

## ABOUT INSECT CATCHER

### A. What is Insect Catcher?

Insect Catcher is composed of a black light of give out 365nm (nanometer) ultraviolet rays which insects like, and a special adhesive tape to catch flying insects.

It is often seen that there are candles on each table at outdoor restaurants.. Flying insects rush into candle's flame and die. Then, we can enjoy dinner.

Why do insects gather and rush into flame?

You know flying insects are allured by candles' light, and rush into the flame.

Why are insects allured by candles' light?

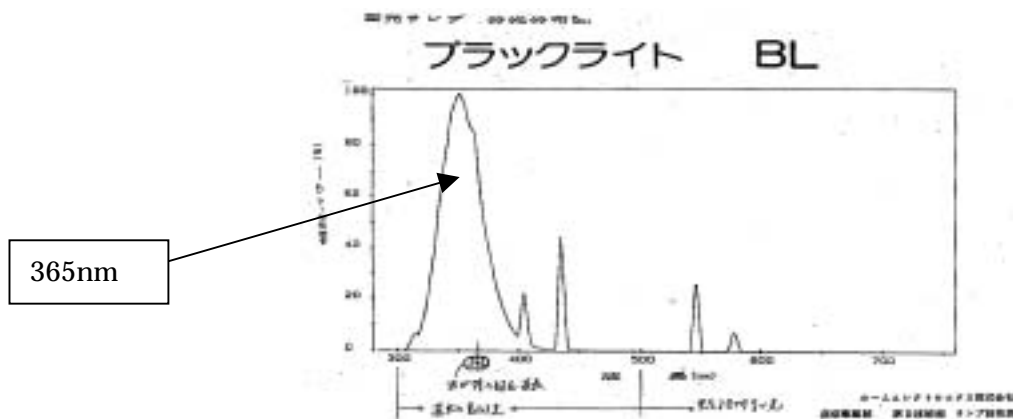
The light has special wavelength which insects like. Flying insects are allured by candles' light, and rush into flame.

The wavelength light which insects like, is ultraviolet around 365nm. Candles' flame and ordinal fluorescent lamp also give out 365nm ultraviolet rays. Therefore, flying insects gather to the light.

Our insect catcher adopts the special lamp which gives out 365nm ultraviolet rays much than others.

This lamp is called Black Light.

Distribution of black light is the following.



By the way, sterilizing lamp use ultraviolet rays. The peak of this light is around 253.7nm. 253.7nm ultraviolet rays Gives a dangerous influence to a human body. If you see the light directly, or put the light on the skin, you will go Blind or get burned severely.

Flying insects are allured, attracted by 365nm ultraviolet rays of black light, and gather to the lamp. They fly about A light source and touch the special adhesive tape, then will be caught.

### B. Demerit of Electric Insect Killer

There are electric insect killers except for the extermination of flying insects by candles' flame.

Electric insect killer gathers flying insects by a black light as same as an insect catcher. It kills flying insects by high-voltage electric shock.

It is seen at a restaurant, a supermarket, a factory, a hotel, and so on.

Electric insect killer used to be established at every places for the measures of an alien substance.

However, an electric insect killer has been changed to an insect catcher since 1990.

The reason is ;

Electric Insect Killer Is Discomfort.

It extremely gives an unpleasant noise at a spark as it kills flying insects by high-voltage electric shock. It sometimes occurs burned smell and smoke of flying insects.

Electric Insect Killer Is Not Sanitary.

It scatters flying insects at a spark as it kill them with high voltage.

Then, the dead body has a possibility to jump over, drop, and scatter.

If the dead body is caught at a saucer, it's possible that other insects lay an egg on it. Moreover, the dead body becomes dry, then will be scattered around by wind of an air conditioning.

Electric Insect Killer Is Dangerous.

As it gives out high voltage, it causes a danger when you touch.

Moreover, it is heavy as high voltage requires a big transformer. It's very dangerous when it drops.

Electric Insect Catcher Need a Limited Installation Place.

An installation place is limited as it gives out high voltage electric and is heavy.

Installation need enough consideration. (the places that nobody touches, it's not dangerous if it drops, hanging fittings can stand the weight.)

Electric Insect Killer Can't Stamp Tiny Insects Out.

Flying insects must touch 2 points of lattice in order that an electric insect killer sparks. High voltage gives out when an insects 2 points of a lattice. Insects of less than 5mm length can't be stamped out because they go through the lattice.

The users often misunderstand that there are no tiny flying insects on a saucer. The fact is seen from the above reason.



Electric Insect Killer Stamps Out Only.

As it kills flying insects by high voltage, the insects scatter everywhere.

If you find the kind of flying insects, you can investigate how to stamp them out. For example, you install a curtain at a doorway to prevent from flying insects' invasion if you specify the flying insects grown outside.

Moreover, if you find the flying insects grown inside, you can investigate and carry out the measures to Prevent from their invasion. The example is to be complete to clean a drain and lavatory.

This system to pursue the cause is corresponded the concept of ISO9000 and HACCP.

Unfortunately, an electric insect killer kills flying insects only. Therefore, it can't correspond to ISO9000 and HACCP.

## C. Merit of Insect Catcher

We would like to explain the merits of an insect catcher.

**Insect Catcher Stamps Out Without Sound.**

It catches flying insects with a special adhesive tape. Accordingly, there are no sound, smell, and smoke.

**Insect Catcher is Sanitary.**

As it catches flying insects with a special adhesive tape, caught and dried insects aren't scattered about.

**Insect Catcher Is Safety.**

As it catches flying insects with a special adhesive tape, human beings won't get a high-voltage electric Shock.

Moreover, it is light and safety because it doesn't use a transformer for high-voltage generation.

**Insect Catcher Can Be Installed Anywhere.**

It can be installed wherever a normal lamp is installed. It can be fixed to a wall, put on a floor, not only hanging like an electric insect killer.

(\*However, it can't be installed where water splashes as it isn't processed waterproof.)

**Insect Catcher Can Catch A Tiny Flying Insects.**

As it catches flying insects with a special adhesive tapes, it can catch tiny insects.

**Insect Catcher Correspond To ISO9000 And HACCP.**

As it catches flying insects with a special adhesive tape, you can analyze caught insects. Therefore, you can investigate and take measures.

Moreover, you can take measures in advance, as you can grasp the trend of each month or each season with an accumulation of data. It will become the data to refute a claim of an alien substance.

A perfect measures of flying insects will win the trust of customers and consumers, and contribute the development business.

## D. Special Feature Of Our Insect Catcher

### a) Special Adhesive Tape

After pulling a special adhesive tape out from a cartridge, you can use 30 months.

However, other adhesive tapes can't keep adhesive force, as it needs a change.



It can be kept for 5 years if it is in a cartridge.

It never get dry at the temperature from 0 to 50 . (Insects can't fly under 0 .)

Other adhesive tapes get dry at a low temperature, and melt at a high temperature.

As special adhesive medicine is put on both side, the effect to catch insects is twice than others. Other adhesive medicine is put on one side only.

As there is section lines at 5cm intervals, it is useful to count caught insects.

It's safety that a special adhesive tape doesn't include harmful material.

#### b) MP-2200

It is slim and light body outside, made by resin. As looks is good, it can be installed at a kitchen and Various places.

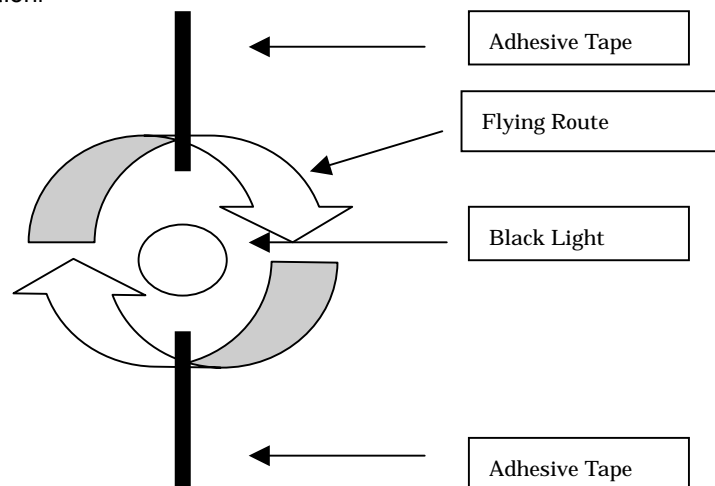


Dust isn't apt to collect as it is streamlined.

As it lures from both side, it can attract flying insects at most.

Flying insects can be caught easily as a special adhesive tape is put at verticality to floor. Flying insects Tend to settle on vertical surface, but not settle on a floor by their behavior.

As flying insects have behavior to flutter about black light, our special adhesive tape and black light is put on the best position.



- 1) Former hanging fitting was chain, but MP-2200 type adopts a wire which doesn't collect dust easily. Moreover, the length can be adjusted to 1m.



## POCKET

- 1) Base function is same as MP-2200 type.

The distinguishing characteristic is the structure which a special adhesive tape can't be seen from outside. It is suitable for restaurants, hotels, bakery shops and so on because Pocket doesn't look an insect catcher.



## E. Installation Place

When you install an insect catcher, please pay attention to the installation place. Many users were shocked when they see the installation of electric insect killer. An electric insect killer was put over a table at restaurant in Singapore. It was put in front of chopping board to cut fish at a Chinese supermarket. It is often put in front of a doorway everywhere.

If an insect catcher is installed at a wrong place as above, more flying insects will invade and it becomes more and more that flying insects invade or be mixed in.

Following 3 points should be needed to find an installation place.

Install at the place where light of black lamp doesn't leak out.

If it's installed at the place where the light is seen from outside, flying insects which usually don't enter inside will be attracted.

It is the purpose to stamp out flying insects invaded from outside. It is the most important to install at

the place where the light can't leak out.

Install near the invading way.

It's necessary to install near a doorway.

Invading insects can be attracted easily.



Install far away from a working place and products.

If it is installed near a working place or products, it's possible a flying insect is mixed up.

Therefore, it is necessary to install far away from these places.

Please consider installation quantity.

Effective area of MP-2200 and Pocket is 30 50m<sup>2</sup> in our catalogue, but it is only standard.

The effective installation quantity will change according to the time of cleaning required to the room, doorway, window, column, and drain.

If you give us a sketch map, we will propose an effective installation place and quantity.

Please understand an effective installation place and enough quantity to get a sure effect.

Please see the attached installation example at food processing factory.

#### F. Flying Insects Which Can Be Caught.





The above pictures are the flying insects which can be caught in Japan. We are sorry we don't have the example in Indonesia, but there will be same insects in Indonesia.

From the tropics and lack of drains, insects in Indonesia will be much than Japan.

However, some flying insects aren't allured by light. A vampire mosquito is representative.

An insect catcher can't catch it positively because a mosquito is allured by carbon dioxide and smell discharged from human beings.

When you analyze a special adhesive tape, mosquitoes are caught. You had better think it is an accident.

Please understand this enough.

#### G. Life Time of Black Light

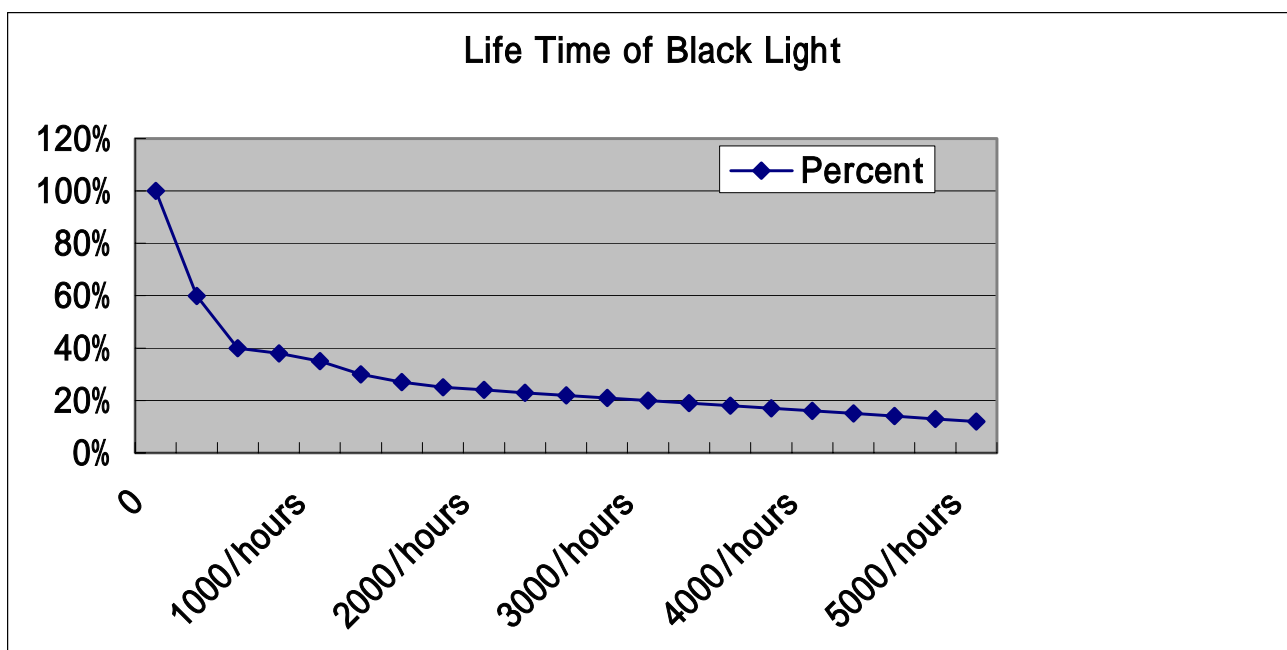
Black light can't give out 365nm ultraviolet rays permanently.

From the following diagram, the ability to give out ultraviolet rays decrease suddenly by 1,000 hours.

After 5,000 hours, the effect becomes under 20% of new lamp.

Of course black light gives out a light after 5,000 hours. However, the ability to allure flying insects drop sharply.

We recommend you to change black light at 5,000 hours in order to maintenance the effect of catching insects.



## H. At Last

We have made rapid progress for 20 centuries since the Industrial Revolution.

The progress has always been a relative connection with natural destruction.

Many natural destruction gives a serious influence to the environment of the earth. Besides, it brings a great fear to the life time as the home of human beings.

On 21<sup>st</sup> century, we foresee the future of the earth, and start to deter the progress that doesn't reflect ecology.

The system toward insects is same as the above policy.

Flying insects exist everywhere.

Perfect extermination of flying insects for an alien substance is a very arrogant and cruel act.

As flying insects adopt to medicine, it will be necessary to develop and spray stronger medicine. The medicine will give a serious influence to human beings, then destroy a food chain, and damage the environment of the earth.

The basic concept of flying insects step is the coexistence with them. We don't have to stamp out with medicine, but we should stamp out the limited place where we don't want to be invaded.

Insect Catcher was developed from this concept.

At last, we are pleased if you support this concept.