

Ultraviolet Air Purification For Your Family's Home



The Facts About Indoor Air Quality

Today's construction methods make our homes even tighter and more energy efficient than ever. The drawback is that our homes now also trap pollutants and allergens inside. Even though one may not have noticeable irritating symptoms, this silent and invisible menace threatens the quality of indoor air in homes every day.

The EPA has concluded that most of our exposure to toxic chemicals, harmful biologicals and allergens occur indoors where we spend over 90% of our time. In a way, this is good news. We have more power over the environment in our homes and businesses than we do on the outdoor environment.

It is well established that indoor air pollution can be the result of cleaning chemicals, mold in damp places, microorganism growth in carpets, poor building ventilation, and out gassing due to construction products used in new homes and renovations. The control of indoor pollutants is extremely important because of the adverse effects they can cause regarding ones long term health.

Common symptoms resulting from poor indoor air quality include: headaches, fatigue, eye irritations, asthma attacks, breathing problems, dizziness, memory loss, depression, skin irritations, sinus infections, colds, flu, and viruses. Exposure to even low levels of contaminants can potentially lead to long-term health problems. GeneralAire® UV Air Purifiers are designed to bring the balance of nature to your home for improved indoor air quality.

GENERALAire[®]
Fresh Indoor Air Quality



Light Wavelengths in Nanometers (nm)

Cosmic Rays	0 nm
Gamma Rays	25 to 50 nm
X-Rays	50 to 100 nm
UVV	100 to 200 nm
UVC	Short Wave Band 200 to 280nm
UVB	Medium Wave Band 280 to 315nm
UVA	Long Wave Band 315 to 400nm
Visible Light	400 nm
Infrared	700 nm
Radio Waves	1200nm

All ultraviolet (UV) light is measured in units called nanometers. A nanometer (nm) is a wavelength of light approximately 1/25,000,000 inch or a billionth of a meter. Wavelengths of visible light range from about 400 to 700nm. UV wavelengths range from about 1 to 400nm. The UV wavelength is shorter than visual light and is rendered invisible to the human eye.

Let the Sunshine In!

The sun that brings us daylight everyday also delivers UVC energy that protects us from germs,

bacteria, viruses and other destructive bioaerosols outdoors. Installed on your HVAC distribution system, the UV Air Purifiers boast an intensely effective 16 inch 36 watt germicidal H-lamp (UVV16HC). The 36 watt lamp radiates a high output of germ killing ultraviolet light in your duct work, imitating the air purifying intensity of the sun that treats your indoor air. The germicidal bandwidth C (UVC) measuring 200 to 280 nanometers is effective at killing germs and bacteria in your home and will significantly reduce the levels of harmful bioaerosols (viruses, fungi, mold, and allergens).

How are Bioaerosols Eliminated?

The high output UVC energy will break down the electron bonds of an organic molecule. This intense energy will penetrate an airborne microorganism causing cellular and genetic damage that either destroys the microorganism or renders it harmless by robbing it with the ability to reproduce.

What is Super Plasma?

Plasma is an excitation of gas by the energy from ultraviolet light. Wavelengths of ultraviolet light measuring 100 to 200 nanometers bandwidth generate highly reactive triatomic molecules. The aggressive ionized gas has the ability to destroy organic contaminants photochemically by the formation of atomic oxygen, molecular singlet oxygen, activated oxygen, and ozonides (O₃⁻). This formation interacts with organic contaminants breaking them down to harmless carbon and water.



GU100A83 UV Air Purifier

(GFI #4142)

Does Lamp Output Intensity Matter?

Ultraviolet lamp output intensity is measured in microwatts per square centimeter at 1 meter ($\mu\text{W}/\text{cm}^2@1\text{ meter}$) from the lamp. The GeneralAire® H-lamp is rated at $180\ \mu\text{W}/\text{cm}^2@1\text{ meter}$ delivering up to 100 times more germicidal output than other brands. The secret to our powerful intensity rating is achieved by combining a high output 36 watt lamp with a multi voltage regulating electronic ballast. Lamp output matters if you want the best performance for your home.

Specifications

- 4" W x 8.75" H x 2.75" D
- 36 watt, 16" UVC LSK36 Germicidal H-lamp UVV16HC (GFI #4447)
- $180\ \mu\text{W}/\text{cm}^2@1\text{ meter}$ UVC Output Potency
- 120 VAC / 240 VAC Regulating Electronic Ballast (GFI #4885)
- QuartzCoat® Durability
- Effective Lamp Life 18,000 hours (2 year lamp replacement)
- Power Cord Disconnect (Appliance Coupler Design)
- Max 2000 CFM or 4500 Sq. Ft.
- 5 Year Ballast Warranty



Footnote: The UVV5CL lamp is rated to produce 50 milligrams of O₃ at high output and test measures well below F.D.A. regulations of .05 ppm.



GUV25403A Super Plasma UV Air Purifier (GFI #4835)

The **VECTORFlo** PCO2450 Photocatalytic Ultraviolet Air Purifier (GFI #4840)



How does it work in my Home?

The plasma is produced by its 5 inch pure quartz broad spectrum ultraviolet lamp (UVV5CL). The UVV5CL lamp output is controlled by the patented Oxy-Regulator lamp-

in-tube design. The Oxy-Regulator allows you to set the intensity level of oxidation to breakdown airborne gaseous contaminants and eliminate unwanted odors in your home.

Specifications

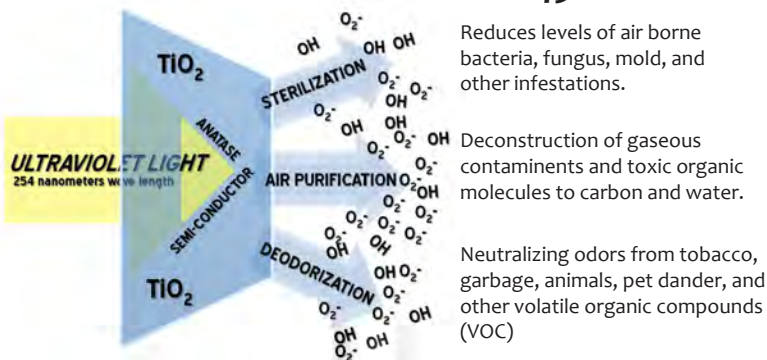
- 4" W x 11.75" H x 2.75" D
- 36 watt, 16 inch LSK36 Germicidal H-Lamp UVV16HC (GFI #4447)
- 180 $\mu\text{W}/\text{cm}^2$ @1 meter UVC Output Potency
- 8 watt, 5 inch Super Plasma Lamp UVV5CL (GFI #4870)
- 12 $\mu\text{W}/\text{cm}^2$ @1 meter UVV Lamp Intensity Rating
- 120 VAC / 240VAC Regulating Electronic Ballast (GFI #4881)
- QuartzCoat® Durability
- Effective Lamp Life 18,000 hours (2 year lamp replacement)
- Power Cord Disconnect (Appliance Coupler Design)
- Max 2000 CFM or 4500 Sq. Ft.
- 5 Year Ballast Warranty

The VectorFlo® PCO2450 (Photocatalytic Oxidation) Air Purifier features the patented VectorFlo® semiconductor designed to deliver a high performance kill rate unmatched by other ultraviolet air treatment brands. The VectorFlo® creates a low pressure area around the high output 50 watt UVC lamp establishing a venturi effect. The venturi significantly increases the time exposure of airborne microorganisms in a bath of sterilizing germicidal ultraviolet light. The treated unrestricted air (.02 inches W.C.) is then accelerated beyond the VectorFlo® semiconductor and introduced into the main airflow for maximum purification.

The patented semi-conductor's exclusive process incorporates 24 SQFT equivalent surface area of honey combed aluminum cells. The cells are electro-statically coated and permanently bonded at high temperatures with nanosized crystallites of titanium dioxide TiO₂ in an anatase form. This specific process is proven to be one of most effective photocatalyst.

A photochemical reaction occurs when UVC light is absorbed by the TiO₂ semiconductor. An advanced oxidation conversion process occurs where the H₂O molecule in the airflow is split to create hydroxyl radicals (OH) and super oxide anions (O₂⁻) known to be among the most powerful oxidizing radicals. This Photocatalytic process aggressively deconstructs gaseous contaminants and deodorizes your indoor air safely.

The VectorFlo® PCO2450



Specifications

- 8-1/2" W x 7-3/8" H x 2" D
- 50 Watt 18 inch LT-50 UVC Lamp (GFI #4448)
- 135 $\mu\text{W}/\text{cm}^2$ @ 1 meter UVC Output Potency
- High Output Temperature Compensating (HOTC) 120v / 240v Ballast (GFI #4884)
- 24 SQFT Titanium Dioxide TiO₂ Anatase Semi-conductor
- Max 2000 CFM or 4000 Sq. Ft.
- QuartzCoat® Durability
- Effective Lamp Life 18,000 hours (2 year lamp replacement)
- Power Cord Disconnect (Appliance Coupler Design)
- 5 Year Ballast Warranty

MICROBESwatter[®]

24 Volt Ultraviolet Air Purifier with U.L. listed remote ballast



MS24
GFI #4440

2-3 times MORE! Germicidal Output Intensity Than Other Brands

The GeneralAire[®] MicrobeSwatter[®] MS24 and MS24OZ utilizes the contaminant fighting technology of ultraviolet light to dramatically reduce harmful airborne microorganisms circulating through a heating and air conditioning system. The MicrobeSwatter[®] is 2 to 3 times more powerful than many commonly used ultraviolet light products. This enhanced power provides far greater bio-contaminant destruction and results in significantly improved indoor air quality.

Featuring Magnetic Strength Mounting for Secure-Convenient Lamp Placement

The MicrobeSwatter[®] MS24 (GFI #4440) & MS24OZ (GFI #4450) features a patent pending magnetic mounting plate. Simply cut a hole, affix the lamp to your HVAC system & you're done! Powerful magnets securely hold the mounting plate in place and make installation and lamp replacement a snap! You don't have to unscrew or unfasten the unit to replace the lamps – simply remove the lamp and insert a new one!



SweetShot MS24OZ
GFI #4450

Specifications

Dimensions:

- AGMGF Mounting Plate: 3" x 3" (GFI #4889)
- UVC H-Lamp 1.75" x 16.25"
- Duct Mounting Hole: 2"

Weight:

- UVC H-Lamp Assembly: 6 oz

Electrical:

- 24 VAC, 2 Amp
- UL Listed Electronic Ballast AG2436 (GFI #4883)

UVC H-Lamp Potency:

- 36 watt, 105 uw/cm² @ 1 meter
- For MS24: Repl. Lamp AGL36 (GFI #4886)
- For MS24OZ: Repl. Lamp AGL36OZ (GFI #4487)

Effective Lamp Life:

- 9,000 hours

Transformer NOT included

- Use Required GeneralAire[®] 50 VA GA3501 (TR50VA12024) (GFI #4305)

MICROBESwatter[®] SweetShot (GFI #4450) Indoor Air as Fresh as after a Soft Summer Rain!

Everyday the sun's ultra-violet rays battle to protect us from harmful germs, bacteria and viruses outdoors. The sun also has the power to measure safe levels of ozone to freshen the air we breathe and break down dangerous gaseous contaminants. The GeneralAire[®] MicrobeSwatter[®] SweetShot MS24OZ acts like the sun indoors to bring you the same benefits we experience outdoors. Its MS24OZ fused lamp design delivers a safe measured amount of ozone (O₃). The MicrobeSwatter[®] SweetShot MS24OZ will break down gaseous compounds that create unwanted odors in your heating and air conditioning ducts and leave your indoor air fresh and clean, like after a soft summer rain.

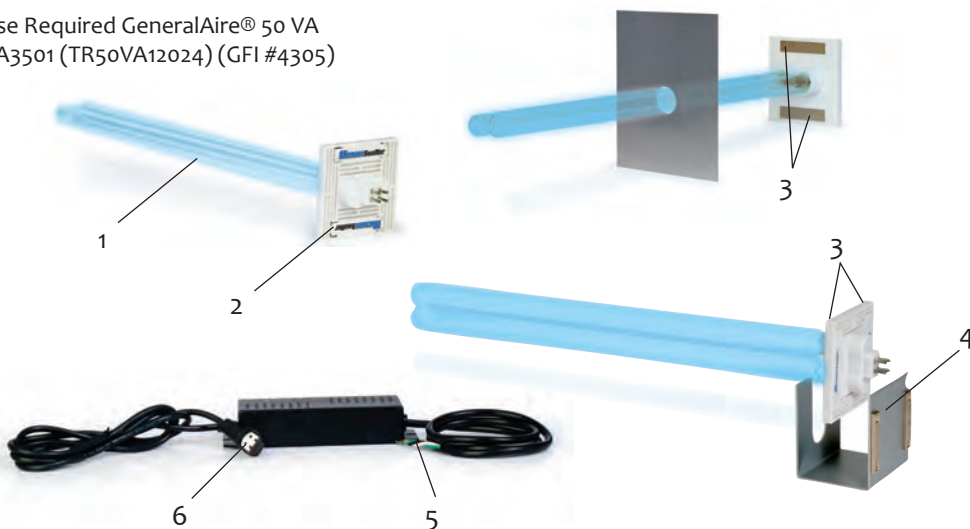
Ultraviolet Lamp Assembly

1. 36 watt UVC H-Lamp AGL36 (GFI #4886)
2. Mounting Plate
3. Powerful Magnets
4. Magnetic mounting bracket for mounting unit inside duct (GFI #4889)

Electronic Power Supply

Provides constant wattage to the UVC H-lamp. Blue LED light indicates if UVC H-lamp is lit. Regulating Electronic Ballast (GFI #4883)

5. To 24 VAC Connection
6. To Lamp Assembly



Canadian General Filters, Ltd.
400 Midwest Rd.
Toronto, ON M1P3A9
(416) 757-3691
sales@cgfproducts.com

- Purchase replacement parts at your local dealer or online: www.generalaire.com.
- Visit www.generalaire.com (Click on "Literature") to download GeneralAire[®] brochures, installation & owner's manuals and product guides.
- Be sure to watch, tweet, follow and like GeneralAire[®]
- Subject to change without notice.

1/2012 GFI / JPF



General Filters, Inc.
43800 Grand River Avenue
Novi, Michigan 48375
Fax (248) 349-2366
sales@generalfilters.com
www.generalaire.com

