

SYNERGETIC[®]
LEADING INNOVATIVE FLYING INSECT CONTROL

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From research + development to innovation + testing

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SYNERGETIC®

Bringing leading flying insect control to the North American market, Synergetic® offers innovative, patented product solutions backed by expert technical support.

Building on the heritage of P+L Systems quality, Synergetic® is proud to bring leading product flylights to the USA, Canada and Caribbean.

The Synergetic® brand offers flylights for front-of-house areas, food manufacturing, storage areas and backrooms and commercial food preparation areas, covering a wide range of applications for every conceivable flying insect control scenario.

For advice on Synergetic® flylights and accessories please call our technical sales team toll free on (877) 928-2847 or email info@pandlsystems.com

Alternatively visit www.synergetic-flylights.com to keep up with the latest flying insect control news!

P+L Systems®

Synergetic® became part of the P+L Systems Group in 2009. P+L Systems delivers a range of brands to the facilities management industry, offering our global customer base a wide range of products to support their FM needs. P+L Systems develops leading brands for specialist commercial markets, including flying insect control, bird control, washroom hygiene solutions and automated washroom systems.

Leading brands - Our reputation is built on leading brand heritage, developed with extensive knowledge of our markets and supported by experts in each field. Each of our brands is over 20 years old, built on a reputation of high quality products and support services. We continually work to develop our brands to support our customers needs throughout the world.

Leading products - Customer insight is at the heart of our product innovation program, allowing us to develop world class products designed with serviceability, design and quality in mind. Our close working relationships with customers is key to our product development ethos, giving us insight into their needs and focusing on solutions based innovation.

To find out more about the P+L Systems Group and our brands, please visit www.pandlsystems.com

"We have a strong focus on innovation and development, allowing us to offer our customers world leading, patented products"

INNOVATION AND PRODUCT DEVELOPMENT

- Leading patented technologies developed through a consistent new product development program
- Offering reduced installation and service times and improved results
- New products are developed with worldwide legislative and efficacy test houses



EFFICACY TESTING

- Tried and tested product solutions
- Efficacy assessments carried out by independent test houses and at our in-house R+D facility
- Testing and approvals from leading industry and government bodies
- Material and component testing



COMPREHENSIVE RANGE OFFER

- A comprehensive range, designed for pest management professionals
- Complete insect control range offers a choice of electric grid, glueboard and decorative units ideal for commercial, industrial and front-of-house areas



TECHNICAL SUPPORT

- Specialised technical teams with extensive industry experience
- Support available in over 12 languages
- Advice and support on product selection and installation
- Guidance on project quotations
- Training support packages

POSITIONING A FLYLIGHT

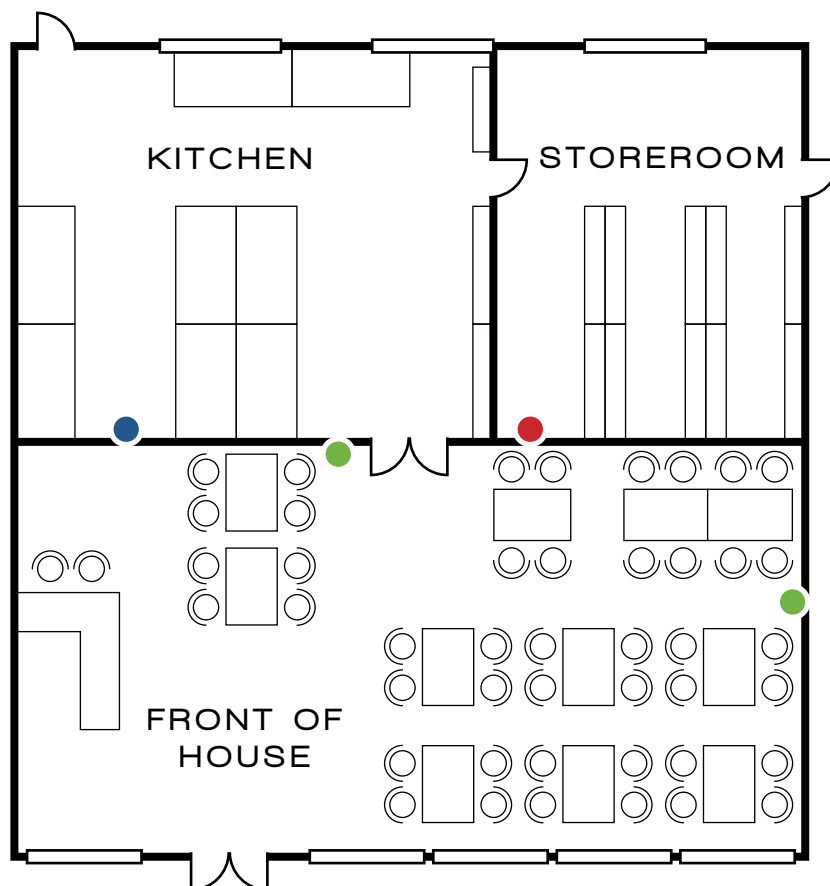
Every application is unique, so each situation requires an individual assessment for flylight positioning, however, there are basic principals that should be followed

- Recommend enough units to cover the area to be protected
- Install units away from sources of light competition, such as windows, doors and high powered artificial light sources
- Consider sources of heat and airflow, such as heaters / AC units
- Don't install units directly above sensitive areas, such as food preparation areas
- Glueboard units should be used in sensitive applications such as food preparation or production areas
- Consider access for installation and future servicing
- Wherever possible, flylights should be positioned at 90° to sources of natural light, such as windows, doors and skylights
- Flylights should be positioned in between potential entry points, so as to intercept flying insects before they reach sensitive areas
- Flylights should not be installed either too high or too low in the area to be protected, with an optimum height of around 6'7"

FLYMAP

INSECT CONTROL

- Killing Grid – Backroom
- Glueboard – Sensitive area
- Decorative – Front of house





BULBS - SYNERGETIC®

We understand that our customers work within a variety of environments and need a choice of bulbs which will offer solutions to the wide range of issues faced. We have developed a comprehensive range incorporating the leading brands and technologies to ensure that it's easy to find the right bulb every time.

HOW OFTEN SHOULD UV BULBS BE CHANGED AND WHY?

We recommend that UV bulbs are changed every 12 months to ensure maximum efficacy.

The levels of UV produced by fluorescent bulbs deteriorates rapidly throughout the life of the bulb. Whilst the bulb will continue to glow blue or green indefinitely, after approximately 8,000 hours the amount of useful UV (Which humans cannot see) drops to a level where it is no longer attractive to flying insects. As a result, UV bulbs must be replaced annually to ensure they remain effective in producing useful levels of UV. This replacement cycle is typically undertaken just before the peak insect season, (March/April within North America) to ensure the flylight is producing the maximum amount of UV throughout the critical insect season.

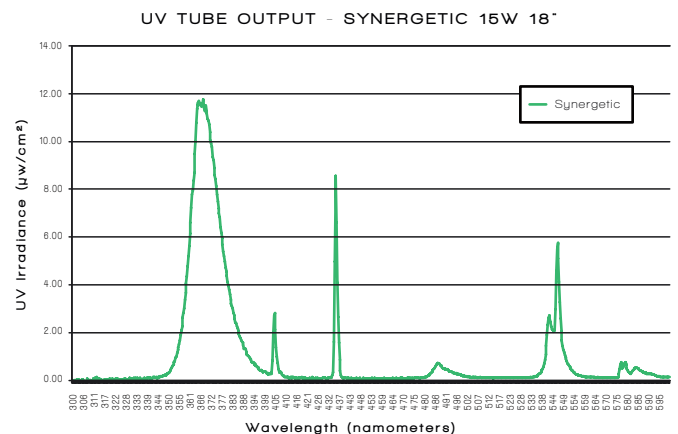
SYNERGETIC®

Easily recognized by their glowing green light, Synergetic® bulbs have been developed to attract a much wider range of flying insects than traditional blue UV bulbs.

Based upon a unique phosphor mix, patented technology ensures that a broader 'two peak' wavelength is maintained (368nm and 540nm) attracting a wide range of insects including stored product moths, whilst attracting the common housefly as effectively as traditional blue UV bulbs, giving you the best of both UV technologies.

Extensive testing has been carried out over many years by independent entomologists and test laboratories, showing the benefits of green light in combination with UV.

A wide diversity of insects were shown to be more attracted to Synergetic® light, including greenhouse whiteflies¹, silverleaf whiteflies, thrips, leafhoppers², Indian meal moths, Mediterranean flour moths³, tropical warehouse moths, warehouse moths⁴, plus many more!



DID YOU KNOW?

Many insect pests of public health, stored product and agricultural importance have evolved visual pigments which allow them to perceive green light.⁵

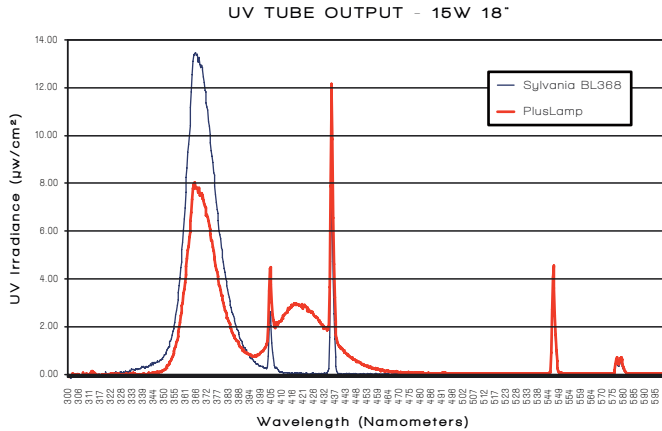
Recordings of electroretinograms in housefly eyes found peaks in both UV (340-365nm) and blue green (450-550nm)⁶ with similar sensitivities found in other Diptera eg. *Calliphora vicina* Meig⁷, *Haematobia irritans* L., *Musca autumnalis* De Geer, *Stomoxys calcitrans* L.⁸, *Glossina morsitans morsitans* Westw.⁹, and *Fannia canicularis* L.¹⁰, as well as the mosquito *Aedes aegypti* (323-345nm and 523nm)¹¹. Several Tabanid species were also found to have a peak activity of 400-600nm¹².

¹ Coombe, P.E. 1981. Wavelength specific behavior of the *whitefly Trialeurodes vaporariorum* (Homoptera: Aleyrodidae). *J. Comp. Physiol.* 144:83-90 ² Chu, C.C., Printer, P.J., Henneberry, T.J., Umeda, K., Natwick, E.T., Wei, Y., Reddy V.R & Shrepatis, M. 2000. Use of CC traps with different trap base colours for *silverleaf whiteflies* (Homoptera: Aleyrodidae), *thrips* (Thysanoptera: Thripidae) and *leafhoppers* (Homoptera: Cicadellidae). *J. Econ. Entomol.* 93:1329-1337. ³ Soderstrom, L., 1970. Effectiveness of green electroluminescent bulbs for attracting stored product insects. *J. Econ. Entomol.* 63: 726-731. ⁴ Rees, D.P., 1985. Review of the response of stored product insects to light of various wavelengths, with particular reference to the design and use of light traps for population monitoring. *Trp. Sci.* 25: 197-21. ⁵ Small, G., 2009. Review of the attraction of insects to green light. *l2L Research* ⁶ Mazokhin-Porshniakov, G.A., 1960. Colourimetric study of the properties of colour vision of insects as exemplified by the *house fly*. *Biofizika* 5 (3):295-303 ⁷ Burkhardt, D., 1962. Spectral sensitivity and other response characteristics of single visual cells in the *arthropod* eye. *Symp. Soc. Exp. Biol.* 16:86-109. ⁸ Agee, H.R. & Patterson, R.S., 1983. Spectral sensitivity of stable, face and horn *flies* and behavioural responses of stable *flies* to visual traps (Diptera: Muscidae). *Environ. Entomol.* 12 (6): 1823-1828. ⁹ Green, C.H. & Cosens, D. 1983. Spectral responses of the *tsetse fly, Glossina morsitans morsitans*. *J. Insect Physiol.* 29 (10): 795-800 ¹⁰ Bellingham, J., & Anderson, M., 1993. Variations and sexual differences in the spectral sensitivity of the compound eye of the *housefly Musca domestica* (L.) and the lesser *housefly Fannia canicularis* (L.). Proceedings of the International Conference on Insect Pests in the Urban Environment 1:480. Cambridge. ¹¹ Muir, L.E., Throne, M.L. & Kay, B.H. 1992. *Aedes aegypti* (Diptera: Culicidae) vision: Response to stimuli from the optical environment. *J. Med. Entomol.* 29(3):445-50. ¹² Smith, W.C., 1986. The retina of the *Tananiae* (Diptera) compound eye: an ultrastructural and electrophysiological study. M.S. thesis, University of Florida, Gainesville, USA. 406 pp.



SYLVANIA

A respected, established brand within the pest control industry, the BL368nm range from Sylvania is the leading brand of blue UV bulbs, trusted by the pest control industry since its launch over 10 years ago.



Available in a comprehensive range of models, including shatterproofed versions, the Sylvania BL368nm range catches common flyspecies faster, making it ideal for a wide range of applications.

DID YOU KNOW?

Some stored-product beetles respond better to blue UV light, including the cigarette beetle, the merchant grain beetle, the rice weevil and the red flour beetle.

PLUS+LAMP™

Offering superb value, the PlusLamp™ range offers users a wide choice of 368nm blue UV bulbs in both standard or shatterproof options.

Testing showed that the PlusLamp™ 368nm range experienced a lower rate of deterioration than many leading brand UV bulbs.

SHATTERPROOFING

Shatterproof bulbs provide peace of mind in sensitive areas by retaining glass shards if the bulb is broken. All our ranges can be shatterproofed, ensuring that you can choose your ideal bulb to help you protect even the most sensitive areas, including food preparation and assembly areas. Shatterproof bulbs MUST be installed in areas operating a 'glass free policy'.

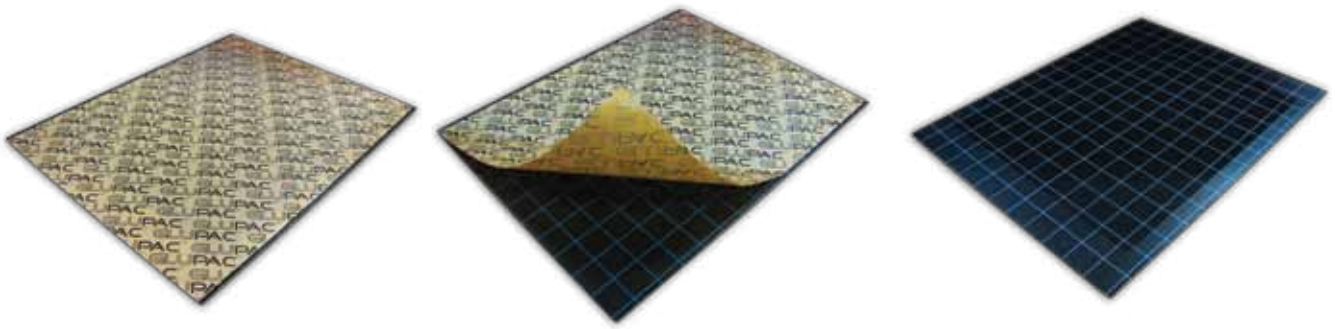
The Fluorinated Polymer (FEP) material used for all our sleeving is designed specifically for optical transmission and allows 97% of effective UV light to pass through the coating. As a result, the maximum possible amount of useful UV irradiance passes through the sleeving to effectively attract insects. With only 3% of the irradiance being absorbed into the material, the structural integrity of the sleeving is maintained for the full 12 month life of the bulb, preventing discoloring and ensuring all glass shards are retained in the event of a breakage.





GLUPAC®

Glupac® glueboards are designed to perfectly complement your Synergetic® flylight, offering consistently high standards of performance and quick servicing times.



EASY FLY COUNT GRIDS

Glupac® glueboards feature simple grids to make it quick and simple to monitor and record fly counts and identify species. This allows valuable, accurate feedback to be kept for hygiene audits and shared with the end user on a regular basis.

SILICON COATED RELEASE PAPER

Glupac® release paper is silicon coated to ensure that it releases from the glue covered board quickly and simply, leaving the glue in place. This guarantees speedy service times and ensures that there is no contact between the glue and the service technician.

FEATURES

Unique flexible glue application allows for maximum glue area

Advanced UV stable glue guards against the glue drying out over a four week period

Dry glue formulation reduces glue run from exposure to bulb heat and mess free servicing

Consistent thickness of glue application ensures no areas are too thin to retain the caught insect

Varnished base material reduces absorption of the glue

High quality silicon coated release paper provides easy peel action less mess and for reduced service times





SYNERGETIC® GLUEBOARD FLYLIGHTS



10-11
EDGE



12-13
HALO

WHAT IS A GLUEBOARD FLYLIGHT?

Glueboard flylights use UV light to attract flying insects to the unit, then use a glueboard to retain the flying insects. As the insect is caught and retained whole, glueboard flylights are ideal for more sensitive environments.

Glueboard flylights are ideal for use in commercial front-of-house areas, commercial kitchens and industrial food preparation zones.



EDGE®

EDGE®

Developed to be the most effective glueboard flylight on the market, Edge® is designed around patented* glueboard technology to catch significantly more flying insects than traditional glueboards.

As the glueboard is inserted into the flylight it self-folds at the desired points, creating a unique form around high efficacy Synergetic® UV bulbs. This unique design forms edges, proven to be more attractive to flies, maximizes useful UV light output, and creates **a 30% larger glue area than traditional glueboards, creating a staggering 31.5% increase on a normal catch rate!**

The unique glueboard form provides three features shown to better catch flying insects:

1. The glueboard forms edges, proven to be more attractive to flies
2. 30% larger glue area than traditional 'flat' glueboards
3. The glue area is equidistant from the UV bulbs, maximizing the useful glue area



* Patent pending

OFFERING A 31.5% INCREASE IN CATCH RATE



FEATURES

Unique patented* glueboard technology

Catches 31.5% more flies than traditional glueboards

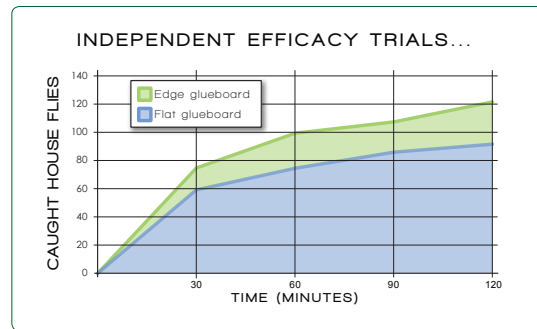
Swing down front guard allows simple and quick servicing, with full access to bulbs and glueboard

Patented dual wavelength Synergetic® technology for an increased catch

Simple wall, ceiling or counter top mounting

Contemporary market leading design

* Patent pending



PRODUCT CODE

ZF105/110v

DESCRIPTION

Edge®, 30 watt, Stainless

DIMENSIONS (INCHES) H x W x D

14 3/4 x 22 1/4 x 4 1/4

COVERAGE (ft²)

1300

BULBS

2 x TGX15-18

GLUEBOARDS

1 x INF198

WEIGHT (lbs)

12



ROOM COVERAGE

1300 ft²

APPLICATION

- Commercial Kitchen
- + Industrial Food Preparation
- + Front of House

halo

With a contemporary, discreet aesthetic and superior efficacy, Halo is the most versatile glueboard flylight available for use across a range of commercial applications. Halo is available as a slimline 30 or 45 watt model which can be wall, counter top or horizontal ceiling mounted. Halo products feature a light reflecting swing down front guard, simple glueboard replacement and common high efficacy 15W UV bulbs for reduced inventory requirements.

For increased efficacy Halo incorporates UV reflecting aluminum components such as the removable debris tray. The patented* variable side light output gates allow 180° light output for increased efficacy.

PRODUCT CODE	ZF100/110v
DESCRIPTION	Halo 30
DIMENSIONS (INCHES) H x W x D	13½ x 24 x 3¼
COVERAGE (ft²)	860
BULBS	2 X TP15-18
GLUEBOARDS	1 x INF199
WEIGHT (lbs)	13¼



* Patent pending



FEATURES

Patented* variable side light option for maximum light output or mounting surface protection from the UV bulbs

Commercial efficacy with a contemporary discreet aesthetic for a wide range of applications

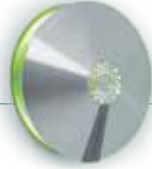
Hinged front panel allows quick, easy but secure access for bulb changing and maintenance

High efficacy UV bulbs

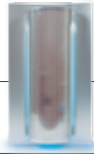
Designed for use with GLUPAC® pheromone impregnated glueboards

* Patent pending

SYNERGETIC® DECORATIVE FLYLIGHTS



15-16
AURA



17
SATALITE



18
NECTAR

WHAT IS A DECORATIVE FLYLIGHT?

Designed for use in front-of-house areas, decorative flylights discreetly protect areas which are highly visible to customers. Insects are attracted by UV light then retained with highly effective glueboards to ensure that flying insects are kept at bay.

Decorative units are ideal for use in restaurants, cafes, hotel lobbies, reception areas, food service and dining areas.



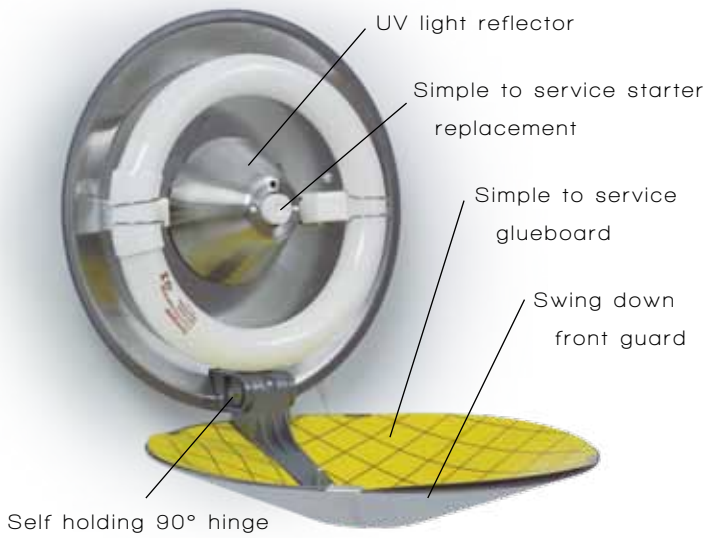
Stylish and contemporary, the Aura™ decorative flylight is an ultra discreet unit designed for front-of-house applications.

Ideal for use within cafes, restaurants, bars and hotels, the Aura™ offers an elegant, modern aesthetic alongside innovative, easy-to-service features and maximum efficacy. **The unique circular registered design of the unit allows light to attract flying insects from a full 360° around the unit**, attracted by the patented Synergetic® green light, whilst the design of the discreetly positioned glueboard gives a 100% useful glue area which remains hidden from customer view.

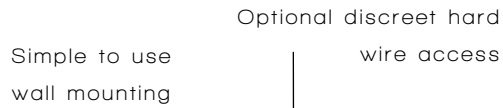


FEATURES

- Contemporary detailing and elegant clean lines
- Beautifully polished facade
- Slim design ensures that the unit is unobtrusive
- Ultra discreet fly catching glueboard hidden from view
- 100% useful glueboard area ensures maximum efficacy
- Ensures compliance with food hygiene legislation
- Patented dual wavelength Synergetic® technology for an increased catch
- Easy tool free access and efficient, fast servicing
- Robust stainless steel and UV stable polycarbonate construction



PRODUCT CODE	ZL051/110v
DESCRIPTION	Aura, 22 Watt
DIMENSIONS (INCHES) H x W x D	10 1/2 x 10 1/2 x 5 1/4
COVERAGE (ft²)	430
BULBS	1 X TGX22
GLUEBOARDS	1 x INL198
WEIGHT (lbs)	4 1/4



ROOM COVERAGE

430 ft²

APPLICATION

Front of House

Satalite™

Developed as a contemporary and discreet solution for insect control, Satalite™ is ideal for use in restaurants, bars, cafes and other front of house applications. Satalite™ incorporates patented technology which ensures all of the glueboard is fully utilized. The glueboard is positioned equidistantly from the bulb ensuring there are no areas of glue too far from the bulb to be effective. Satalite™ can be mounted either vertically or horizontally.

FEATURES

Stylish, effective and ideal for front of house applications

Horizontal or vertical mounting

Patented glueboard positioning proven to be more effective at catching flies

High efficacy UV bulbs

Designed for use with GLUPAC® pheromone impregnated glueboards with UV stabilizer

Robust all metal construction

PRODUCT CODE

ZL022/110v

DESCRIPTION

Satalite, 30 watt

DIMENSIONS (INCHES) H x W x D

21 x 12 ¼ x 5 ¼

COVERAGE (ft²)

655

BULBS

2 x TP15-18

GLUEBOARDS

1 x INL161

WEIGHT (lbs)

8 ¾

ROOM COVERAGE

655 ft²

APPLICATION

**Front
of House**





Nectar offers a highly effective in-counter solution to flying insects, providing versatile installation and simple servicing

FEATURES

Simple in counter or wall mounting options

Patented dual wavelength Synergetic® technology for an increased catch

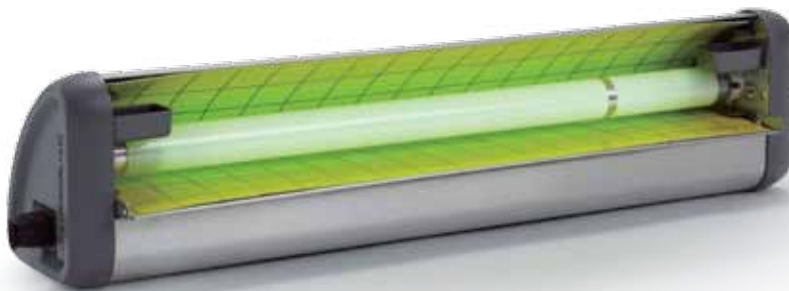
Two glueboards positioned close to UV bulb create large catch area

Two easy to change common glueboards, with grids for simple insect analysis

Variable shield keeps insects hidden from customer sight and changes the direction of the direct light where required

Contemporary design includes removable clips for in-counter advertising

Robust stainless steel and UV stable polycarbonate construction



PRODUCT CODE	ZL055/110v
DESCRIPTION	Nectar, 15 watt, Stainless
DIMENSIONS (INCHES) H x W x D	4 ¾ x 21 ½ x 4
COVERAGE (ft²)	Full Counter Coverage
BULBS	1 x TGX15-18S
GLUEBOARDS	2 x INL170
WEIGHT (lbs)	4 ¼

ROOM COVERAGE
Full Counter

APPLICATION
**Full In-counter
 + Food Display
 Area**



SYNERGETIC® ELECTRIC GRID FLYLIGHTS



20-21
ALLURE

WHAT IS AN ELECTRIC GRID FLYLIGHT?

Electric grid flylights use UV light to attract flying insects to the unit, then use a electric grid to kill the insects, before retaining them in a catch tray to allow hygienic disposal.

Electric grid flylights are ideal for use in commercial backroom, commercial front of house and industrial backroom areas.

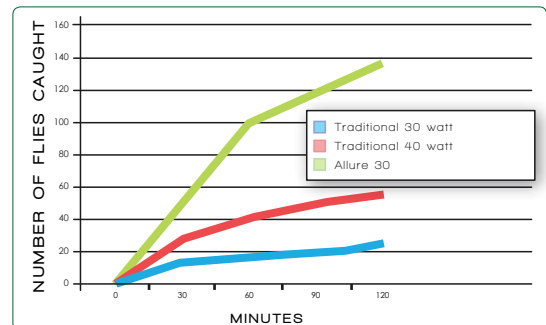


Proven to have more than 60% greater UV light output than traditional electric flylights

With an innovative, patented* open top design to maximise light output of the Synergetic® UV bulbs, this truly unique zapper flylight releases light from the back, sides and top of the unit, creating 67% more useful UV light output than traditional flylights utilizing the same power UV bulbs.

The unique Z-shaped killing grid provides a 20% larger fly killing area, ensuring that the unit easily copes with the increased number of flies attracted by the greater light output. Designed with serviceability in mind, the killing grid, deep catch tray and UV bulbs are easily cleaned and maintained whilst the tool free, drop down guard, also holds the catch tray during servicing making the unit quick and easy to service.

Independent tests show that the Allure30 attracted 448% more flies than the leading traditional 30 watt unit.



* Patent pending



INNOVATIVE OPEN DESIGN

FEATURES

Innovative, patented* open top design gives maximum possible UV light output for increased efficacy

Unique 'Z Shaped' killing grid gives 20% larger useful killing area for increased efficacy

Large capacity, mains interlocked catch tray with anti-blow out folds

Patented dual wavelength Synergetic® technology for an increased catch

Tool free, swing down front guard for quick, simple servicing

Simple wall, ceiling or desk mounting

Contemporary market leading design

PRODUCT CODE

ZC010/110v

DESCRIPTION

Allure®, 30 Watt, Stainless

DIMENSIONS (INCHES) H x W x D

11¾ x 23 x 4¾

COVERAGE (ft²)

1300

BULBS

2 X TGX15-18

WEIGHT (lbs)

11



ROOM COVERAGE

1300 ft²

APPLICATION

**Commercial
Backroom**

* Patent pending



FLYLIGHT PRODUCT SELECTOR – COMMERCIAL

Use our simple guide to help you select the perfect flylight for your type and size of application.

COMMERCIAL										
APPLICATION	FRONT-OF-HOUSE			KITCHEN			BACKROOM			SPECIALIST
COVERAGE (ft²)	0-450	451-1075	1076-1615	0-540	541-1075	1076-1615	0-540	541-1075	1076-1615	0-540
GLUEBOARD FLYLIGHTS										
Edge	●	●	●	●	●	●				
Halo	●	●	●	●	●	●				

KILLING GRID FLYLIGHTS										
Allure				●	●	●	●	●	●	

DECORATIVE FLYLIGHTS										
Aura	●									
Satalite	●	●								
Nectar	●									●

OTHER P+L SYSTEMS BRANDS

To find out more about P+L Systems brands please visit www.pandlsystems.com

NETWORK

Network specializes in the provision of high quality bird control products for the professional pest control market, including leading brands Avipoint™ and Avishock™.

With a leading reputation amongst professional pest controllers, Network is known for innovative time saving product solutions alongside expert technical guidance and specification support.

Network offers a comprehensive range of bird control products from the globally recognized Avipoint™ spike brand, through to high specification bird nets and installation time saving fixings and the leading electric bird proofing brand Avishock™. Developed to offer absolute discretion, Avishock™ is extremely popular amongst architects and specifiers, as well as bird control specialists.

P+L Systems® Washroom

P+L Systems Washroom is Europe's leading supplier of fragrances and dispensers with over 25 years experience in developing products for commercial washroom use.

P+L Systems Washroom understand that fragrance forms an integral part of the customer experience, and have developed a comprehensive range of products to suit a variety of applications. From fruity scents to light florals, rich coffee to fresh baby powder, P+L Systems Washroom has a range of fragrances to suit many areas, from the lobby to the washroom. The selection of fragrances are complimented by a wide choice of high quality, stylish fragrance dispensers offering programmable options to suit a broad range of environments.

In addition to the comprehensive range of fragrances and dispensers, P+L Systems Washroom also offers a wide range of washroom products designed for the European market, including urinal fragrancing and water management solutions, contemporary high specification hand dryers, hygienic feminine hygiene bins available in a range of sizes to suit servicing cycles, plus a range of automatic and manual soap dispensers.



Specializing in water saving technology for commercial washrooms, Dart Valley Systems has been producing leading automatic washroom technology for over 25 years.

DVS is a market leader in the field of water saving products along with automatic washroom products for specialist applications, including the healthcare, mental healthcare, custodial and public sector markets. Alongside the extensive product portfolio of WC flushvalves, urinal controls, automatic taps, safe ensuites and water management controls, an expert team of engineers are on hand to support installations, whilst our technical sales teams give tailored project support and specification advice.

Combining the benefits of reduced water consumption with a focus on hygienic design, DVS products have been used reliably in some of the most demanding commercial environments for many years.

SYNERGETIC®

For advice on product selection or technical support,
call our team on (877) 928-2847
or email info@pandlsystems.com

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W www.synergetic-flylights.com

P+L Systems®

For more information on the P+L Systems Group please visit www.pandlsystems.com

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