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BLACKLIGHT LAMPS

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Airborne insects such as the common house fly, wasps, midges, etc. can each carry up to 4 million bacteria. The potential for contamination occurs wherever they land, and their presence is absolutely unacceptable in areas of hygiene. Sylvania manufactures a powerful arsenal of UV-A lamps to attract these insects so that they can either be destroyed, or decontaminated in a humane fashion. The product range includes numerous shapes, sizes and different spectra to suit every application.

UV-A lamps enjoy numerous spin-off applications in other industries as well. One of the most important is to be found in the cosmetics business, where UV-A tubes are employed in the gel method of professional finger nail curing.

BLACKLIGHT LAMPS

Insect trapping

INSECT TRAPPING: HOW DOES IT WORK?

All insect traps rely on the fundamental phenomenon that flying insects are attracted to long wave UV-A radiation. However in order to maximise the efficiency of traps, we need a deeper understanding of when and why insects are attracted.

To take the example of mosquitoes, the process starts with the preparation for birth of the baby insects. The mother mosquito lays her eggs in a dark and damp place, where the babies will be able to shelter and mature. The choice of location is very important, because the newly born insects are especially prone to dehydration. Indeed after hatching, they can only venture out in the absence of solar rays, which would cause dehydration and death.

Since they can emerge only in the dark, their eyes have evolved to be especially sensitive to the low level UV-A night time radiation. Natural instinct drives them towards better lit areas where they can see more easily, and these can be produced artificially with the aid of UV-A lamps.

As the young insect matures, its resistance to the perils of dehydration begins to strengthen. Eventually it is capable of flying in the early evening under greater levels of sunlight, and its eyes begin to lose their UV sensitivity. Clearly then, the efficiency of UV traps works best with younger insects.

By the time the young females are ready to lay their own eggs, their sensitivity to UV is completely gone. In its place, a ravishing thirst for blood draws them to the scent and heat of human and animal bodies. However the female remains eager to find a safe place to lay her eggs, and natural instinct will draw her towards the same kind of dark and humid locations that she originally hatched in.

We can learn much from this life story of the mosquito in order to mount an effective campaign of disinfection. The optimum time for the use of traps is at the beginning of spring – to capture the UV-sensitive creatures as soon as they hatch. Lamps should be energised at dusk and switched off at dawn, destroying the young population to prevent further breeding. When summer then draws, the numbers of adults will have been dramatically reduced. However the traps must be left operational to attract long-range insects flying in from other areas which have not been disinfected.

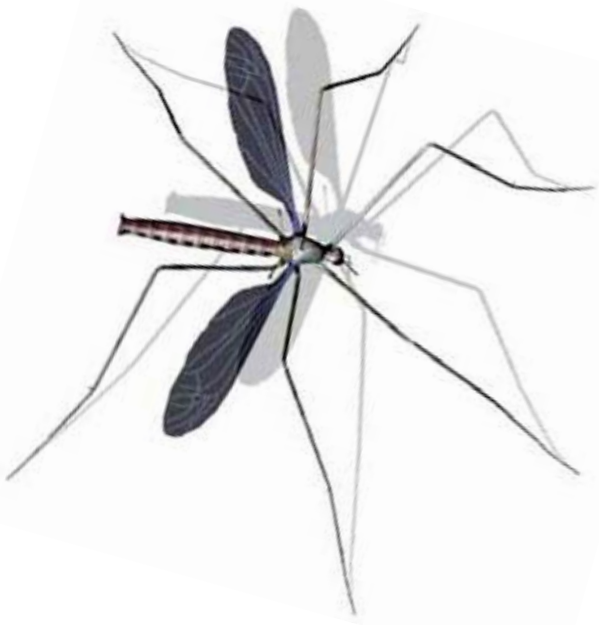
THE HARMFUL EFFECTS OF INSECTS

Flying insects have an appetite for our leftovers – satisfying their hunger on rotting organic matter. It goes without saying that our decomposing waste is literally teeming with pathogenic substances. During feeding the insects pick these up, and will subsequently spread them everywhere they land. Many of these pathogens are particularly harmful to humans:

- Streptococci cause infections of the digestive system and skin.
- Campylobacter leads to dangerous intestinal infections.
- Chlamydia parasite nests inside us causing serious ill health.
- Klebsiella causes painful infection of the urinary tracts, and respiratory system.

However it's not only flying creatures which have to be targeted. Just as harmful are the flour beetle, the bread weevil, the Trogoderma (warehouse beetle) and the Tigola. Constant protection of the critical areas is of great importance.

In order to minimize these harmful effects, certain guidelines and regulations have been established in many countries. The best example is the HACCP-system. See following page.



HACCP

WHAT IS HACCP?

HACCP (Hazard Analysis Critical Control Points) is a hygienic means of controlling and monitoring aimed at safeguarding the health of the consumer.

BUSINESS CATEGORIES COVERED BY THE STANDARD

It is a legal obligation to provide adequate protection in all businesses which manufacture, prepare, process, package, store, transport, handle, sell or supply foodstuffs to the consumer. For example:

- restaurants
- bars, confectioners
- food, fruit and vegetable resellers
- grocers, delicatessens
- butchers, fishmongers
- bakers
- chemists

WHERE DOES THE STANDARD APPLY?

Analysis of the relevant business operation will reveal a number of critical areas, where laws demand that specified controls must be implemented. The HACCP approach is a scientific method to prevent and discover the causes of any particular problem, for instance:

- It identifies and minimises the risks of food contamination
- It facilitates the execution of formal inspections
- It promotes a system of open and transparent competition with consumer protection as the objective. It applies not only to finished goods but the whole production cycle.

Courtesy Moel

Blacklight BL368 - Linear & Circline

Recent improvements in Phosphor technology have led to a new generation of UV-A lamp with much improved insect attraction efficiency. This range, called BL368, is a premium high performance range.

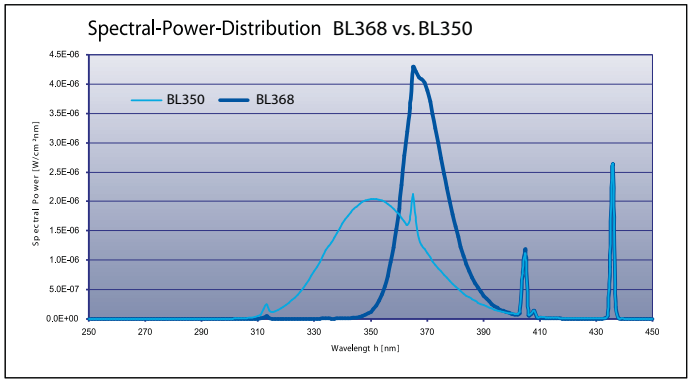
Two major improvements:

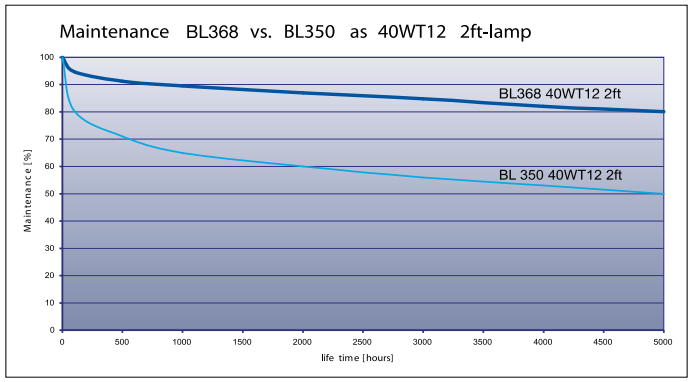
1. The energy distribution of the BL368 lamp is a much narrower band concentrated around the spectral peak at 368nm. This is widely accepted as the most important frequency for the attraction of flying insects. The radiation at 368nm is twice as powerful as from BL350 tubes, and because of this the lamp attracts many more insects.

2. Furthermore, the depreciation of UV-A output over time is significantly reduced. After 5000 hours of operation, the lamp maintains 80% of its original 100% output. The result is that it performs longer and better throughout the season.

The lamps exist in linear, circline and compact versions. They are electrically and dimensionally equivalent to other fluorescent lamps of similar ratings.

Besides insect trapping they also enjoy widespread applications in diazo printing machines, chemical processing, photo polymerisation and mineral detection. A new application, mostly for compact lamps, is nail curing devices. Sylvania's compact BL-lamps guarantee that the drying process does not last longer than 2 minutes. The result is naturally shining and strong nails.





All lamps are RoHS-compliant

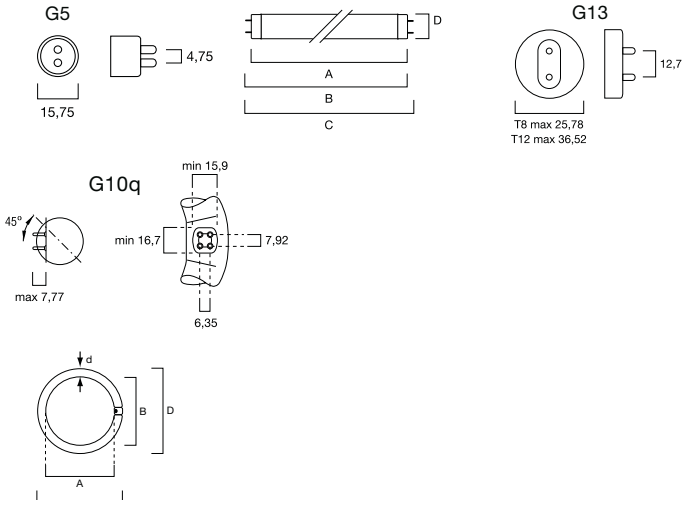
DIRECTIONS FOR USE

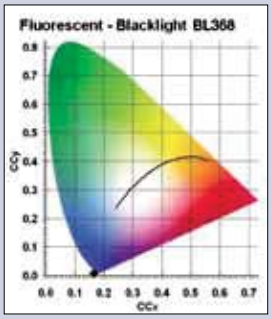
Maximum exposure limits are set by EN60335-2-59:1997 at an effective 1,0 milliWatt per metre squared (1,0 mW/m^2) measured at a distance of 1 metre – originally based on the recommendations of the National Radiological Protection Board in the UK. The irradiance value for a single BL368-lamp measured without reflector and/or fixture, in free air at 25 celsius, is varying between 0,2 and 0,4 mW/m^2 depending on the wattage.

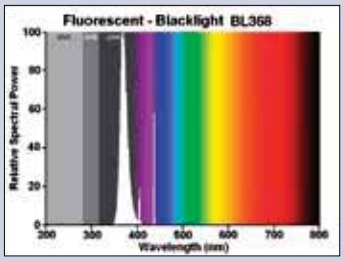
Courtesy Bower

Courtesy Moel

Blacklight BL368 - Linear & Circline







	A max	B min	B max	C max	D nom
4W	135.9	140.6	143.0	150.1	16
6W	212.1	216.8	219.2	226.3	16
8W	288.3	293.0	295.4	302.5	16
11W	212.1	216.8	219.2	226.3	16
15WT5	288.3	293.0	295.4	302.5	16
15WT8	437.4	442.1	444.5	451.6	26
18WT8	589.8	594.5	596.9	604.0	26
25WT8 18”	437,4	442,1	444,5	451,6	26
30WT8	894,6	899,3	901,7	908,8	26
36WT8	589.8	594.5	596.9	604.0	26
20WT12 24”	589.8	594.5	596.9	604.0	38
40WT12 24”	589.8	594.5	596.9	604.0	38
40WT12 48”	1199.4	1204.1	1206.5	1213.6	38

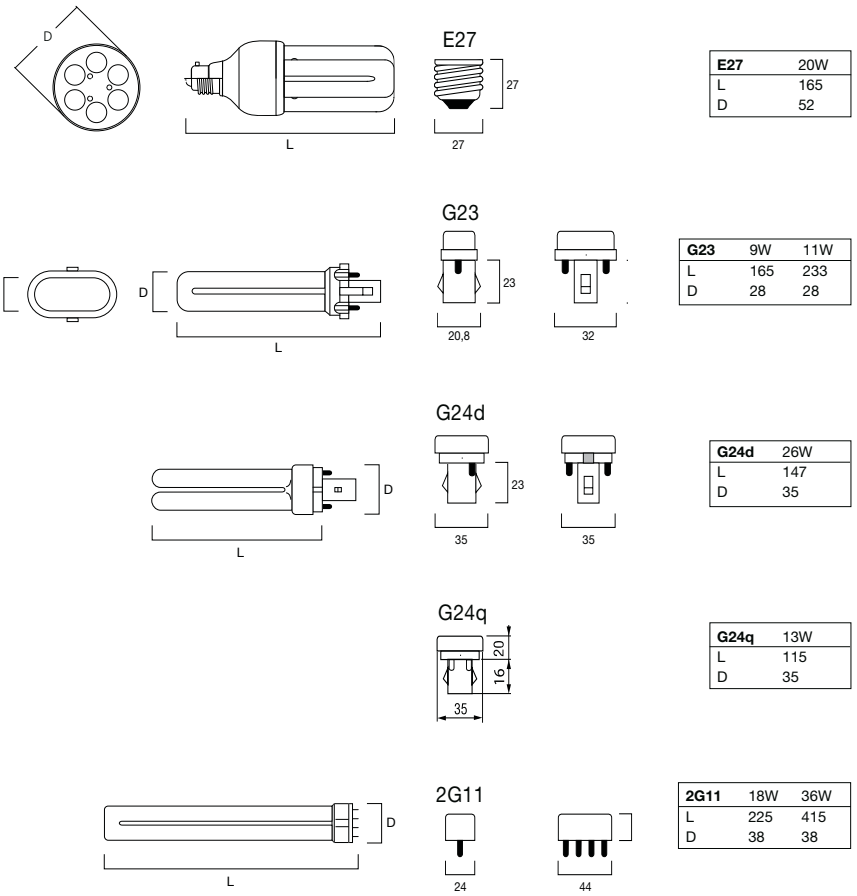
	A min	A max	B min	B max	D min	D max	d min	d max
22W	149.1	155.6	147.6	157.2	203.2	215.9	26.2	30.9
32W	149.1	155.6	147.6	157.2	203.2	215.9	26.2	30.9

All lamps are RoHS-compliant

Ordering Code	Item description	Watt W	Volt V	Current A	Light Colour	Cap	Packing Quantity
0000085	F4W T5 BL368	4	29	0.170	BL368	G5	50
0000088	F6W T5 BL368	6	42	0.160	BL368	G5	25
0000089	F8W T5 BL368	8	56	0.145	BL368	G5	25
0000097	F11W T5 BL368	11	34	0.350	BL368	G5	25
0000090	F15W T5 BL368	15	44	0.310	BL368	G5	25
0000082	F15 T8 BL368	15	55	0.310	BL368	G13	25
0000091	F18W T8 BL368 24" **NEW**	18	59	0.36	BL368	G13	25
0002166	F25 T8 BL368 18"	25	38	0.600	BL368	G13	25
0000098	F30 T8 BL368	30	96	0.365	BL368	G13	25
0000092	F36W T8 BL368 24" **NEW**	36	50	0.85	BL368	G13	25
0000361	F20 T12 BL368 24"	20	57	0.370	BL368	G13	25
0001638	F40 T12 BL368 24"	40	47	0.880	BL368	G13	25
0000099	F40 T12 BL368 48"	40	103	0.430	BL368	G13	25
0000456	FC22 T12 BL 368 8"	22	62	0.400	BL368	G10q	12
0000100	FC32 T12 BL 368 8"	32	57	0.480	BL368	G10q	12

UV-A= 315-400nm UV-B=280-315nm

Blacklight BL355 & BL368 - Compact



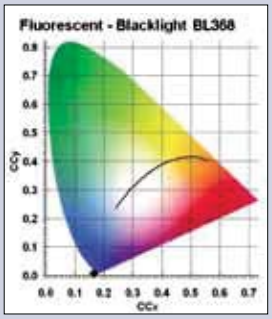
E27	20W
L	165
D	52

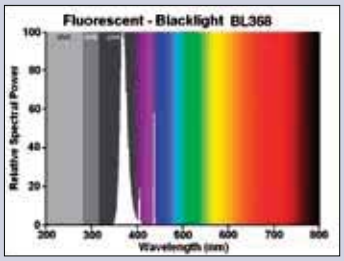
G23	9W	11W
L	165	233
D	28	28

G24d	26W
L	147
D	35

G24q	13W
L	115
D	35

2G11	18W	36W
L	225	415
D	38	38





All lamps are RoHS-compliant

Ordering Code	Item description	Watt W	Volt V	Current A	Light Colour	Cap	Packing Quantity
Blacklight BL355 - Compact							
0025275	Lynx-S 9W BL355	9	60	0.170	BL355	G23	50
Blacklight BL368 - Compact							
0025706	MiniLynx 20W BL368	20	230	0.160	BL368	E27	20
0025411	Lynx-S 9W BL 368	9	60	0.170	BL368	G23	50
0025412	Lynx-S 11W BL 368	11	91	0.155	BL368	G23	50
0025708	Lynx-DE 13W BL368	13	91	0.175	BL368	G24q-1	50
0025709	Lynx-D 26W BL368	26	105	0.325	BL368	G24d-3	50
0025268	Lynx-L 18W BL368	18	58	0.375	BL368	2G11	10
0025710	Lynx-L 36W BL368	36	106	0.435	BL368	2G11	10

UV-A= 315-400nm UV-B=280-315nm

Blacklight Toughcoat™

What are Toughcoat™ lamps?

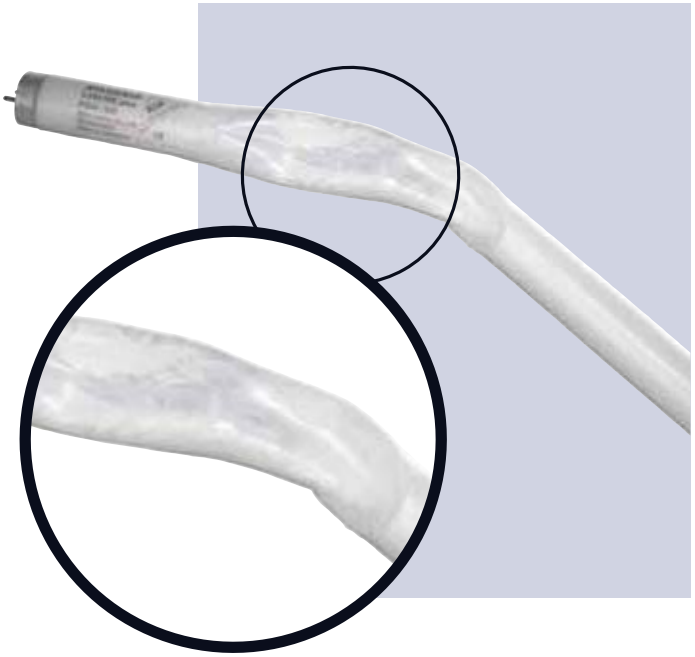
Toughcoat™ lamps are shatter resistant blacklight lamps ensuring excellent fragment retention in the event of breakage. The tubes are coated with Teflon FEP (fluorinated ethylene propylene). This coating differs from conventional PET (PolyEthylene Terphthalate) polymers in that it transmits 97% of the UV-radiation so as to maintain maximum insect attraction. FEP is also a much tougher material which will not become brittle as it ages.

Why use Toughcoat™ lamps?

For many companies, especially those operating in the food area (also restaurants), the risk of glass and mercury contamination is real. Toughcoat lamps pay dividends in avoiding injury, contamination and loss of production time in case a lamp should be broken. Within the EU, Health and Safety regulations carry heavy penalties for avoidable injury of employees, making these lamps an especially sound investment, to meet the HACCP guidelines.

High quality features

- Excellent fragment retention in the event of breakage
- The protective FEP coating meets the IEC60068-2-75 Pendulum Hammer test (5 Joule) and the 4m drop test, demonstrating excellent glass retention in the event of accidental lamp breakage.
- The 97% UV-A transmission of FEP maintains maximum insect attraction.
- No discolouration or yellowing of shatter resistant coating during the entire lamp life (> 10,000 hrs).
- The FEP material does not degrade during life. Versions employing PET coatings become brittle, and may not contain fragments. PET is also less transparent for UV-radiation..
- The coating withstands up to 200°C in both open and enclosed IP65 fittings. The melting temperature is 260°C.
- Meets all necessary regulations for resistance to heat and fire, and does not support combustion when exposed to naked flame or excessive heat. It passes the 850°C Glow Wire Test
- Satisfies the requirements of the International Food Standard (IFS 2004)
- FDA approved, in compliance with 21CFR177.1550 Regulatory Compliance Status.
- Satisfies the requirements of the BRC (British Retail Consortium) leading supermarkets global standard. In paragraph 3.2.2.6.2 it states *"All bulbs and strip lights, including those on electric fly killer units, where they constitute a risk to products, shall be protected by shatterproof plastic diffusers, sleeve covers or with a shatterproof protective coating"*.

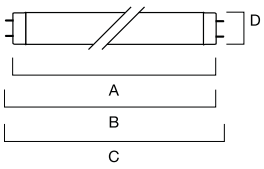


DIRECTIONS FOR USE

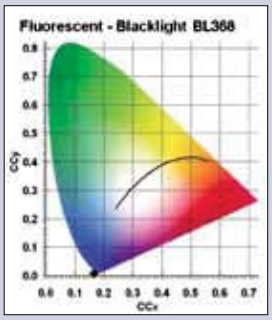
Maximum exposure limits are set by EN60335-2-59:1997 at an effective1,0 milliWatt per metre squared (1,0 mW/m^2) measured at a distance of 1 metre – originally based on the recommendations of the National Radiological Protection Board in the UK. The irradiance value for a single BL or BL368-lamp measured without reflector and/or fixture, in free air at 25 celsius, is varying between 0,2 and 0,4 mW/m^2 depending on the wattage or about one-fifth of the limit.

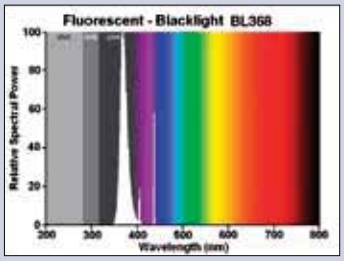
Courtesy PestWest

Blacklight Toughcoat™



	A max	B min	B max	C max	D nom
8WT5	288.3	293.0	295.4	302.5	16
15WT8	437.4	442.1	444.5	451.6	26
15WT5	288.3	293.0	295.4	302.5	16
15WT8	437.4	442.1	444.5	451.6	26
18W 24”	589.8	594.5	596.9	604.0	26
20W/2ft-24”	589.8	594.5	596.9	604.0	38
25WT8 18”	437,4	442,1	444,5	451,6	26
30WT8	894,6	899,3	901,7	908,8	26
36W 24”	589.8	594.5	596.9	604.0	26
40W/2ft-24”	589.8	594.5	596.9	604.0	38
40W/4ft-48”	1199.4	1204.1	1206.5	1213.6	38





Courtesy PestWest

All lamps are RoHS-compliant RoHS compliant

Ordering Code	Item description	Watt W	Volt V	Current A	Light Colour	Cap	Packing Quantity
0001648	F8W T5 BL368 Toughcoat™ **NEW**	8	56	0.145	BL368	G5	25
0001649	F11W T5 BL368 Toughcoat™ **NEW**	11	34	0.350	BL368	G5	25
0001650	F15W T5 BL368 Toughcoat™ **NEW**	15	44	0.310	BL368	G5	25
0000124	F15W T8 BL 368 Toughcoat™	15	55	0.310	BL368	G13	25
0001664	F18W T8 BL368 Toughcoat 24" **NEW**	18	59	0.36	BL368	G13	25
0001651	F25W T8 BL 368 Toughcoat™ 18"	25	38	0.600	BL368	G13	25
0001652	F30W T8 BL 368 Toughcoat™ 24"	30	96	0.365	BL368	G13	25
0001665	F36W T8 BL368 Toughcoat 24" **NEW**	36	50	0.85	BL368	G13	25
0000125	F20W T12 BL 368 Toughcoat™ 24"	20	57	0.370	BL368	G13	25
0000126	F40W T12 BL 368 Toughcoat™ 24"	40	47	0.880	BL368	G13	25
0001630	F40W T12 BL 368 48" Toughcoat™ 48"	40	103	0.430	BL368	G13	25

UV-A= 315-400nm UV-B=280-315nm

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