

## Specifications:

<b>Approvals</b>	OEM, UL 867, UL 2998
<b>Input Voltage:</b>	110VAC to 240VAC
<b>Power (VA):</b>	5 Watts
<b>Frequency:</b>	50/60 HZ
<b>Output Voltage</b>	5 KV
<b>Power Supply Dimensions:</b>	2.0" W x 1.0" H x 3.0" L
<b>Flexible Bar Dimensions:</b>	1.25" W x 0.05" H x 18" L
<b>Power Supply Weight:</b>	0.5 lb.
<b>Service Temp. Range:</b>	-40°F to 140°F
<b>Electrical Approvals:</b>	UL and cUL recognized
<b>Plasma Output:</b>	35 million ions/cc per foot
<b>Indication:</b>	Green LED "Power On" LED "OFF" = No power or fault
<b>Mounting:</b>	Flexible applications - adhere to solid surface
<b>Orientation:</b>	Install in air stream of application

## Packaging:

1 each **4900-35**

## Installation Instructions:

The iWave-M is a highly versatile ion generating device that is designed to be typically installed at the base of the cooling coil for ductless and duct air conditioning systems; but the device can be installed in supply air as well. The iWave-M is an ideal, no replacement part device that can be integrated into wall or ceiling cassette indoor coils of mini-splits, PTAC units or commercial systems where there may not be enough room to install the iWave-C between the filter and coil. It can also be used to inhibit mold in ice machine applications. The 18 inch ion generating bar can be used for coils up to 36 inches wide. For coils beyond the 18 inch ionizer length, simply center the ionizer bar on the coil to make sure the ionization best covers the coil width. For coils shorter than 18 inches, see the section on iWave-M modification directions on the back page.

Attach the provided hook and loop strip across the width of the coil near its base so the iWave-M treats the coil as well as the breathing zone. Using the hook and loop backing on the iWave-M attach this to the existing hook and loop strip on the unit. For ceiling cassette systems, attach the iWave-M directly to the edge of the blower wheel housing See Figure 6 for location of the iWave-M. Following the wiring. Connect the appropriate leads of the iWave-M to the 110VAC-240VAC power (see diagram on back page), be sure the remaining wire leads are out of the way of the blower wheel, and replace the cover of the unit. For ice machines, install on top and/or side panel of equipment, above the water line so it creates a plasmafield inside the machine. Connect the appropriate leads of the iWave-M to 110VAC to 240VAC power (see diagram on back page) and reassemble the equipment and turn on power to the unit.

## Indoor Air Quality

### **iWave®-M** *Mini Flexible Air Ionization System*



## Mini-Split Instructions:

1. Turn power off to mini-split.
2. Open front cover of indoor unit.
3. Remove filter screens.
4. Measure the length of coil and affix ionizer bar to solid surface (often plastic) on top of the coil. If there is no plastic surface, the iWave-M can be affixed directly to the top of the fins. (See Figure 5.) The width of the plastic region will easily accommodate the iWave-M ionizer bar so it can treat the coil, barrel blower and breathing zone of the room. For coils between 24-36 inches, center the ionizer bar on top of the coil and affix. For coils less than 18 inches, refer to the iWave-M modification directions below.

**Critical:** Keep any metal from directly touching the emitters.

5. Depending on mini-split model, the area available to mount power pack will vary. Either affix with hook and loop backing to back cabinet wall or side of coil.
6. Run wires to the electrical compartment to hook up to 110VAC to 240VAC incoming power source to where iWave-M will power on continually. For 110/120VAC and 208/240VAC input, connect black wire (hot) and white wire (Neutral or Other AC Phase) to applicable electrical terminal block.
7. Trim wires to length hook up to appropriate terminal connections and connect. Harness/secure wires within the equipment as necessary. The LED on iWave-M power pack will turn green when power is supplied.
8. Reassemble filter screens, close the front cover and turn on power to mini-split.

## **iWave-M Modification Instructions on Back.**



## iWave-M Modification Instructions:

For typical minisplit (or ice machine) applications, no adjustment in iWave-M length is necessary. For an irregular application where the iWave-M is too long for the coil which it's being applied, perform the following steps:

1. Measure how much past the end of the coil the iWave-M lies.
2. Bend the iWave-M back on top of itself (DO NOT bend under with hook and loop backing facing each other) so the brush pairs on the top will lay next to the brush pairs on the bottom, shown in Figure 1.
3. Using the provided hook and loop strip attach the iWave-M to the cooling coil starting at the power entry side of the iWave-M. DO NOT press down on the end of the iWave-M that will need folded to shorten the length, see Figure 2.
4. Fold the iWave-M back to achieve the length required, lining up the bottom and top layer brush pairs as shown in Figure 1, and place a piece of electrical tape across the joint. See Figure 2.
5. Continue to use electrical tape down the iWave-M towards the end, making sure that the tape joints are between the brush pairs. DO NOT allow the tape to cover the brush pairs. See Figure 3.
6. DO NOT crease the end of the iWave-M flat. As a guide, use a #2 Phillips screwdriver inside the fold joint to ensure the proper bend is achieved. See Figure 4.
7. Once the iWave-M has been folded and taped to the length required, push it down on the coil.
8. A successful fold procedure will create "pockets" for the carbon fiber brushes to emit the ions.



Figure 1



Figure 2



Figure 3



Figure 4

## Maintenance:

1. Remove power from the AHU and remove the required parts to access the iWave-M. Confirm the iWave-M power supply LED is not illuminated. It is good practice to ensure all voltage is removed from the iWave-M. Take a screwdriver with insulated handle and touch a carbon fiber brush brass connector on one side to another on the opposite side. This will discharge any remaining voltage that could cause a potential shock hazard during maintenance.
2. Use an alcohol wipe or low pressure compressed air to clean the emitter tips of the iWave-M. A soft bristle brush, like a toothbrush, can also be used to clean debris from ion emitters. Do not expose the Wave-M to corrosive cleaners.

Maintenance will depend on application and filtration effectiveness. Service is recommended to be completed every 90 days in standard applications, and more often in applications where the system is exposed to heavy particulate loads.

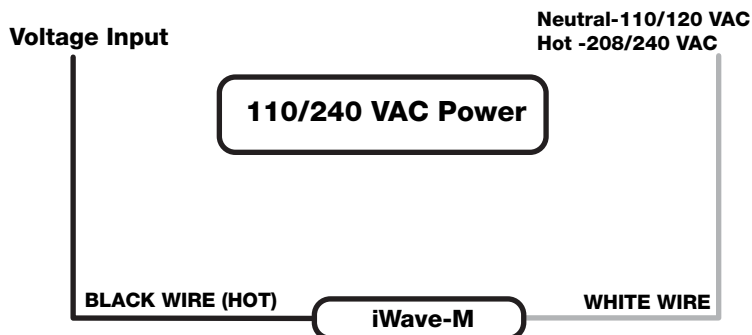
Figure 5

Affix iWave-M power pack to back of cabinet.



Affix iWave-M to the top of coil on plastic strip (or top of fins) to treat coil, blower and living space.

Figure 6



## Limited Warranty:

The iWave-M offers a limited warranty for three years that covers any defects in material or workmanship under normal use. If you make a claim during the warranty period, you must provide proof of purchase and proof of proper installation by a licensed contractor for the warranty to be valid. The iWave warranty does not cover labor, return shipping charges, damage from improper installation or improper voltage usage. The iWave warranty begins on the date that the unit was purchased. Installation of your iWave by any person other than a licensed contractor will void the warranty. Contact your local Nu-Calgon account manager or [info@nucalgon.com](mailto:info@nucalgon.com) with further questions.

