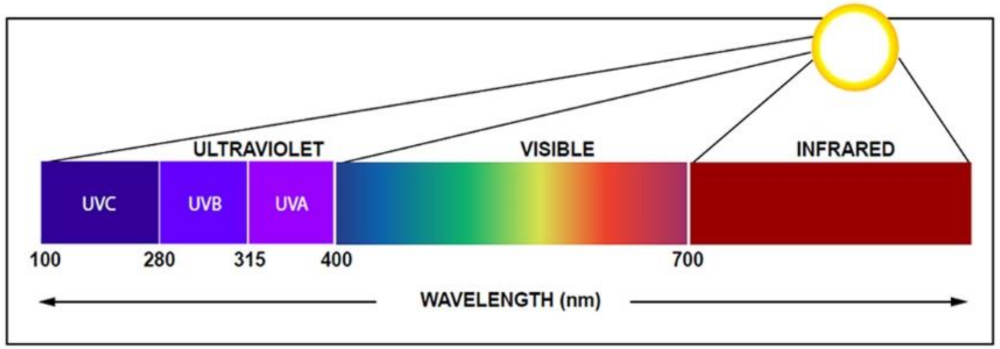
LIGHT PROGRESS

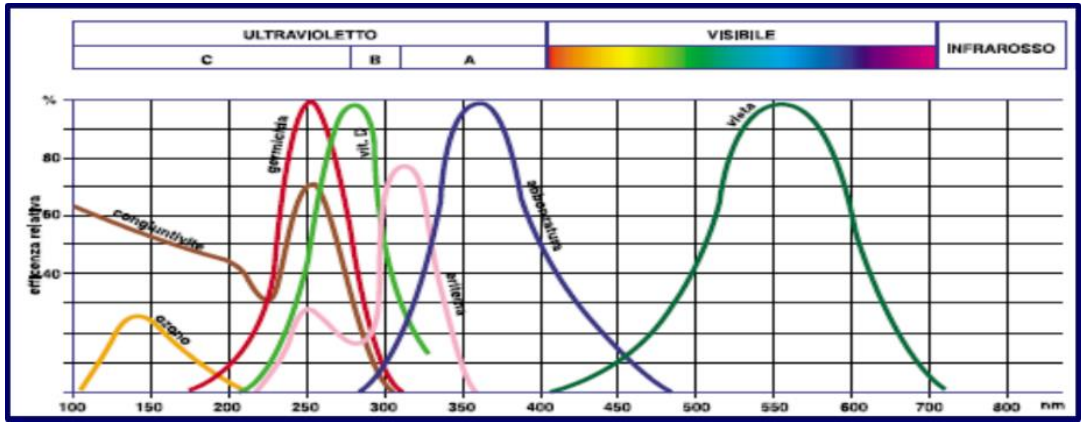
Grease and Odours Reduction

UltraViolet Germicidal Irradiation (UVGI)

Ultraviolet Germicidal Irradiation is known from the 60s as a good physical method to control growth and distribution of microbial organisms, pathogens, spores, moulds, etc.

What does UVGI mean ?





Light in a broad sense can be divided in visible, infra-red and ultraviolet rays.

Ultra-violet rays (invisible) can be classified in :

- UV - A (with tanning properties),
- UV - B (with therapeutic properties)
- UV – C (with germicidal properties).

What does UVGI mean ?

The absorption of a UV photon by the DNA of microrganisms causes a destruction of a link in the DNA chain, and consequently the inhibition of DNA replication.

The germicidal effects of the UV-C radiation destroy DNA of Bacteria, Viruses, Spores, Fungi, Molds and Mites avoiding their growth and proliferation.

UVGI technology is a physic disinfection method with a great costs/benefits ratio, it's ecological, and, unlike chemicals, it works against every microorganisms without creating any resistance.

Micro-organism DNA
(before UV-C exposure)

Micro-organism DNA
(broken by UV-C exposure)

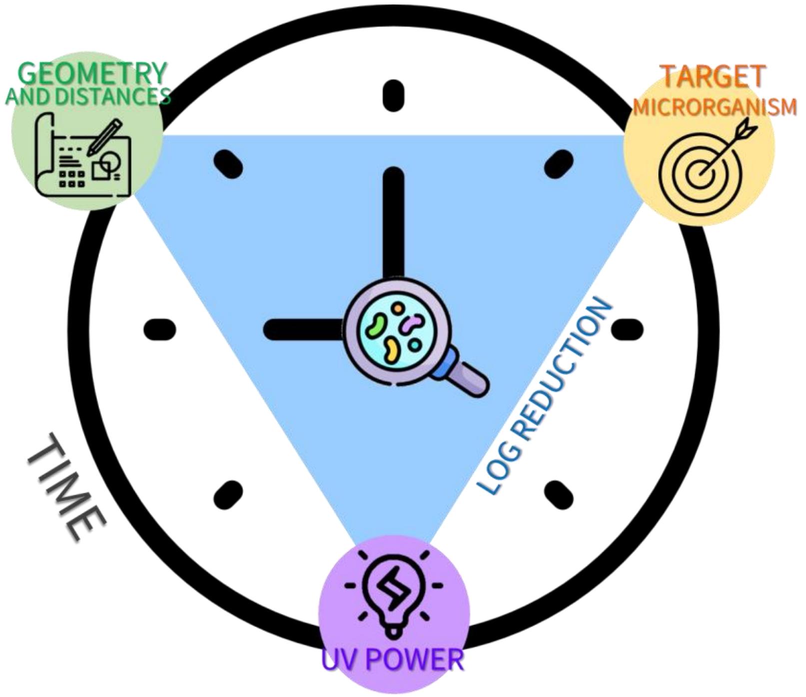
UV Disinfection Key Factors

LIGHT PROGRESS

Each microorganism has a specific UV-resistance threshold, called DOSE. The specific dose need to be delivered to get a proper disinfection level, which is expressed in LOG REDUCTION (1 Log=90%, 2 Logs=99%, 3 Logs=99,9%, etc).

Therefore, for some microorganisms a low level of UV POWER is sufficient to be eliminated, while for others it takes more power to get same elimination level...or alternatively a longer exposure TIME.

These factors are essential to understand UV technology:



- Disinfection level that needs to be achieved (Log Reduction);
- Target pathogen (and its dose);
- UV power in play;
- Exposure time / geometry and distance balance;

UV DOSE needed to eliminate 99% (2 Logs) value in (µW/cm2 SEC)

BACTERIA		Virus (genieric, DNA e RNA)	
Mycobacterium tuberculosisn (TBC)	4300	Virus dell' influenza A	4558
Escherichia coli ATCC 11229	4800	Hepatitis A HM175	8000
Legionella pneumophila ATCC 33152	3200	Corona Virus (SARS-CoV1 – MERS-Cov)	1200-1500
Pseudomonas aeruginosa ATCC 9027	6500	Rotavirus	15000
Salmonella ATCC 6539	4500	Molds	
Staphylococcus aureus	3200	Aspergillus Amstelodami	66700
Streptococcus hemolyticus	4400	Aspergillus Brasiliensis (Niger)	226000
Vibrio cholerae	4100	Yeasts	
MRSA	6550	Comuni lieviti dolciari	12000
Clostridium Difficile	10000	Lievito di birra	20000

SANITATION means bringing the microbial load into acceptable and optimal hygiene standards that depend on the intended use of the environments concerned. Sanitation is often used to mean “clean” and must however be preceded by cleaning.

DISINFECT means to reduce the microbial load deeply, that is to eliminate at least 1 log (90%) of the bacteria present. Microbial load reduction is a basic value in disinfection and it is expressed in Log Reduction.

A good disinfection level is around 2Logs (99%) a very good disinfection is 3Logs (99,9%), and 4Logs (99,99%) is considered a pretty high standard.

STERILITY is the closest level anyone can get to achieve complete reduction of microbial load, we can talk about sterilization only if reduction is proved to be not less than 6Logs, meaning 99,9999%.

To declare sterility test has to be proved and certified by third parts by law.

SANITATION

DISINFECTION

STERILIZATION

our Company

LIGHT PROGRESS®

since 1987

Light Progress

studies, develops, projects and manufactures

Ultraviolet Germicidal Irradiation devices

LIGHT PROGRESS

MADE IN ITALY

LIGHT PROGRESS

2019 -

New German Branch Office, Frankfurt.

Light Progress has a brand-new office to follow clients from Germany, Austria, Switzerland, UK, and East and North EU in general. Russian market is also a one of our future target.

Main goal is to increase our presence in these countries and be able to offer better assistance to Key Accounts.

One new Business Development Manager has been employed to strength our Brand Identity and offer a better service for old and new clients.

Great reseller and distributors network

Benefits

We eliminate
every harmful
microorganism,
up to 99,999%

We improve
your product
Quality

We ensure
you safety

We support
sustainability

We make you
save money

Our team
is there to
support you

Standards

why LIGHT PROGRESS ?

We offer the **widest product range** of UVGI Devices on the market, providing different solutions, great quality, 100% Made in Italy.

Our Team sizes and projects every application designing a **custom solution** for each specific case, we invest in R&D e work together with Universities and big companies, leaders in their field.

Our products **fit in different application fields**, such as Healthcare, Food Industries, Water Treatment, Odour reduction, HVAC, Public Trasports, etc. with thousand clients in Italy and abroad.

LIGHT PROGRESS

operates in different fields and turns Ultraviolet Technology into real Solutions, providing a Specific Device for every application needed.

HVAC

Water

Health

Food

Smell reduction

Certificates

LIGHT PROGRESS

LIGHT PROGRESS

DECLARATION OF COMPLIANCE

We, LIGHT PROGRESS S.r.l., hereby declare under our own responsibility that the following units of own production:

⇒are in accordance with EEC directive 2014/30/EU (Electromagnetic Compatibility)
⇒are in accordance with EEC Machinery Directive dispositions 2006/42/EU
⇒are in accordance with EEC Low Voltage Directive 2014/35/EU
⇒are in accordance with EEC (RoHS) directive 2002/95/EU and 2011/65/EU

TECHNICAL STANDARDS APPLIED

UNI EN ISO 12100:2010	Safety of Machinery - Basic Concepts, General Principles for Design - Risk assessment and risk reduction
UNI EN ISO 13857:2008	Safety of Machinery - Safety Distances to prevent danger zones being reached by the upper and lower limbs (2008)
ISO 14120:2015	Safety of Machinery - Guards - General Requirements for the Design and construction of fixed and movable guards
UNI EN ISO 13849-1:2016	Safety of Machinery - Parts of the Control System related to the Safety – Part 1: General Design Principles
UNI EN ISO 14119:2013	Safety of Machinery - Interlocking devices associated with guards - Principles for design and selection
CEI EN 60204-1/EC	Safety of Machinery - Electrical Equipment of Machines. Part 1: General Rules (2010)
EN 61439-1:2011	Low-voltage Switchgear and Control Gear Assemblies. Part 1: General rules

FURTHER TECHNICAL STANDARDS APPLIED:

IEC EN 60335-1 "Safety of household electrical appliances and similar"
Electronic Ballasts for the control of the lamps in accordance with the standard EN 60928.
Germicidal UV-C Lamps in accordance with EN 61199.
Electrical Protective Measures in accordance with IEC 70-1, EN 60229.

Anghiari, 05 January 2017

LIGHT PROGRESS

Responsible for Standards: Dr. Aldo Santi

LIGHT PROGRESS S.r.l. Via G. Marconi, 81 - 53031 ANGHIARI (AR) - ITALY - http://www.lightprogress.com

Jan-2017 Pag. 22/24

---

kiwa

CERTIFICATE

Reg. Number	6950 - A	Valid From	2019-07-28
First issue date	2007-12-21	Last change date	2019-07-28
Valid Until	2022-07-29	IAF Sector	19

Quality Management System Certificate
ISO 9001:2015

We certify that the Quality Management System of the Organization:

LIGHT PROGRESS S.r.l.

Is in compliance with the standard UNI EN ISO 9001:2015 for the following products/services:

Design and production of UV-C rays disinfection systems.

Chief Operating Officer
Giampiero Belcredi

The maintaining of the certification is subject to annual surveillance and dependent on the observance of Kiwa Cermet Italia contractual requirements.
This certificate is composed of 1 page.

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta all'attività di direzione e coordinamento di Kiwa Italia Holding Srl
Via Cadriano, 23
40057 Granarolo dell'Emilia (BO)
Tel +39.051.459.3.111
Fax +39.051.763.382
E-mail: info@kiwacermet.it
www.kiwa.it

CERMET

LIGHT PROGRESS S.r.l.
Registered Headquarters
- Località San Lorenzo, 40 52031 Anghiari (AR) Italy

Certified Sites
- Località San Lorenzo, 40 52031 Anghiari (AR) Italy

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

SGQ N° 007A

CERTIFICATE OF COMPLIANCE*

Certificate Number	20130702-E362672
Report Reference	E362672-20130628
Issue Date	2013-JULY-02
Issued to:	LIGHT PROGRESS SRL VIA G. MARCONI 81 52031 ANGHIARI AR ITALY
This is to certify that representative samples of	ACCESSORIES, AIR-DUCT MOUNTED Duct-Mounted UV Lamp Assembly, Models UV-RACK, followed by 3/, 4/ or 6/, followed by 40H, 60H or 90H. Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	Bi-National Standard for Heating and Cooling Equipment, ANSI/UL 1995-2011 and CAN-CSA C22.2 No. 236-11
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Classification Mark for the U.S. and Canada should be considered as being covered by UL's Classification and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Classification Mark includes: the UL in a circle symbol: with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and the product category name (product identity) as indicated in the appropriate UL Directory. The UL Classification Mark for Canada includes: the UL Classification Mark for Canada: with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and the product category name (product identity) in English, French, or English/French as indicated in the appropriate UL Directory.

Look for the UL Classification Mark on the product.

William R. Carney, Director, North American Certification Programs
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus

Page 1 of 1

*Available for selected items

UNIVERSITÀ DI SIENA
1240

University Tests - Air Treatment

LIGHT PROGRESS

Dpt of Physiopathology, Experimental Medicine and Public Health
University of Siena
Via Aldo Moro 3, 53100 – SIENA - ITALY
Tel +39 0577 234134 - Fax +39 0577 234090
e-mail: epidmol@unisi.it

MOLECULAR EPIDEMIOLOGY
Research Division
EpidMol

Valutazione dell'effetto che purificatori d'aria a raggi UV-C prodotti da ***LIGHT* PROGRESS®** hanno sulla carica microbica e fungina presente nell'aria.

University of Siena
Department of Physiopathology,
Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomoli

Grafico 1

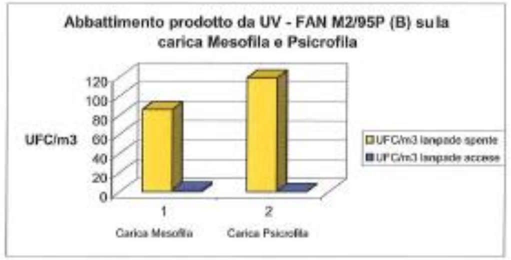
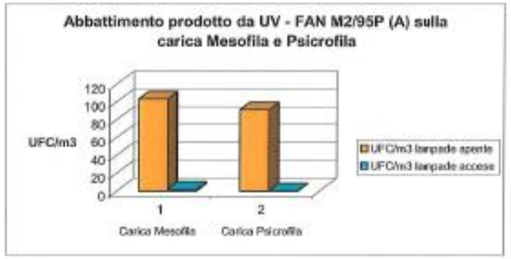


Grafico 2



University of Siena
Department of Physiopathology,
Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomoli

University Tests - Microbial Load Reduction

UNIVERSITÀ DI SIENA
1240

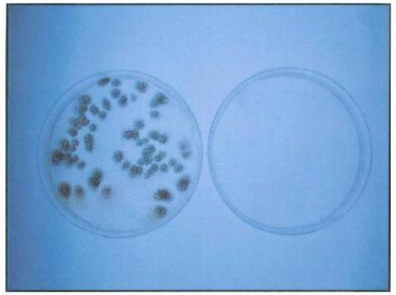
Dpt of Physiopathology, Experimental Medicine and Public Health
University of Siena
Via Aldo Moro 3, 53100 – SIENA - ITALY
Tel +39 0577 234134 - Fax +39 0577 234090
e-mail: epidmol@unisi.it

MOLECULAR EPIDEMIOLOGY
Research Division
EpidMol

Valutazione dell'effetto battericida, sporicida e fungicida dei raggi UV-C emessi da apparecchi *LIGHT* PROGRESS®

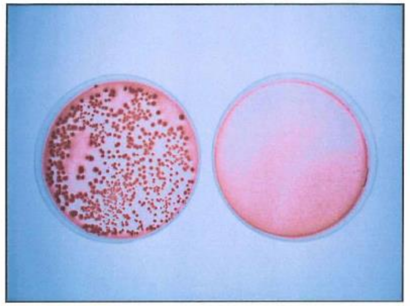
University of Siena
Department of Physiopathology, Exp Medicine and Public Health
Lab. Molecular Epidemiology
Prof. Emanuele Montomoli

Aspergillus niger



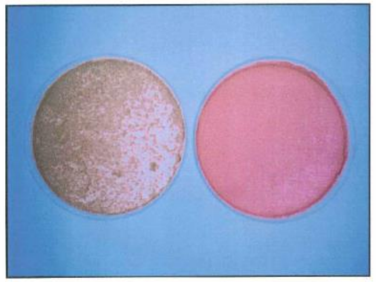
Aspergillus niger su Sabouraud dextrose Agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

Escherichia coli



Escherichia coli su Macconkey Agar n.3, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

Staphylococcus aureus



Staphylococcus aureus su Mannitol salt agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

Grafico 8

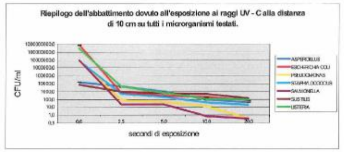
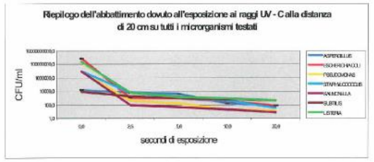
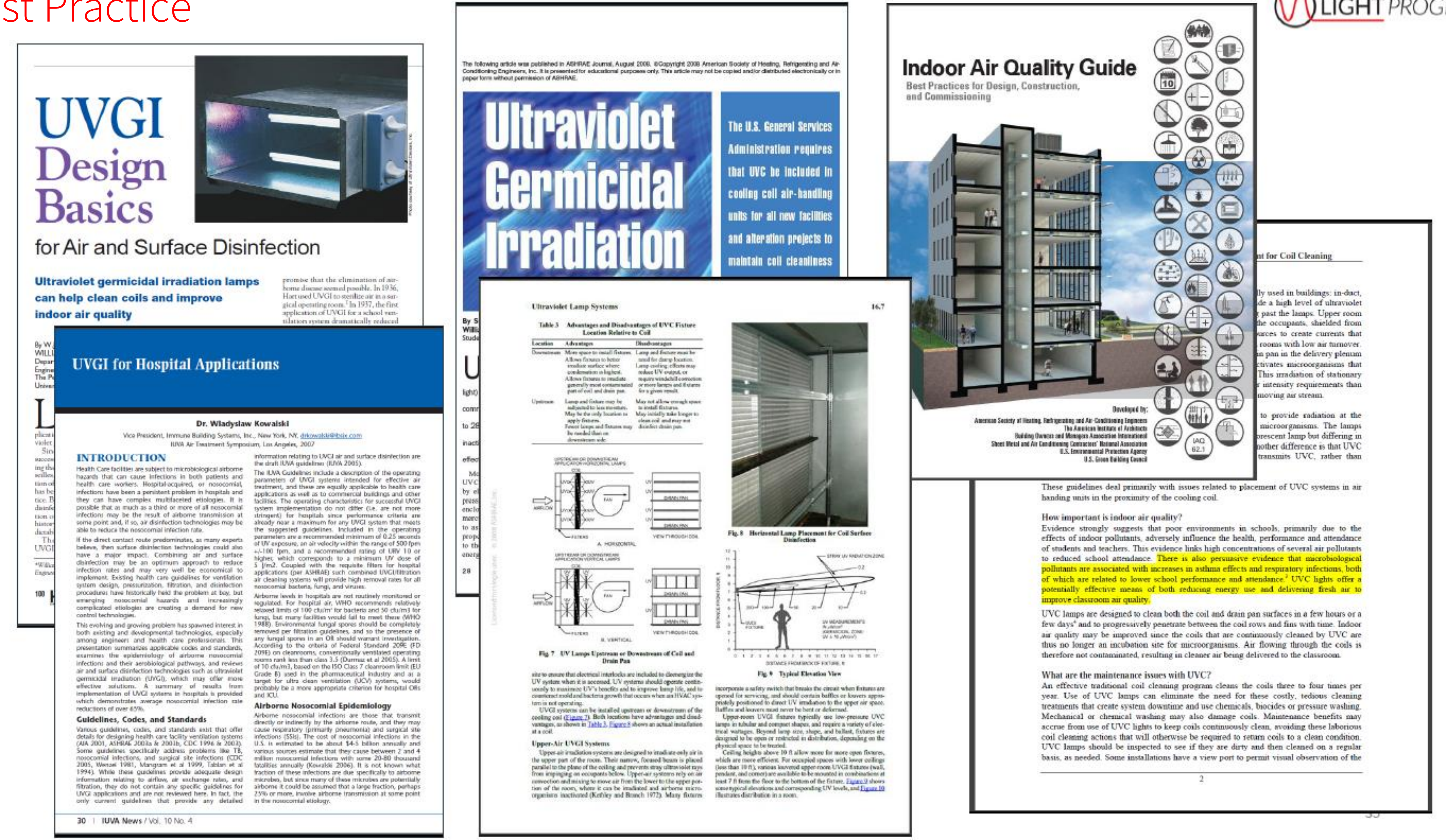


Grafico 9



Best Practice

LIGHT PROGRESS



Scientific Studies

LIGHT PROGRESS

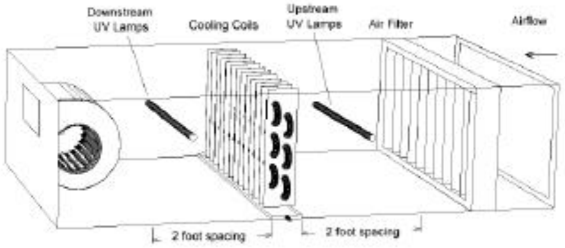


Figure 2.1: Location and spacing for UVGI system in an air handling unit.

2.2 Location of UV Lamp Ballasts

UV lamp ballasts should preferably be located external to the ventilation system although this is not currently a strict requirement due to so many systems that have integral lamp ballasts that must be located wherever the lamp is located. One of the problems with lamp ballasts being located inside air handling units is that they may be exposed to temperature and humidity extremes.

If lamp ballasts are located in an internal lamp housing, the housing should be of drip-proof construction or other approved housing method. If lamp ballasts are located external to the air handling unit or ductwork, the wiring must be run through conduit such that there is no exposed wiring inside the air handling unit. Exposed wiring may be subject to deterioration inside and air handling unit and may also be exposed to UV irradiation, which may cause photodegradation over time and thus pose a fire hazard.

2.3 Operating Conditions

Both the UV lamp and the ballast should be located such that the ambient operating conditions (i.e. temperature and relative humidity) are within the component design or operating limits. Refer to manufacturer's information for design operating conditions. In general, both UVGI and filters are designed to operate at an air velocity of 500 fpm, although some lamps may be suitable for operation at higher velocities. Variations in air velocity (i.e. +/- 100 fpm) may be acceptable depending on the manufacturer's lamp but such variations should be evaluated to include or assess the impact on UV output. See IUVA-G01A-2005, "General Guideline for UVGI Air and Surface Disinfection Systems," for

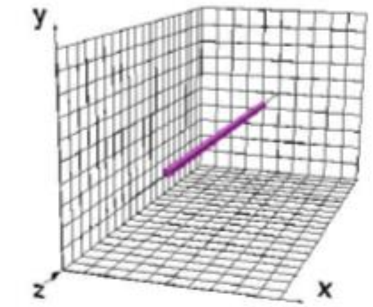


Figure 6.1: Grid for a 10x10x20 Matrix and Coordinate System, shown with a lamp in an axial configuration.

6.2 Operation of the Program

The program takes the input data from an input text file, performs the analysis and outputs results in a text file. Intermediate results can be extracted and graphed in spreadsheets.

Input data requires definition of the coordinate system. The lamp coordinates are based on the lower left front corner of the matrix being at (0, 0, 0). The indices for both the large and small matrices are also based on this (0, 0, 0) point.

Using the input the enclosure intensity field is determined by evaluating the direct intensity field of the lamp, the first reflection intensity field, and the total inter-reflected intensity field. These are summed to produce the total intensity field of the enclosure. This process is shown by the flow chart in Figure 6.2.

As mentioned previously, the inter-reflections are only computed for three iterations, after which the total bulk average intensity is determined mathematically for the remaining inter-reflections. Each of the first three inter-reflection calculations involves computing the exchange of radiative energy from each of the blocks on the other three sides, for all four walls. The summed result produces the wall intensity contours for the next set of inter-reflection calculations. This is the most calculation-intensive portion of the program and takes up the most operating time. In comparison, the direct and first reflection calculations proceed relatively rapidly.

Because two different size matrices are used for the computations, it is necessary to scale up the smaller matrix to match the size of the larger matrix prior to adding them. This is

MN-00-11-1

Effective UVGI System Design Through Improved Modeling

W.J. Kowalski, P.E.
Student Member ASHRAE

William P. Bahnfleth, Ph.D., P.E.
Member ASHRAE

ABSTRACT

This paper summarizes an improved methodology for predicting the rate of airstream disinfection for UVGI systems that will enable effective designs and lower energy costs. This approach uses radiative view factors to define the three-dimensional intensity field for lamps and reflective surfaces inside enclosures. Lamp photosensor data for a variety of lamps are shown to agree more closely with the view factor model than with models using the Inverse Square Law. The intensity field due to reflectivity from internal surfaces is determined by assuming diffuse reflectivity. An analytical method is used to determine the inter-reflection component of intensity due to multiple internal reflections. The superposition of these components yields a three-dimensional intensity field matrix that can be used to calculate disinfection rates for any given microbial rate constant. Results from laboratory bioassays using S. marcescens *in various duct configurations have corroborated model predictions within ±15% in most cases.*

INTRODUCTION

Currently available design information has not guaranteed predictable performance for UVGI air disinfection systems. Some of today's design practices can overdesign systems, leading to prohibitive costs and high energy consumption. Other design practices lead to undersized and ineffective systems. Design practices have not changed in decades, and it is worthwhile to review the history of UVGI applications to discover how this situation has come to be.

Although the first UVGI water disinfection system was implemented in 1909 (AWWA 1971), the first UVGI systems designed for airstream disinfection weren't implemented until the 1930s (Sharp 1940). Based on limited laboratory data and using newly available UVGI lamps, these systems were sized without the benefit of preexisting criteria. Tests, either air sampling or epidemiological, were used to determine their efficacy. Some of these systems were highly successful, such as those used to control measles in schools, and one used by Riley to eliminate TB bacilli from hospital ward exhaust air (Riley and O'Grady 1961).

Other designs appeared to be ineffective, with the result that the initial glowing reviews of this technology became tempered. Guidelines were issued that sanctioned the use of UVGI only in combination with HEPA filters (Luciano 1977; ASHRAE 1991). No studies were ever undertaken to determine the root cause for any UVGI system failures. Apart from improvements in lamp designs, applications technology for airstream disinfection has remained almost stagnant for decades.

The first design guidelines for UVGI airstream disinfection systems were developed in the 1940s (Luckiesh and Holladay 1942; Luckiesh 1946). Versions appeared in catalogs that continue to be reproduced and used today (Philips 1985). These guidelines offer procedures, charts, and tables to size lamps and reflective surfaces so as to obtain a desired disinfection rate. These sizing methods, though admirably detailed for the period, suffer from a number of deficiencies:

1. They fail to define the intensity field, instead merely using the lamp rating or else relying on photometric data for lamp midpoints.
2. Lamps are specified without regard to lamp location or type.
3. The correction factor for rectangular ducts ignores the intensity field variations due to surface reflectivity.

W.J. Kowalski is a doctoral candidate and **William P. Bahnfleth** is an associate professor in the Department of Architectural Engineering, Pennsylvania State University, University Park, Pa.

our Product Range


LIGHT PROGRESS
DIRECT IRRADIATION
UV REFLEX
UV FLOW
UV DIRECT
UV STICK
UV PIPE
UV STYLO
TEAM OF LAMPS
UV TEAM
UV TEAM-A
AIR PURIFIERS
UV-FAN
WATER TREATMENT
UV WATER
AIR CONDITIONING
UV DUCT
UV RACK
UV STYLO
UV STICK-SCR
UV STLO X
FAT AND SMELL
UV SMELL
UV STYLO S
BOX AND CABINETS
UV BOX
UV CABINET
STETCLEAN
STETCUBE

What happens inside Kitchen Ventilation Systems ?

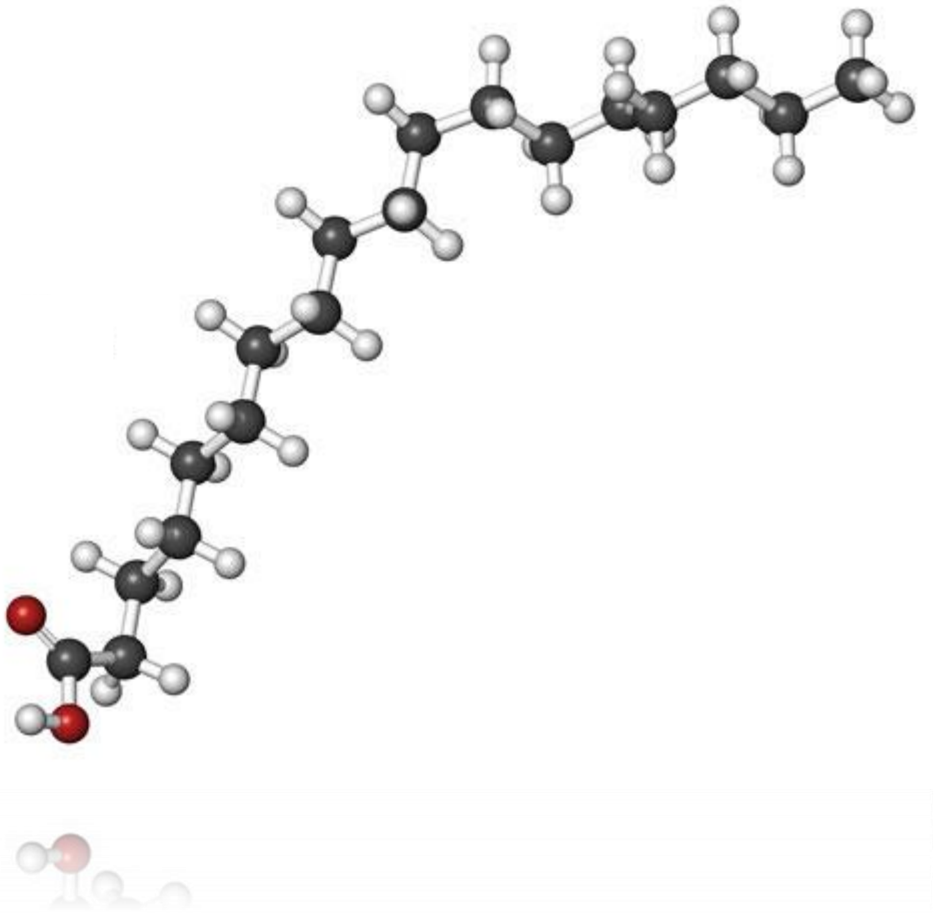
LIGHT PROGRESS

In restaurants and community kitchens, during food cooking phases, fats pollutants and unpleasant smells are generated.

Besides these inconveniences, those deposits are very dangerous for **fire risks**, and for this reason continuous maintenance operations are necessary.

Furthermore food cooking bad smells may be disputed by authorities and give often rise of legal issues with the neighborhood.

What happens inside Kitchen Ventilation Systems ?



Fats are carbon and hydrogen compounds, with a structure made of complex chains.

If fats are **exposed to an intense UV-C irradiation**, they absorb part of this powerful energy, and molecules, placed in a higher energy state, become more reactive.
For this reason they recombine with oxygen present in the air.
This process causes a particular and immediate chemical reaction, the **"cold combustion"**.

Results of this reaction are organic and odorless short chain gases, such as carbon dioxide (CO2), water, etc.., normally present in air.

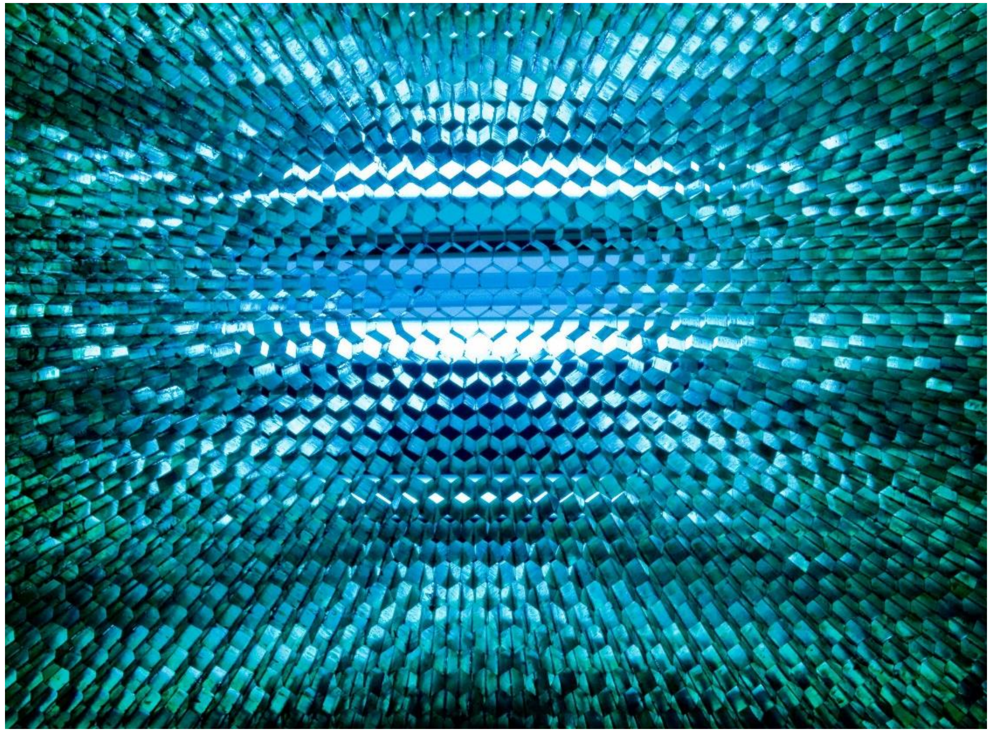
What happens inside Kitchen Ventilation Systems ?

UV-SMELL-SQ o UV-STYLO-S are applied either inside kitchen hoods or in kitchen ventilation system, through a «plenum».

Both devices can be equipped with UV-C+O3 (Ozone) lamps or UV-C ozone-free lamps; these are the first devices in the market that can handle ozone or ozone-free lamps, alternatively or even combined together, according to clients' needs.

So the air filtered by UV-SMELL-SQ or UV-STYLO-S during normal cooking, reduces the formation and deposits of fat and the consequent risk of fires, limiting also the growth of molds that feed usually on fats.

Special TiOX® Filter



TIOX® honeycomb filter, original Light Progress (optional) is a special filter coated with nano-structured titanium dioxide and silver salts (optional) that, in combination with the very high UVC power emitted by lamps, is an excellent photo-catalyst that degrades pollutants and organic and inorganic compounds (SOV, NOx and VOC volatile organic compounds, nitrogen oxides).

TIOX® filter performs further oxidation of polluting particles, and contributes significantly to the deodorizing action of UV-C.

Il TIOX® can be added inside UV-SMELL-SQ or in between the application of UV-STYLO-S .

LIGHT PROGRESS

UV-SMELL-SQ

— Body in STAINLESS STEEL AISI 304.

— UV-C selective (253.7 or 253,7 nm + Oz 183 nm.) high efficiency, pure quartz.

— Waterproof and dust proof (IP 55)

— Control Board in ABS; LED synoptic view with hourcounter (IP65)

— Modular system, can be applied combining more units

— facilitated connections plug with pre-wired multipole cable

— All materials are tested for resistance to intense UV-C rays and Ozone.

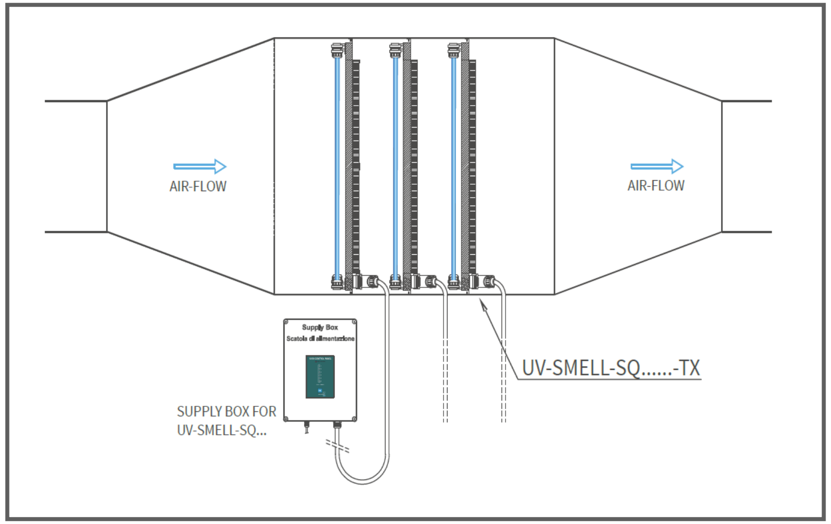
— Powered by electronic ballasts specific for Light Progress UV-C rays lamps. (220-240 V, 50-60 Hz)

— Suitable for TiOX® filter (optional)

— CE Mark (LVD - EMC - MD - RoHS).

Installation Examples

UV-SMELL-SQ

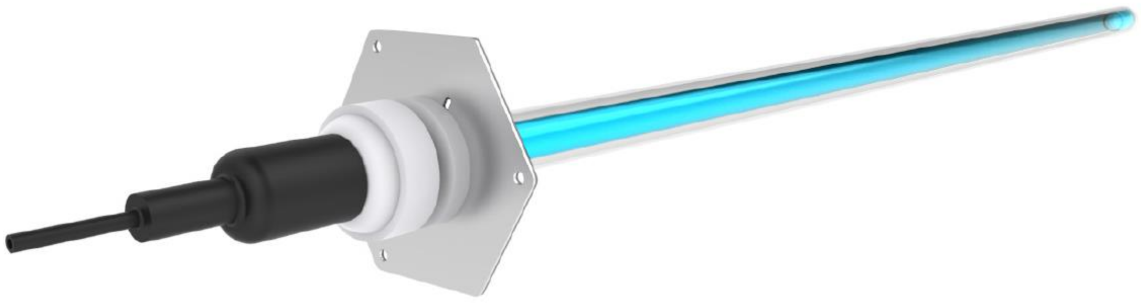


LIGHT PROGRESS

UV-SMELL-SQ

UV-SMELL-SQ		4/40H (TX)	4/90H (TX)	4/120H (TX)	6/40H (TX)	6/90H (TX)	6/120H (TX)
LIFETIME LAMP (hour)	DURATA LAMPADA (ore)	9000	9000	9000	9000	9000	9000
UV-SMELL-SQ (+Oz)		4/40H-Oz(TX)	4/90H-Oz(TX)	4/120H-Oz(TX)	6/40H-Oz(TX)	6/90H-Oz(TX)	6/120H-Oz(TX)
LIFETIME LAMP (hour)	DURATA LAMPADA (ore)	6000	6000	6000	6000	6000	6000
CONSUMPTIO N (W)	CONSUMO TOTALE (W)	40x4 = 160	80x4 = 320	100x4 = 400	40x6 = 240	80x6 = 480	100x6 = 600
UV-C EMISSION (W)	EMISSIONE UV-C (W)	13x4 = 52	26x4 = 104	32x4 = 128	13x6 = 78	26x6 = 156	32x6 = 192
MODULE DIMENSIONS (mm)	DIMENSIONI MODULO (mm)	175xAxB	175xAxB	175xAxB	175xAxB	175xAxB	175xAxB
DIMENSIONS (A)(mm)	DIMENSIONI (A)(mm)	594	1052	1332	594	1052	1332
DIMENSIONS (B)(mm)	DIMENSIONI (B)(mm)	253	253	253	358	358	358
DIMENSIONS (C)(mm)	DIMENSIONI (C)(mm)	96,5	96,5	96,5	149	149	149
SUPPLY BOX DIMENSIONS (mm)	DIMENSIONI ALIMENTAZIONE(mm)	314x394x128	314x394x128	314x394x128	314x394x128	314x394x128	314x394x128
Weigth(Kg)	PESO (Kg.)	5,50	6,00	6,50	6,50	7,00	7,50
MAX AIR FLOW TO BE TREATED (mc/h)	Volume di aria esausta trattabile (mc/h)	1.000 mc/h	2.400 mc/h	3.200 mc/h	1.600 mc/h	3.600 mc/h	4.800 mc/h

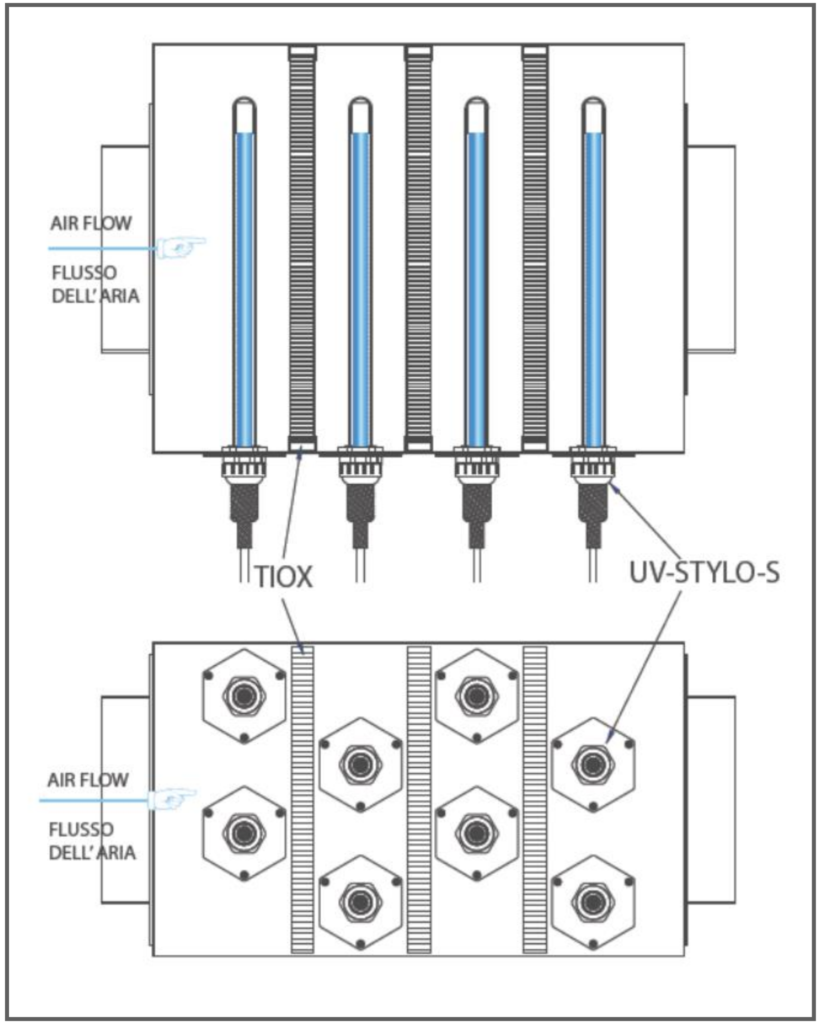
UV-STYLO-S



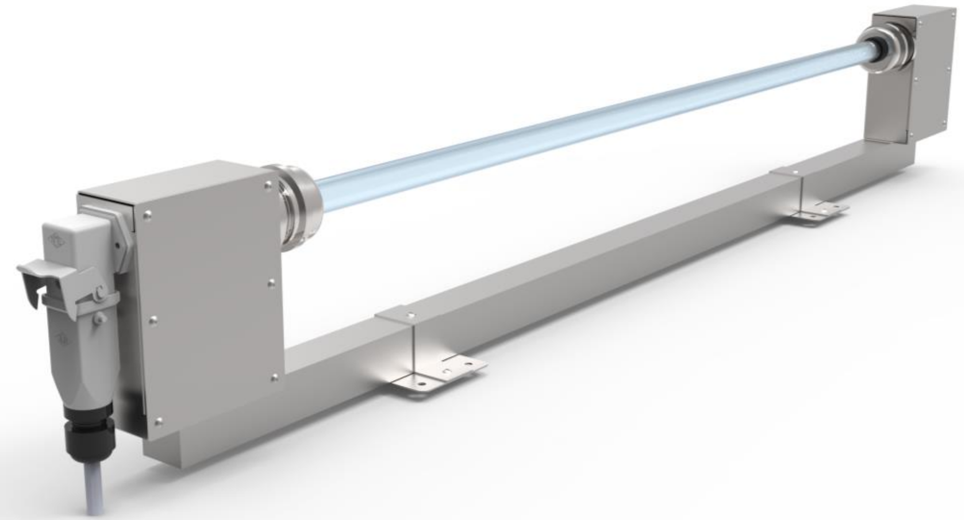
- Body in STAINLESS STEEL AISI 304.
- UV-C selective (253.7 or 253,7 nm + Oz 183 nm.) high efficiency, pure quartz.
- Waterproof and dust proof (IP 40)
- Modular system, can be applied combining more units
- Facilitated connections plug with pre-wired multipole cable
- Quartz sleeve to protect the UV lamp (or UV + Oz)
- All materials are tested for resistance to intense UV-C rays and Ozone.
- Powered by electronic ballasts specific for Light Progress UV-C rays lamps. (220-240 V, 50-60 Hz)
- Suitable for TiOX® filter (optional)
- UVLON PIPE special sleeve (optional)
- CE Mark (LVD - EMC - MD - RoHS).

Installation Examples

UV-STYLO-S



UV-SMELL-A



- Body in STAINLESS STEEL AISI 304.
- UV-C AMALGAM selective (253.7 or 253,7 nm + Oz 183 nm.) high efficiency, pure quartz.
- Waterproof and dust proof (IP 40)
- Modular system, can be applied combining more units
- All materials are tested for resistance to intense UV-C rays and Ozone.
- Powered by electronic ballasts specific for Light Progress UV-C rays lamps. (220-240 V, 50-60 Hz)
- Suitable for TiOX® filter (optional)
- CE Mark (LVD - EMC - MD - RoHS).

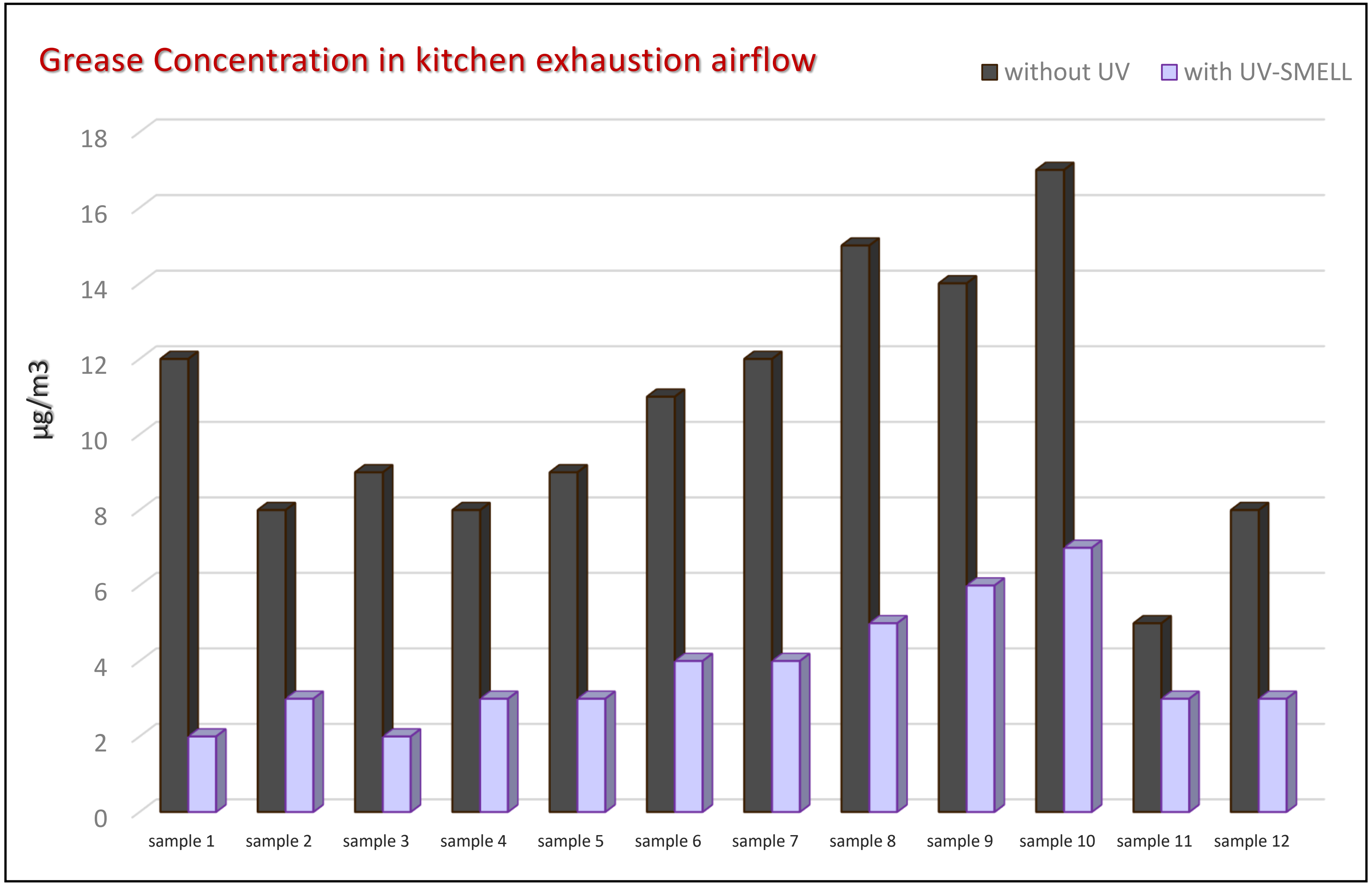
UV-SMELL-A

TABLE - Tabella

UV-SMELL-A		**172**
LIFETIME LAMP UP TO (hour)	DURATA LAMPADA FINO A (ore)	18.000
UV-SMELL-SQ (+Oz)		**172-Oz**
LIFETIME LAMP UP TO (hour)	DURATA LAMPADA FINO A (ore)	16.000
CONSUMPTION (W)	CONSUMO TOTALE (W)	1X172=172
UV-C EMISSION (W)	EMISSIONE UV-C (W)	51
MODULE DIMENSIONS (mm)	DIMENSIONI MODULO (mm)	1020X151X47
WEIGHT(Kg)	PESO (Kg.)	3
MAX AIR FLOW TO BE TREATED (m^3/h)	Volume di aria esausta trattabile (m^3/h)	1.200 m^3/h

Testing grease reduction

After taking samplings from a frying station determine the amount of grease in kitchen air.
Thanks to our systems, in every sample we took the amount of grease particles was consistently reduced.



NO GREASE =

- Fire prevention
- Less maintenance interventions
- Very few, recurring cleaning costs
- Improvement of active carbon filters' life

In any large kitchens, in shopping malls, office buildings, hotels and food court UV can help you keep the environment clean and hold odors back.

What are main benefits and advantages ?

LIGHT PROGRESS

Important reduction of odors and smells coming from kitchen ventilation system. No germs proliferation (bacteria and mold) or fat deposits.

Less maintenance interventions, deep surface cleaning without the continuous use of high pressure equipment and chemical products, usually very expensive.

Significant life improvement of active carbon filters, which are "cleaned up" by the ozone absorbed and maintain best performances in time.

Ecological Treatment (cold and dry) without any chemical spray or agent, dangerous for the environment.

Fire protection with the prevention of highly flammable fats' deposits in the hoods and inside exhaust-air ducts. Maximum safety for employees.

Quick installation, maintenance and lamps replacement are easy. Our team will help you and guide you in choosing the solution that best suits your needs.

LIGHT PROGRESS

UV-STYLO-S

UV-STYLO-S		11	16	40H (OZ)	60H (OZ)	90H (OZ)	120H
LAMP LIFETIME (hours)	DURATA LAMPADA (ore)	9000	9000	9000 (6000)	9000 (6000)	9000 (6000)	9000
CONSUMPTION (W)	CONSUMO TOTALE (W)	11	16	35	60	85	100
“A” DIMENSIONS (mm)	DIMENSIONI “A” (mm)	196	272	397	541	851	1.132
Weight (kg)	Peso (kg)	0.20	0.30	0.70	0.75	0.80	1.00
AIR FLOW IN M^3 WITH SPEED MAX 2.5 m/s	PORTATA D’ARIA IN M^3 CON VELOCITA’ MAX 2.5 m/s	80	120	280	450	600	750

What are main benefits and advantages ?

LIGHT PROGRESS

Important reduction of odors and smells coming from kitchen ventilation system. No germs proliferation (bacteria and mold) or fat deposits.

Less maintenance interventions, deep surface cleaning without the continuous use of high pressure equipment and chemical products, usually very expensive.

Significant life improvement of active carbon filters, which are "cleaned up" by the ozone absorbed and maintain best performances in time.

Ecological Treatment (cold and dry) without any chemical spray or agent, dangerous for the environment.

Fire protection with the prevention of highly flammable fats' deposits in the hoods and inside exhaust-air ducts. Maximum safety for employees.

Quick installation, maintenance and lamps replacement are easy. Our team will help you and guide you in choosing the solution that best suits your needs.

LIGHT PROGRESS

References

DAAS 25
International Group
25 years of change

Aedium
Oprema za trgovinu i ugostiteljstvo

Electrolux

LIGHT PROGRESS

REFCOND

TOSCOCANALI E IMPIANTI S.R.L.

Dussmann

FORCATERING
MADE WITH EXPERIENCE

R & R

Air System

insatek
AIR SYSTEMS & CONTROLS

TEOMAR
caldo e freddo in cucina

VORTEX®
AIR EXTRACTION TECHNOLOGY

DIMTECH

NewAir
TECHNOLOGY

VERONESI GROUP
DIVISIONE DELVEM
IMPIANTI DI ASPIRAZIONE PER CUCINE PROFESSIONALI

feka
Electrostatic Precipitator Technology

G.P.S. SRL

INSTALATER

AIRSTEEL

CHILECAMPANAS
EXPERTOS EN VENTILACIÓN INDUSTRIAL

CMC VENTILAZIONE

IGF

Fornitalia

air builders

aluminox

Thank you