

### **Power Options Better Suited to Large-Scale Operations**

- Option #1 High-Voltage AC (120V-480V) to low-voltage (24v) power converters, multiple, mounted above sections of frames in grow room. Each converter would power X number of serial connected light bars, each serial string of light bars having up to 4 light bars per string. Remote power converter would be sized depending upon number of low-voltage drops desired per converter. This method keeps separation of high-voltage AC from plant/water area by mounting AC component in ceiling frame network.
- Option #2 High-Voltage AC (120V-480V) to low-voltage DC (24v) main power converter, single, mounted in corner of building or in remote power room. Low-voltage DC power is then supplied to serial connected light bars, each serial string of light bars having up to 4 light bars per string, via low voltage DC power drops from ceiling frame mounted DC buss cables. DC buss cables, size 0 or 00 of either aluminum or copper conductor, are attached to remote power converter and provide a grid of low-voltage DC above plant/water area. Tee type clamp-on power taps provide easy to install, easy to change, power drops down to light bars.
- Option #3 High-voltage AC (120v-250v) power is supplied via conduit to service boxes above grow area, mounted to overhead framework. Low-voltage power adapters are plugged directly into service box outlets. Each power adapter would provide up to 10' of low voltage wire (minimum order 1K pieces) to facilitate hook-up strings of up to 4 light bars.

*Additional Options Available*

### **Solar Power**

The numbers per bar are: 400 mA if powered by 24 vdc direct or 9.6 watts. When working with photovoltaic/ battery setups, it is infinitely desirable to not use a power converter. Typical PV/Batt setups are for homes which need 120 vac power. They design the setup to have a PV panel(s), batteries, and a power inverter to change the 24 vdc panel voltage to 120 vac house voltage. The inverter however has at best 60-70% efficiency, meaning that you lose up to 1/3 of the PV panel power. SolarOasis product runs on 24 vdc, the same as the PV panel, so only a power regulator is needed. A power regulator is needed because PV panels vary from 22 volts in the shade, up to 70 volts in noon, clear day sun. The voltage coming into the light bar must be regulated to no higher than 24.7 volts DC. If it dips lower than this, it is not a problem, but if it goes higher than this, the light bar will be compromised.

