

ENERGY SAVING ESTIMATION ON A CONVENIENT STORE WITH DIGITEK-ILT

1. Advantage with DIGITEK-ILT

Save what should be saved – Energy: For power supply voltage about or above rated voltage, DIGITEK-ILT can save electricity 15% or more.

Prolong what should be prolonged – Life Span: DIGITEK-ILT lowers the voltage, and therefore the temperature of fluorescent light tube or HID bulb and ballast. As a result the life span of tube and ballast is prolonged.

Maintain what should be maintained – Luminosity: Maintain the luminosity as required by the design.

2. Saving on Utility

The consumption of ballast is about 25 % of the fluorescent light. For a 80 W fluorescent light, the total consumption of electricity power is about 100 W. Suppose a convenient store has 60 tubes of 80 W fluorescent light, we can make the energy saving on the fluorescent as follows:

Power consumption per hour:

$$100 \text{ W} \times 60 = 6 \text{ KW}$$

Power consumption per day:

$$6 \text{ KW} \times 24 = 144 \text{ KW}$$

Power consumption per year:

$$144 \text{ KW} \times 365 = 52,560 \text{ KW}$$

The utility charge per year for \$.10/KW:

$$\$0.1 \times 52560 = \$5,256.00$$

The utility charge per month:

$$\$5,256.00/12 = \$438.00$$

For energy saving of 15 %:

The saving on utility per year:

$$\mathbf{\$5,256.00 \times 15\% = \$788.40}$$

The saving on utility per month:

$$\mathbf{\$438.00 \times 15\% = \$65.00}$$

For place voltage always higher than rated voltage, the saving will be more.