

Very Important Information

In 1988 the Federal Government passed laws that is now impacting our industries, in summery the government regulated the lighting industries manufacturers to change ballast and lamp technology for a variety of reasons. As of 2005 no companies in the US can manufacture the Magnetic ballast and older T-12 Lamps, as of 4/14/02 nobody does.

It also states that as of 2008 none of the equipment can be sold in the US. We believe that the products won't even be available as early as 2006.

National averages support that only 31% of all buildings to date have retrofitted their fluorescent fixtures and that most Business owners, Asset and Property management Companies don't even REALIZE that they need to budget for their facilities lighting system upgrade or that supplies for their existing wont be available after a certain date.

To date building designers and contractors are still putting the older Lamps and ballast in new building, we at EASIs feel that it's a crime.

Fortunately the cost of upgrading a building can easily be accomplished from utilities cost saving, helping project budgeting.

The laws are also very specific about the fines that will be imposed on owners, from disposal of old equipment without hazardous waste certification.

Federal Ballast Energy Law, Public Law No. 100-357, 1988

EPACT Promotes Energy-efficient Lamp Substitutes

The Energy Policy Act of 1992

lighting accounts for 26 percent of all the energy used in the US, according to the Department of Energy. However, energy used for lighting could be reduced dramatically if more efficient products already on the market were used. Unfortunately, homes, factories and other buildings are full of inefficient lights. And when those lights burn out, retail stores are chock full of inefficient lights to replace them. That should begin to change on October 31, 1995, when lighting efficiency standards set by the Energy Policy Act of 1992 (EPACT) take effect. Under the new law some of the most common and least efficient lamps (light bulbs and fluorescent tubes) cannot be made or imported into the US fortunately, the market has an ample supply of highly efficient substitutes.

Lumens not Watts

There was a time when lighting decisions were simple. How many watts? More watts meant more light. Now choices are much more complicated. Instead of one standard light bulb, consumers choose between half a dozen different lighting technologies. Instead of asking about watts, consumers need to ask about light output (lumens) and efficiency.

Lamps Affected

EPACT sets minimum efficiency standards for some of the most common products: incandescent reflector lamps (R), parabolic reflector lamps (PAR), 4 and 8 foot fluorescent lamps and U-bent lamps (U). However, the most universal lamp--the common light bulb (A-lamp) -- is exempted from the standards. Also exempted are elliptical reflector lamps (ER), bulb reflector (BR) and a host of specialty lamps (colored, decorative, etc). Products banned by EPACT will be available only while existing inventory lasts. After that you'll have to look for substitutes.

Labeling

new information required on packaging and product literature will help you compare products. The information includes lumen output, estimated efficiency (lumens per watt) and lamp life. Fluorescence will also list Color Rendering Index. Although they are exempted from the efficiency standards, A-lamps and compact fluorescent must be labeled. The information can help you compare light output and pick the appropriate lamp for the job.

The Shapes of Things to Come

Fluorescent Lamps

Today, the standard full-size fluorescent lamp is 1.5 inches in diameter-- a size designated as "T12." It uses 40 watts to generate 3050 lumens. The typical fluorescent is also notorious for bad color, with a Color Rendering Index of about 50 to 60 on a scale of 100. EPCACT nudges the lighting industry and consumers to lamps that use energy more efficiently and provide better colors. The most efficient replacements are the skinnier T-8 lamps, which are only 1 inch in diameter. In addition to being sleeker, T-8s are more efficient and have excellent color. Currently, you'll still pay more for a T8 than a T12, but prices are dropping rapidly. However, greater efficiency and longer life makes T8s more economical in the long run. T-8 lamps need different ballast than T12s. To achieve best efficiency install electronic ballasts. Best Lighting efficiency is obtained when using the new T5 lighting technology, T5 lamps are only 17 mm in diameter or 5/8 of T8 size, they use electronic ballasts only, better CRI and stable lumen depreciation of less than 10% offering maximum energy saving that occurs to be 55% when compared to T12 ~ 8 with magnetic ballast.

Some companies are starting a new plug and play T5 adaptor technology that will change the lighting performance dramatically in the coming years. New T5 retrofit of 28 W will produce the same lumen produced from a T12 ~ T9 circuit with magnetic ballast that consumes 56 ~ 62 W. New T5 electronic technology is ideal for industrial use because of its characteristics of maximum light performance at room temperature of 30 to 40 C reaching best performance at 35C while T12 ~ T8 lamps light output will drop by 10 ~ 20 % at these figures. T12 ~ T8 light output is measured at 25C that mean an additional 10 ~ 20 % of lighting output is being saved with T5...

Directional Lamps

Incandescent reflector lamps (R-lamps) used in recessed down lights and track lights have also been affected by EPCACT. The best alternatives are halogen PAR lamps (PAR30 and PAR20), although its only about 15 percent more efficient than older incandescent. There are two issues to keep in mind with PAR-lamp replacements. First, they have a slightly narrower beam spread than the older R-lamps. This might cause uneven illumination in some down light applications. Second, some PAR lamps are shorter than R-lamps, so some light is trapped in the fixture. Long-neck PARs or socket extenders can solve this problem. In spite of these limitations, PAR-lamps are currently the best replacement for most situations. Low voltage halogens (MR16s) offer another option. In addition to saving energy, the small filament allows a very efficient reflector that directs more of the light in the desired direction. The combination of energy and optical efficiency make low voltage halogens a good choice for accent lighting.

Compact Fluorescent

Energy efficiency and high-quality color are hallmarks of compact fluorescent lamps, so they easily meet the requirements of EPCACT. Compact fluorescents now come in many sizes, shapes and light outputs. Thousands of fixtures are designed specifically for CFL. Somewhere; there is a fixture that meets your needs and your budget. The problem can be finding it. Retailers may be reluctant to carry fixtures dedicated to compact fluorescents and have been known to discourage buyers. However, with a bit of research, your supplier should be able to offer several options. Retrofit kits can convert many fixtures from incandescent to fluorescent, including down lights and surface-mounted fixtures. In a pinch, you could even replace R-lamps with reflector-equipped, screw-in compact fluorescent lamps. Achieving the right light output with CFL can be tricky. Packages and product literature often list incandescent to CFL "equivalents." The actual lumen output of a CFL is affected by heat, lamp position and ballast issues. Most of the equivalents are optimistic. Actual light output could be 10 to 30 percent lower. Enclosed fixtures with poor ventilation are especially prone to problems. When replacing incandescent with CFLs, you can compensate by switching to a lamp with a slightly higher output, say from 1200 lumens to 1800 lumens or more. In new construction, you also have several options. Switch to a higher wattage fixture, install more fixtures of the same wattage, and choose fixtures that project light better or some combination of these. CFLs with HPF (high power factor) are saving double than LPF (low power factor) HPF CFLs are highly recommended when setting an energy efficiency plan or at large buildings , modular CFLs are great choice for more savings , modular CFL are a good solution for industrial and large commercial office buildings and present best cost/ efficiency measures ..

Consumer Strategy

In new construction or remodeling you often has several options. You can select the right combination of fixture, lamp and control for each situation. If you start from an existing fixture, your options will be limited to the lamps that will fit or conversion kits. More efficient lamps are more expensive, too. Fortunately, you'll save money every time you use them. Because many consumers focus on initial cost instead of lifetime cost.

Sort the Options

Consumers will find more information on packages and in point-of-sale literature. Each of the "big three" lamp makers offers a printed guide to help you choose replacements for the discontinued lamps. The Osram-Sylvania guide Relamping America is especially informative. With all the new choices, you need to use this information to be a wise light buyer.

For more information please visit: www.futekeg.com

