

**Ballast**

Device for starting and regulating lighting equipment.

**Electromagnetic(Magnetic) Ballast**

A ballast used a “Core & Coil” assembly and operated in line frequency.(50/60Hz)

**Electronic ballast**

A ballast used electronic components and operated in high frequency.(>20kHz)

**Ballast Efficiency**

Defined by output power divided input power. This ratio higher means more energy saving.

**Ballast Factor(BF)**

One lamp can be lighting in different lumen output level . B.F is ratio used for indicated lighting level. B.F value higher means the lamp output more lighter. The Definition of B.F as bellow

$$B.F = \frac{\text{Lumen output of lamp operated by under tested ballast}}{\text{Rated Lumen output provided by lamp maker with “reference ballast”}}$$

**Crest Factor(Lamp current crest factor)**

Ratio of peak lamp current to RMS value.

**Constant current technology**

When fluorescent lamps stably running, it like constant current. Recent studies conclude that using lamps with identical current and same diameter but different wattage results in almost identical Ballast Factor. With constant current technology, the lamp will avoide over powr or heating while aged lamp connected.

**Lumen Efficiency**

Transfer ratio of light energy to electricity energy. The unit is lumen output per input power(Lm/W).

**Fluorescent Lamp**

Gas filled lamp in which light is produced by the reaction of electrons with fluorescent material. The basic structure include tube body(glass)with fluorescent power, electode (Filament with coating material),mercury and end cap or base.

**Instant Start**

Lamp starting method in which lamps are started with high voltage without preheating of lamp filament. This kind of starting method will easily caused ionized mercury bombards the filament during ignition.

**Rapid Start**

Lamp starting method in which both open circuit voltage(OCV) and lamp filament preheated is applied to the lamp at the same time. If the OCV is too high, this kind of starting method will easily causes large amount of glow current during preheating period.

**Programmed Rapid Start**

Lamp starting method in which preheating lamp filament for a given time that ensures filament heating is enough . The open circuit voltage held very low avoided ionized mercury bombardment during this preheating period. This starting sequence is good for prolong lamp life. Although the theory is very easy to understand, few company have ability to design really programmed start ballast due to some circuit technology and lamp know-how are difficult to master. SKYNET has develope sputter-free technology to overcome this barrier and used in EBL ballast design.o

**Potting**

Using material to completely surround and cover the components of ballast. Potting compound will protected components against moisture and dust.

**Over load protection**

While emission material coating is fades away, the voltage drop in the electrode increase and temperature will be higher. Especially in small diameter fluorescent lamp , this result will more easily damage the lamp end and plastic socket, eventually cause the risk of fire-hazard. Over load protection is necessary for ballast to far away those dangerous situation.

**Short circuit protection**

A ballast with short circuit protection will prevent burnout wile people careless wrong wiring.