most applications.

WILL AN LED OVERHEAT IN MY CURRENT LIGHT FIXTURE? – This should be considered when you install LED bulbs as they are sensitive to heat. You should use them in light fixtures that are open or, if enclosed, include some openness to allow air flow and natural ventilation. Most recessed, track and decorative lights that were originally designed for incandescent bulbs have adequate ventilation.

CAN I USE AN LED BULB OUTSIDE? – Yes, certainly. However, you should verify the standards on your bulb packaging. LED bulbs offered through Ancram's Bright Idea program are made for indoor applications or within exterior light fixtures that prevent the bulb from direct contact from rain. If you use the bulb within an enclosed exterior fixture, be sure that it has adequate ventilation to prevent the bulb from overheating.

DO I NEED TO RECYCLE MY LIGHT BULBS? – All fluorescent and compact fluorescent (CFL) bulbs should be recycled due to trace amounts of mercury that they contain. Tossing these bulbs in dumpsters or landfills frequently results in the glass tube breaking and releasing toxins into the environment. The Ancram transfer station is a safe drop-off recycling location for these bulbs, as well as Home Depot and Lowes retail locations. Incandescent bulbs can be disposed of in the trash. Currently there are no recycling programs for LED bulbs but we hope to expand this in the future.