ENSYSTEX™

LEADING INNOVATION IN PEST MANAGEMENT

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TECHNICAL NOTE

VECTOTHOR™ UV-A Lamps - Maintenance and Troubleshooting

This Technical Note is provided to create more practical awareness on the maintenance of UV-A lamps. Lamp replacement, operation, storage and troubleshooting are covered.

Maintaining UV-A lamp performance

Lamp replacement checks

- When changing UV-A lamps, always clean the Fly Trap thoroughly. Dirty reflectors and plastics can significantly reduce the useful UV-A performance of the lamps. This is especially the case when attraction grids are not cleaned.
- Check the lamp sockets. Be sure that the lamps are correctly placed in the lamp sockets. Replace any, which show worn springs or loose contacts. Poor lamp contacts can cause difficulty in lamp starting, shorten lamp life, cause premature end blackening, and possibly electrical arcing at the lamp ends.
- Change the lamp starters regularly. After the European Union Removal of Hazardous Substances (RoHS) directive came in place, lamps became more sensitive during start up. Generally most manufacturers recommend changing the starters at every lamp replacement. Ensystex makes this same recommendation. A worn-out starter can quickly destroy a good lamp!

Lamp operation

- Periodically check lamp cleanliness. A dirt build up on the UV-A lamps can have a significant effect on lamp intensity and therefore reduce the attractiveness.
- Monitor your lamp intensity. Purchase a UV-A monitor and develop a history of UV-A readings. Keep in mind that most meters cannot be used to compare lamps with different spectral properties. Generally UV-A lamps are replaced after a year of operation; **or two years in the case of the Philips Long-life Lamp marketed exclusively by Ensystex**.
- Every time an UV-A lamp is switched on or off, one should deduct one operational hour of its lifetime. Ideally units should never be switched off. Flies are still present at night and this offers the opportunity to catch them when competing light sources are less, especially in the early morning hours.

Lamp storage

- Lamps do NOT degrade while sitting in a box, so “fresh” lamps are not necessary. Since they are a vacuum sealed unit, the only way to degrade a lamp is by running it.
- Lamps are not damaged in any way by storage, even high or low temperatures will not affect them. However, lamps that are left to sit in a cold or hot environment for any length of time may be difficult to light up, until they equilibrate to room temperature.
- The lamps should be stored in a dry environment. High humidity environments will destroy the cardboard package and may corrode the lamp pin connectors.
- If UV-A lamps have been stored in the open, always clean them before installing. Lamps may be cleaned with a glass cleaner, alcohol and most general cleaners.
- Always keep spare lamps available as spare parts on critical locations!

Trouble-shooting

- No light emitted!
    - Lamps may not be properly seated in sockets. Check that pins or lamp ends are properly seated in sockets.
    - Sockets may be dirty or worn out. Check, clean or replace if needed.
    - Ballasts may have reached the end-of-their-life, or may be defective. Change ballasts were needed. Commonly, each ballast powers one or two lamps. A voltage meter can be handy to test and inspect this.
    - Lamps may be leaking air, due to tiny cracks in the ends of map glass caused by shipping abuse. Replace lamps.
- The lamp is flickering or blinking
    - This is usually due to a defective starter. Replace the starter.
- Only the ends of the lamp are glowing
    - This is often caused by a defective starter. Replace the starter.
- The ends of the lamps are dark
    - This is usually caused by the lamps not being seated correctly, or through defective sockets. Seat lamp correctly.
- Orange and brown streaks are present
    - These are caused by air leaks due to the ends of the lamp cracking during shipping. Replace these defective lamps.
- Swirling
    - This is caused by minute impurities within the lamp. These can be eliminated by cycling the unit on and off a few times.
- Early burnout
    - See above.
    - Check for a proper match of lamp type to the unit.
    - Have an electrician verify that the line voltage is not too high or too low.
- Thin phosphor, discoloured patterns in the lamp surface
    - These are very rare cosmetic defects. They have no effect on a lamp's UV-A output.

Performance

- The UV-A lamp (outside of the lamp glass) temperature should be around 30 - 40 degrees Celsius. In very cool environments, the lamp will take 5 - 10 minutes to start up. This reduces the lamp's output to only 65 - 70% of the rated output during the start up period. It will slowly increase to 100% over the 5 – 10 minutes of the start up period.
- Never use lamps with a different wattage output. The ballast, which supplies the voltage to the lamp, can only generate one specific power output. If a different lamp wattage is used (e.g. if a 30 watt lamp were replaced with a 15 watt lamp) the lamp would either not start at all, or will age much faster, thereby reaching the end of its operational lifetime in months.