120 Volt vs Low Voltage

Low voltage lighting systems utilize a type of lighting that operates on 12-volt supply rather than the standard line voltage of 120 volts. This system requires at least one step down transformer to convert the incoming line voltage to 12 volts. There have been endless charts published outlining the so-called “advantages and disadvantages” of low voltage versus line voltage lighting.

We believe that there are no specific advantages or disadvantages to one or the other as we feel that they each have their own specific purposes. There are however some major differences between the two that must be pointed out.

The lighting effects differ immensely between low voltage and line voltage. Low voltage lighting tends to be "spotty", as the lamps have a limited output range and are best suited for highlighting specific plants or features. However, recent developments in lamp technology now make it easy to accomplish the same effects with a more robust fixture. Line voltage lighting can adequately wash large areas and give you vista views and coverage unattainable with low voltage fixtures. The effect of low voltage lighting is easily lost on large-scale projects.

Fixture size is the most obvious physical difference between the two. Due to the fact that line voltage bulbs and sockets are generally large, the fixtures have to be made larger to accommodate them. Low voltage fixtures are a lot smaller in physical size, however the area lighted by each lamp is smaller than that which a line voltage fixture can attain. Therefore, you need more lamps to achieve the same level of brightness as that achieved with line voltage systems.

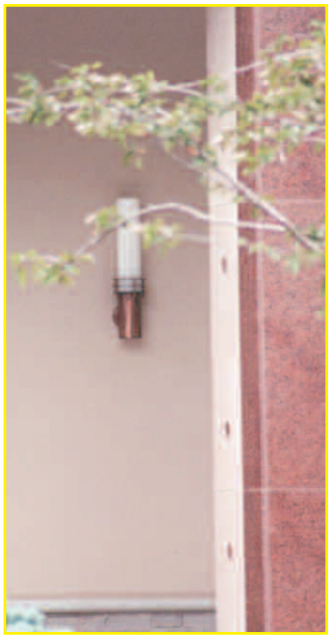
LAMP LIFE/COST

The overall effect of the lighting system is always the foundation of any Curtis design. Comparing a low voltage landscape lighting system quote to a line voltage quote strictly on a cost-per-fixture basis is an unfair comparison. The low voltage quote may appear to come out cheaper however, a system which is cheaper initially may well end up costing more to operate and maintain in the long run. A low voltage lighting system that consists of many fixtures can be costly to relamp once the bulbs have burned out, which typically is within the first year of operation. A line voltage system, however, will provide much greater lamp life, especially with the HID (Mercury Vapor) lamps that have an average life of about five years. The lamps cost more to purchase, but when you factor in the cost and inconvenience of relamping once every year as compared to once every five, in addition to their superior performance and output, line voltage is the better value by far.

ENVIRONMENT

There are constant changes that occur in a maturing landscape, and plant growth is definitely one that cannot be accommodated

Source	Advantages	Disadvantages
QUARTZ-TUNGSTEN/HALOGEN (120-volt)	Low initial installation cost; neutral colour; provides excellent rendition; dimmable.	Shorter lamp life than HID sources; lower efficiancey than HID lamps.
LOW VOLTAGE (12-volt) (Incandescent or Quartz)	Precise beam control; easy to install; low installation cost; good colour rendition; good colour rendition; dimmable.	Voltage drop controls transformer; effects lost on large scale projects; shorter lamp life than HID.
FLORESCENT	Long lamp life; even illumination; choice of colour temperatures.	Low temperature starting considerations; higher installation costs than incadescent.
MERCURY VAPOUR (120-volt)	Blue-green colour compliments most plant materials; long lamp life (5-6 years).	Higher installation costs than incadescent; poor colour for people or food; Low lumen maintenance.
METAL HALIDE (120-volt)	Good colour rendition; long lamp life; excellent for flags; higher effeciancey than Mercuray Vapour lamps.	Higher installation costs; shorter life than Mercury Vapour; distance limitations on remote ballast placement (low voltages).
HIGH PRESSURE SODIUM (120-volt)	Most energy effecientHID source; long lamp life; good for some architectural features	Poor colour rendition for cars and people; makes foliage look “dead”; distance limitations on remote ballast placement.



using low voltage fixtures. The landscape is an extremely harsh environment. This is due to a number of reasons, both natural and man-made. Soil condition, acidity, moisture retention and drainage are all natural characteristics of the landscape. Vehicular and pedestrian traffic, maintenance people and their equipment are a few additional factors that can pose a potential threat to the integrity of a fixture.

Our experience has proven to us that low voltage fixtures just do not stand the test of time. In fact in recent years, a good portion of our business has involved ripping out low voltage systems, and replacing them with line voltage systems. This is usually due to the customer complaining that their lighting isn't performing as well as they thought it would. The only sensible solution is to replace it, however this is particularly difficult for most people to accept, as they feel that they have already paid for the job once initially.

Our many years of experience have allowed us to see the comings and goings of a multitude of similar products. We now employ only the ones that we feel are the best, both from a performance standpoint and from a dollar value. We believe that something is not expensive if it is done right and performs as promised. It becomes very expensive when it has to be done twice.