
[Work characteristics of solar garden light](#)

Posted by: [niuhaibiao](#)

on Apr 06, 2013

Tagged in: Untagged

When the lamp began to light the need for a high voltage, normal light, when not only allows the current, when the voltage across the lamp below the supply voltage. This high-voltage, they jump by our usual talking bubble (starter) to provide. Power is switched on, due to the neon bulb starter within two pieces of metal is not connected to the power breakdown neon electrical conductivity, when we see that neon light bulb, neon when the heat conductive, causing neon bulb inside the pairs of metal sheets (that is, we see curved Flanagan), after heat bending down, and connected to two electrodes, when a larger current through the ballast. Start [solar garden light](#) to achieve high-voltage requirements. Later, due to pairs of metal sheets after the neon bulb connected to the neon light is no longer conductive, the temperature fell rapidly, double metal restitution, quickly cut off the supply, the current from the higher value ballast suddenly becomes 0, produced very high self-induction electromotive force, the self-inductance voltage is enough to puncture the mercury vapor lamp, mercury vapor to produce ultraviolet light and ionizing conductive excitation light-emitting phosphors, solar garden light tubes conductive, the voltage drop at both ends of solar garden light tubes (100V them about), This voltage can no longer make neon bulb conductivity (the breakdown voltage of neon bulb for 150V or so) while the light-emitting, double-metal sheets are no longer connected, and this time, the solar garden light can be continuous.

solar garden light: inside lamp load some special gas, but also in the tube coated with phosphor on the wall, after the power light due to electrical discharges. solar garden light: it does not contain infrared, so it's just a very moderate, and not to hurt the eyes; because they do not contain hot, using up more energy-saving; it will send many beautiful colored light. This is from the phosphor inside the nature of chemicals contained in set, for example coated with tungsten acid, magnesium, hair blue and white shade, coated with boric acid cadmium hair pink shade.

solar lamp with both ends of the filament, tube wall coated with a thin uniform layer of phosphor, tube has been pumped into the vacuum of 10^{-3} - 10^{-4} mm Hg after charging into a small amount of inert gas, but also small amount of liquid injected mercury. Ballast is an iron-core inductor coil, the nature of the inductor coil when the current changes, caused by magnetic flux in the coil will change, resulting in induction electromotive force, its direction and current in the opposite direction, thereby hampering the current changes. Starter switch in the circuit play a role, which consists of a neon discharge tube made in parallel with a capacitor, capacitance of the role is to eliminate the power of electromagnetic interference with the formation of oscillation circuit ballast to increase the start pulse voltage amplitude. Discharge electrode pairs in a metal composition, the use of neon bulb discharge heating, so that pairs of metal sheets in the opening and closing when the current is caused by mutations in ballast inductor and generate high-voltage pulse added to the tube ends.

When the lamp access to the circuit after the starter began to glow discharge between two electrodes, so that pairs of thermal expansion of metal pole with static touch contact, so power supply, ballast, and starter filament form a closed loop, the current so that the filament preheating, when the heating time of 1-3 seconds after the starter between the two electrodes out of the glow discharge, followed bimetal cool touch very disconnected with the static, when the two electrodes disconnected moments, the circuit in the current

suddenly disappeared, so ballast to generate a high-voltage pulse, which overlapped with the power supply, added to the tube at both ends, so that the inert gas ionization inside the tube caused by arc discharge, in the normal light-emitting process, ballast self-inductance device also plays a role of a stable current in the circuit.

Now more and more electronic solar garden light ballasts. Electronic Ballast come out in the early eighties by the Dutch Philips company first developed. Because of its traditional inductive ballast compared, particularly in the electrical properties of the more unique. Is actually a high-frequency resonant inverter, its small size, [led light](#) weight, low energy consumption, low voltage start-up and able to work, no flash and noise. However, the circuit's operating frequency of up to 20 ~ 30kHz, so there are more serious interference with radio frequency interference and electromagnetic radiation, affecting the normal operation of other electronic devices, but also easy to power pollution, harm to the human body. After actual use, its life (and the impact of lamp life), not as good as inductive converter.

With the development of the times, solar garden lights are gradually being principles similar but smaller more efficient energy-saving lamps (three-color solar garden lights) to replace.