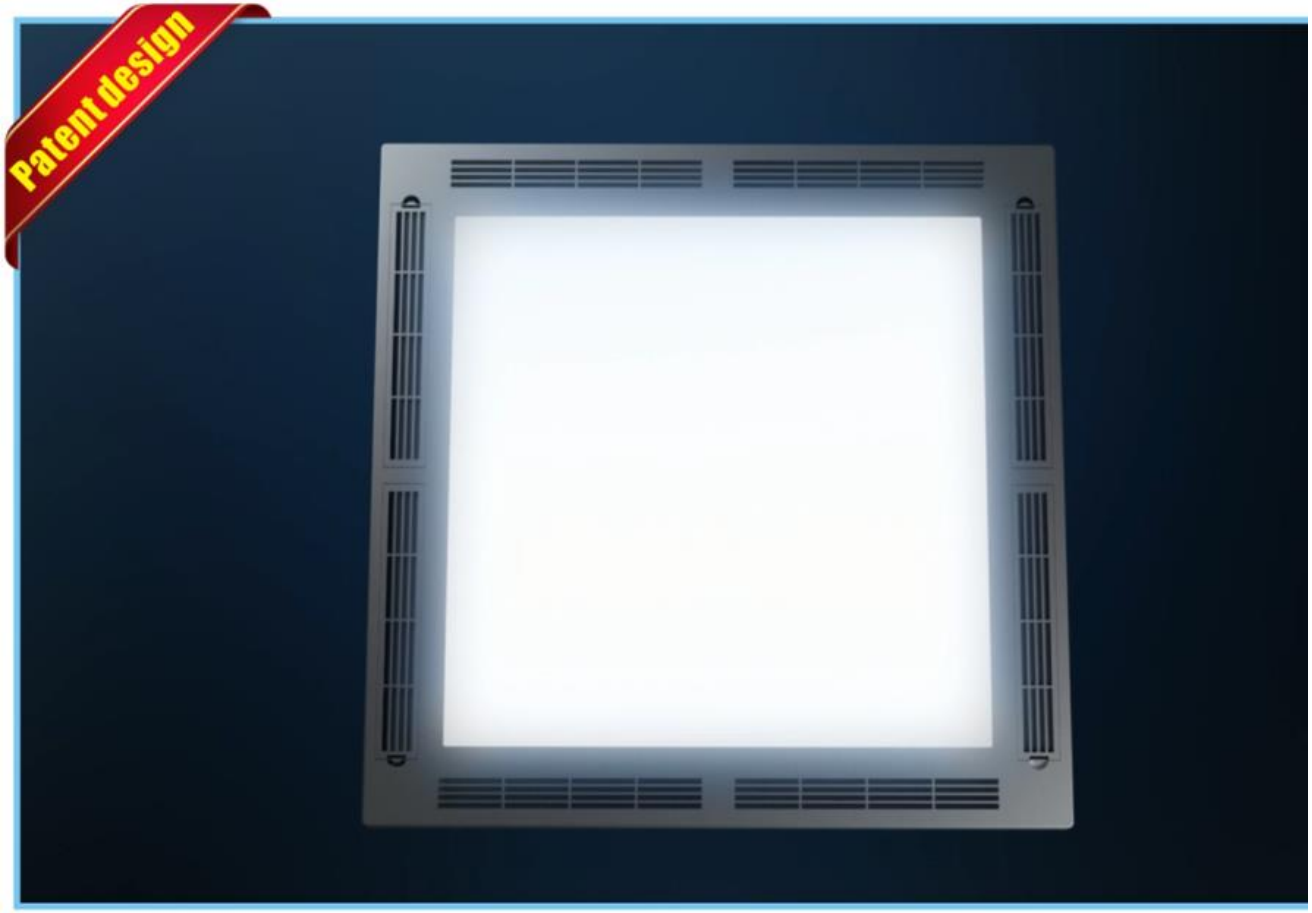
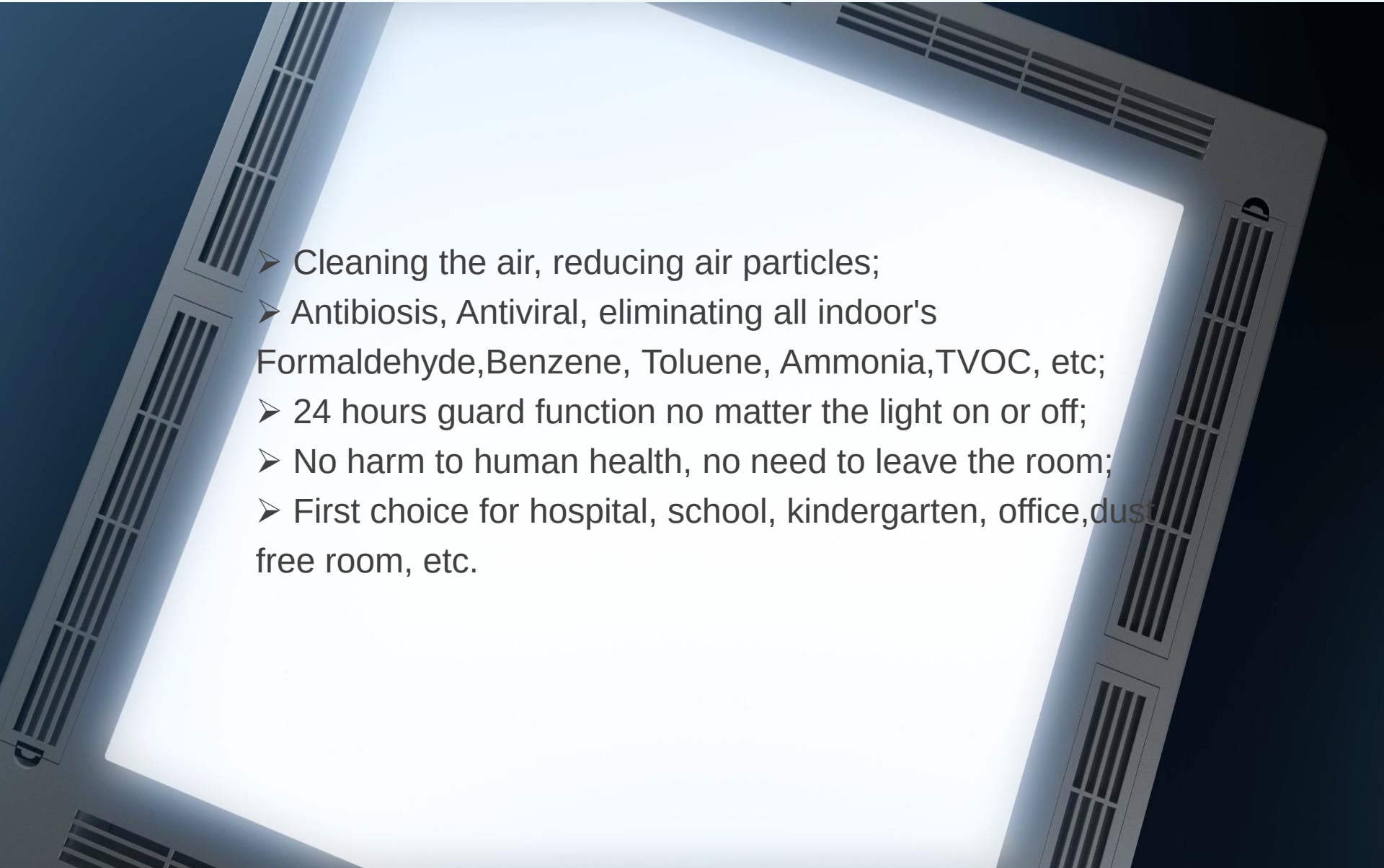
New Nanometer Material Antiseptic and Anti-virus Air cleaning LED Panel Light Specification



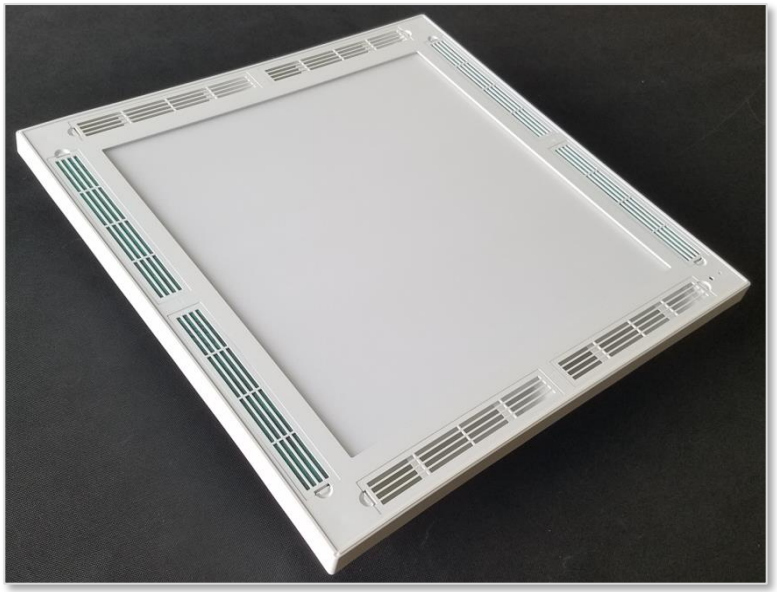
◆ Product Features



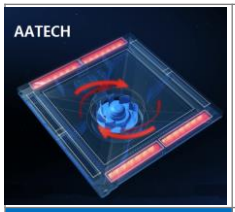
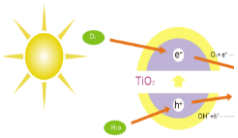
- Cleaning the air, reducing air particles;
- Antibiosis, Antiviral, eliminating all indoor's Formaldehyde,Benzene, Toluene, Ammonia,TVOC, etc;
- 24 hours guard function no matter the light on or off;
- No harm to human health, no need to leave the room;
- First choice for hospital, school, kindergarten, office,dust free room, etc.

Product Parameter

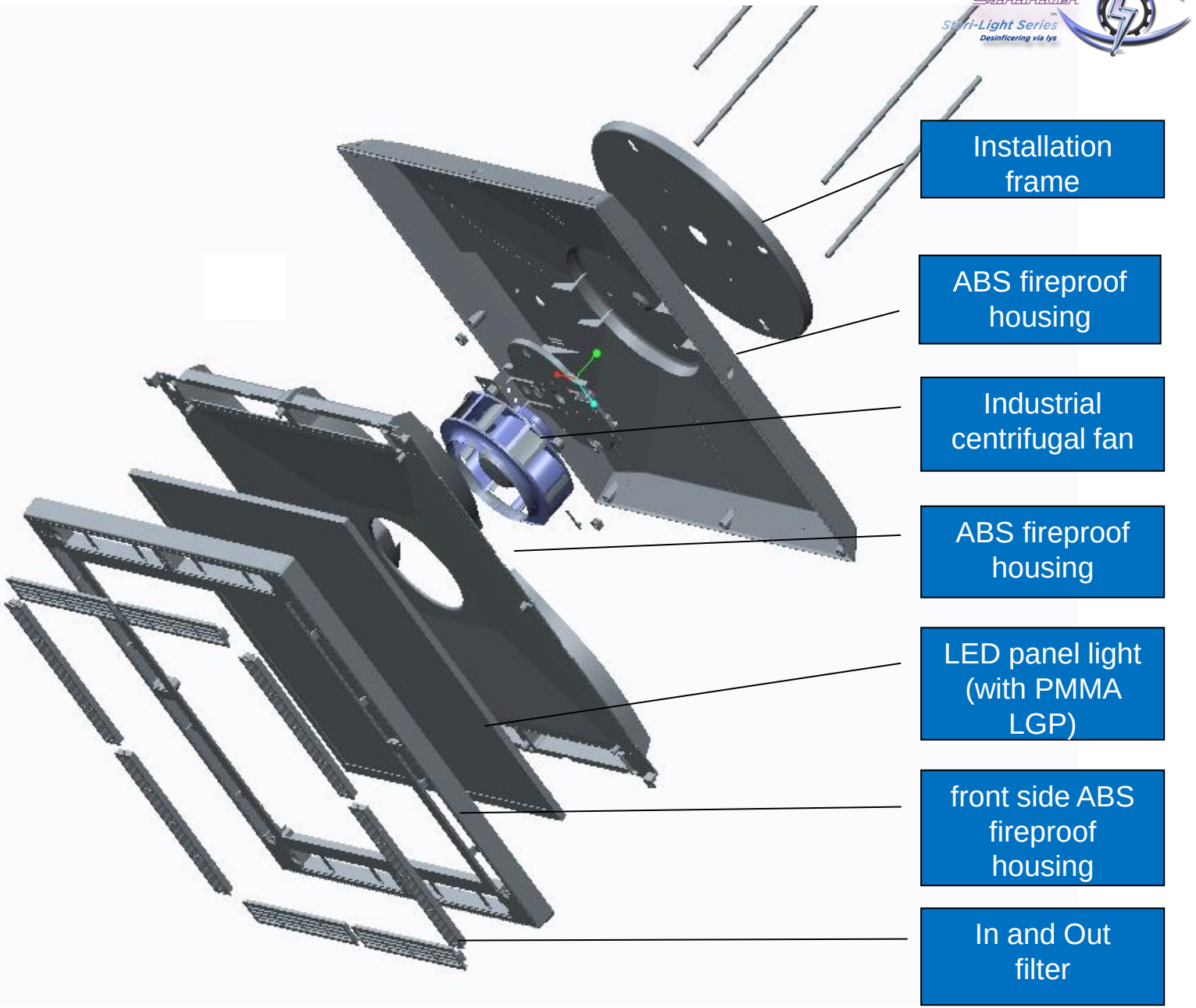
Electrical Parameters	
Wattage	50W (40W LED panel +10W fan)
Input	AC220-240V/AC100-277V
Lumens	4000lm
PF	>0.90
CCT	3000K/4000K/5000K/6000K
CRI	80
SDCM	<4
CADR (clean air delivery rate)	5.72m³/min
Hi-pot test range	SELV isolated driver,1500Vdc/5mA/60s
Noise	<40dB
Fan speed	1700-1900times per minute (clean 45cbm air in one hour)
Dimmable	1-10V, DALI option to choose
Lifespan&Warranty	
Whole fixture lifespan	50,000 hours
Centifugal fan	Medical grade non-stop 100,000 hours
Filters	2160 hours (additional cost for replacement)
Warranty	3 years
Installation & IP& IK	
Installation	Recessed / mounted / hanging
IP grade	IP44
IK rank	IK02



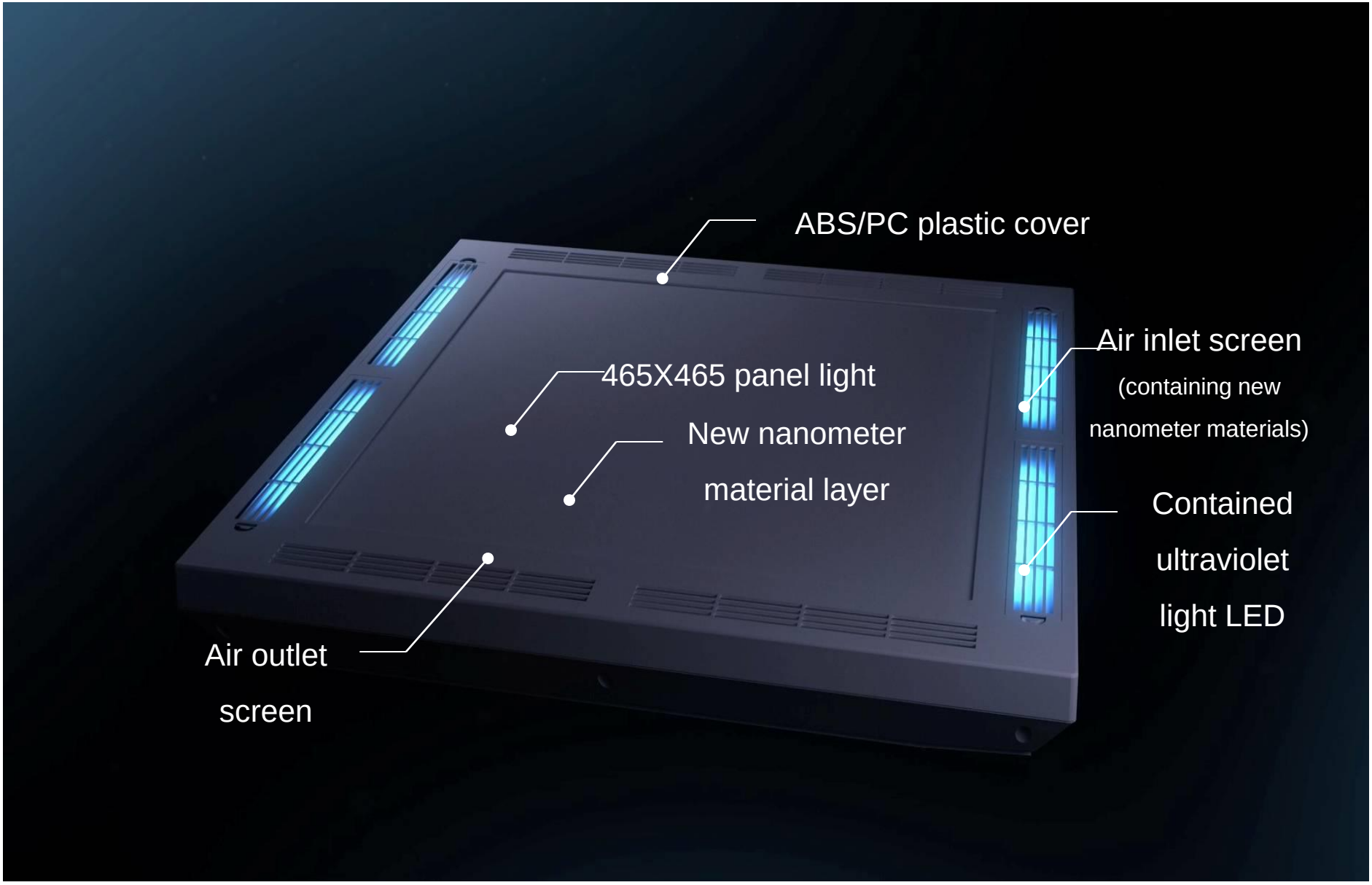
◆ Air cleaning light working theory

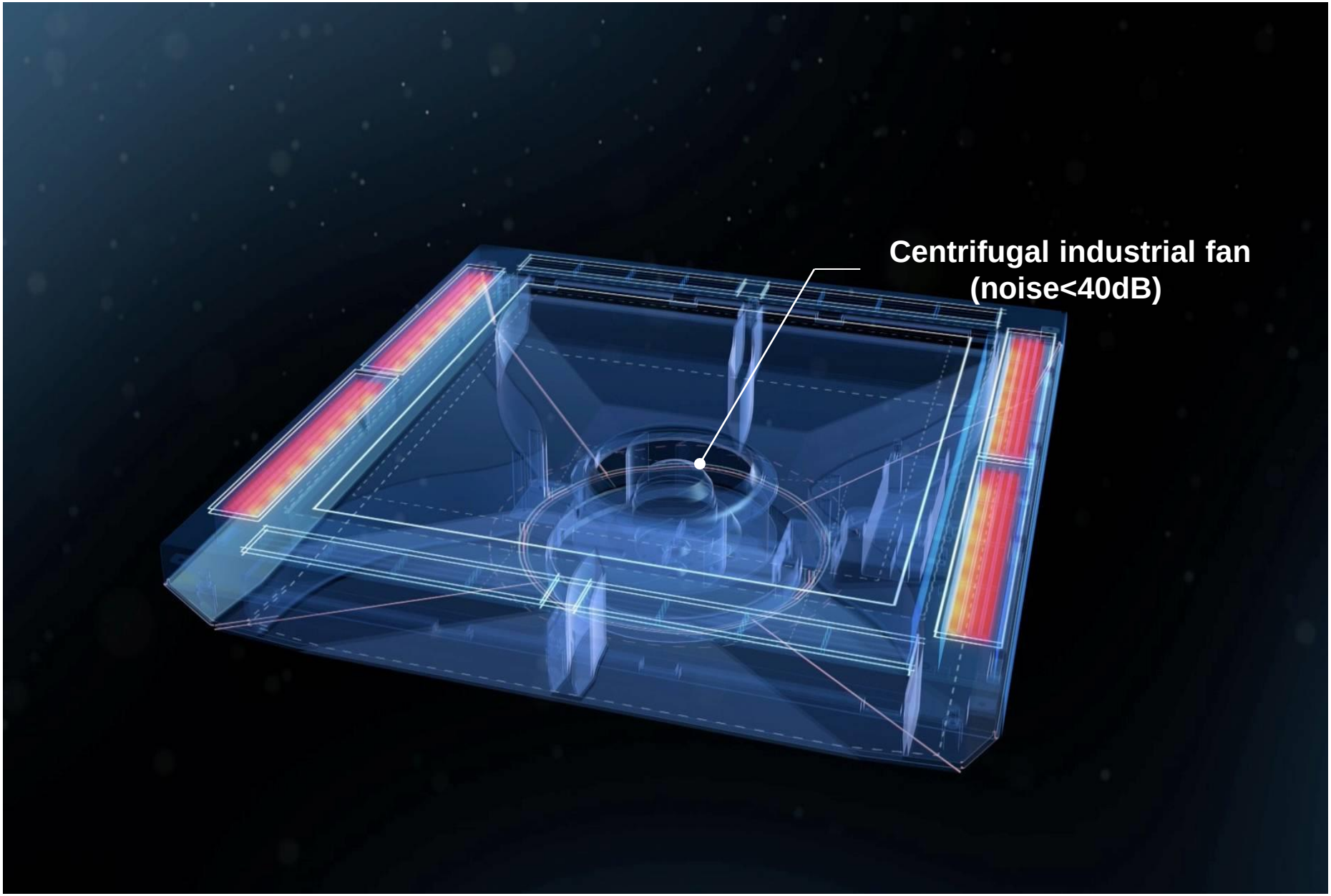
					
Active materials	Nano TTA coating	TiO2+Ag	Photocatalyst	Centifugal industrial fan	Filters
Effect	Antivirus, antibacteria on fixture surface	Kill virus and bacterias in the air	Kill virus and bacterias in the air, refresh the air	Delivery air in and sanitized air out	Filter dust and air particles
Function time	24 hours	24 hours	When there's light	When the fixture is on	When the fixture is on
All effect result	**Antivirus / Antibiosis / Air clean**				
	Virus: H1N1, Enterovirus, Respiratory mixed virus, etc - 99% eliminated after 2hr (FDA, SGS report) **Bacterias:** Superbug, Staphylococcus, Salmonella, etc - 99% eliminated after 2hr (SGS report) **Environment:** Formaldehyde, TVOC,Ammonia, etc - 99% eliminated after 24hr (SGS report)				

Internal Structure



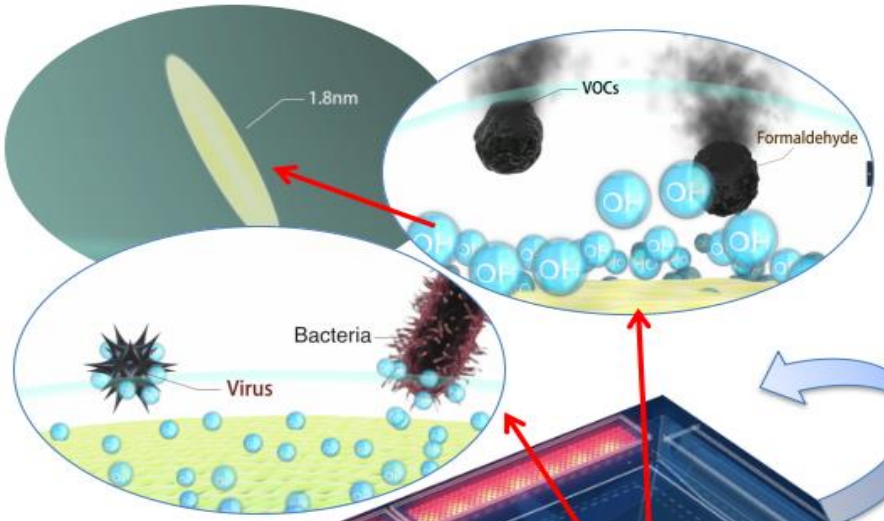
◆ Structure Information




Centrifugal industrial fan
(noise<40dB)

◆ Action principle of antiseptic and anti-viral function

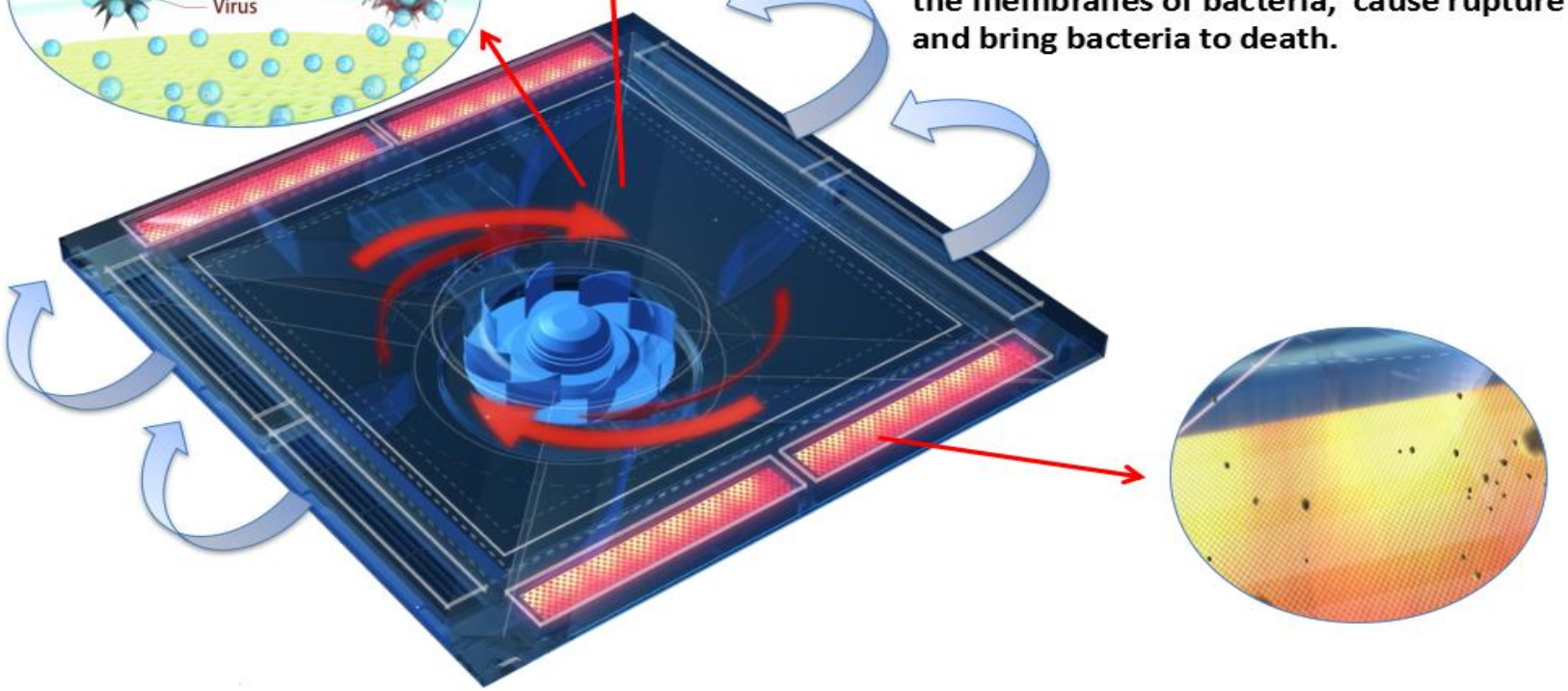
Three kinds of antiseptic and antiviral mechanisms, offer you 24H all-weather protection against bacteria and virus with and without light



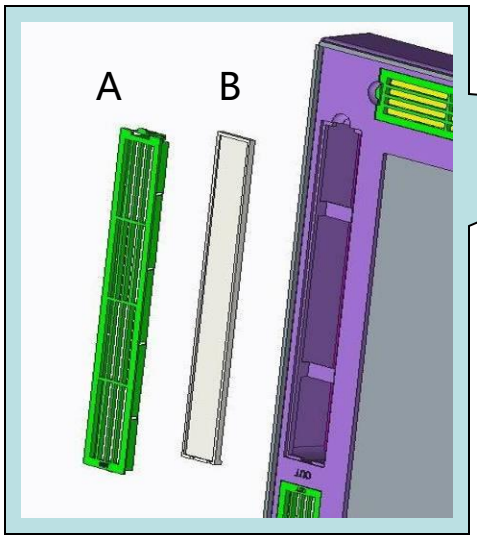
Silver ion reacts with hydrogen sulfide ion in bacteria and inhibits its reproduction.

Produces superoxide free radicals and breaks down the bacteria.

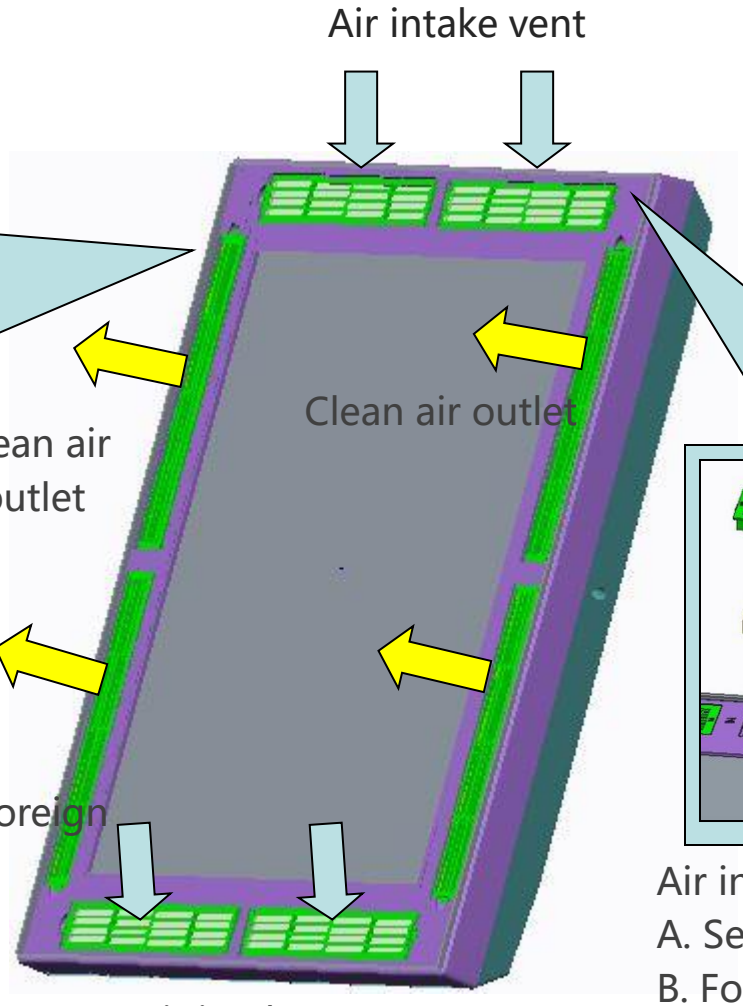
Material surface is with charges that pull the membranes of bacteria, cause rupture and bring bacteria to death.



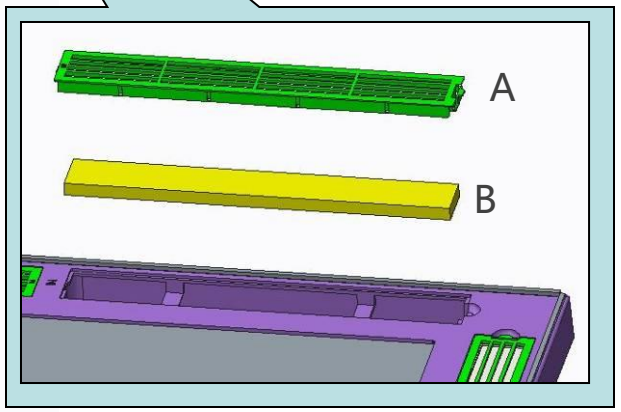
◆ Specification and instructions of the filter



Air outlet filter screen
A. Separable plastic lattice
B. Coarse mesh filter, avoid foreign matters and insects inside.

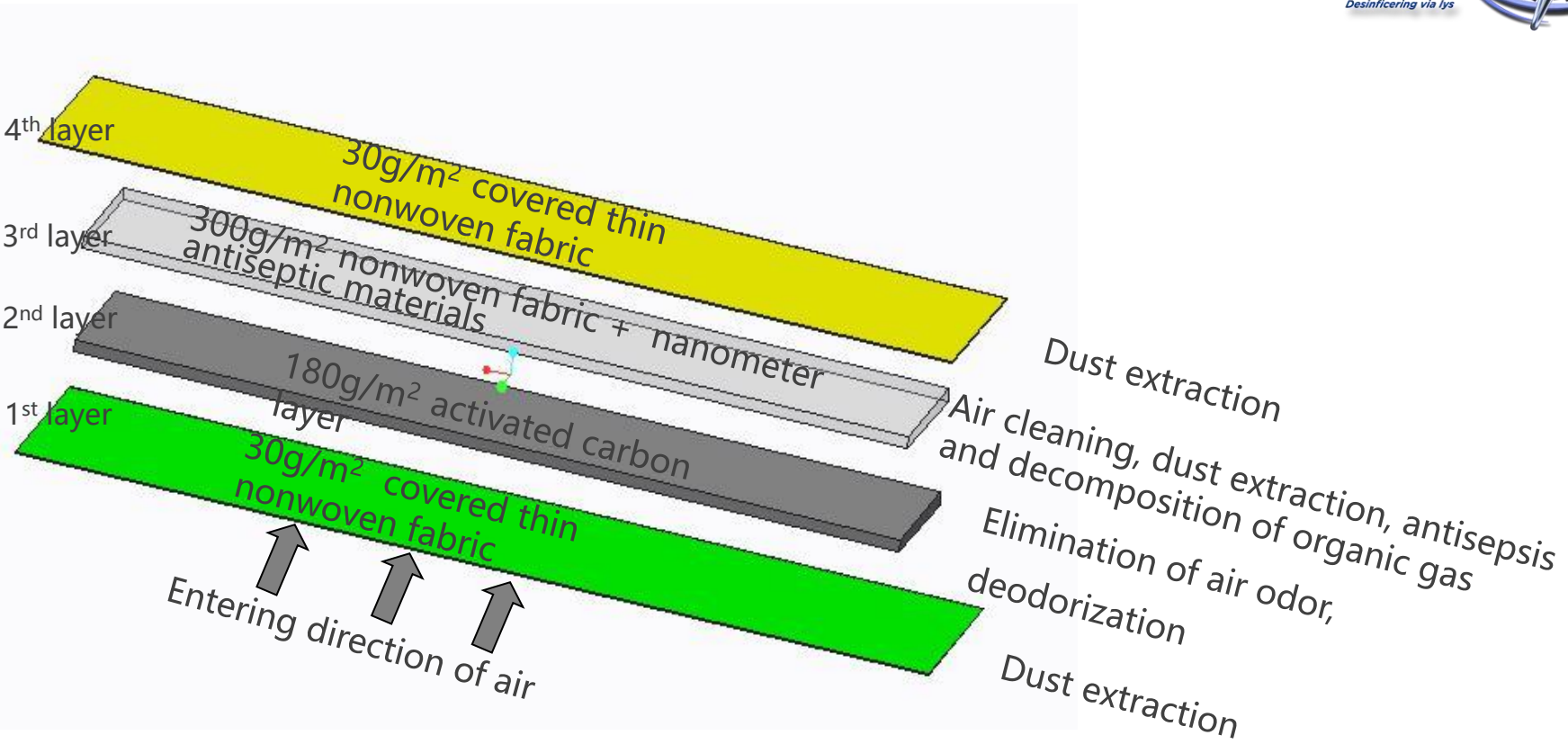


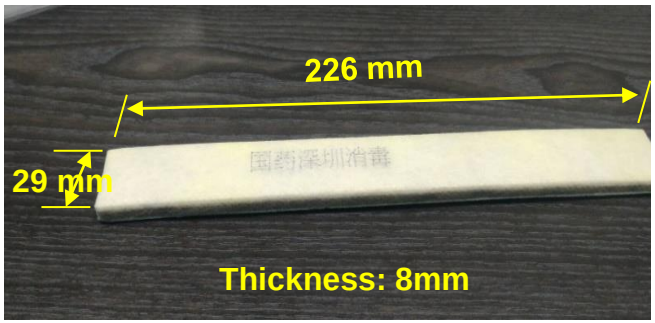
Air intake vent



Air intake vent filter screen
A. Separable plastic lattice
B. Four-layer constitution for dust removal, antivirus, decomposing organic gases and filtration

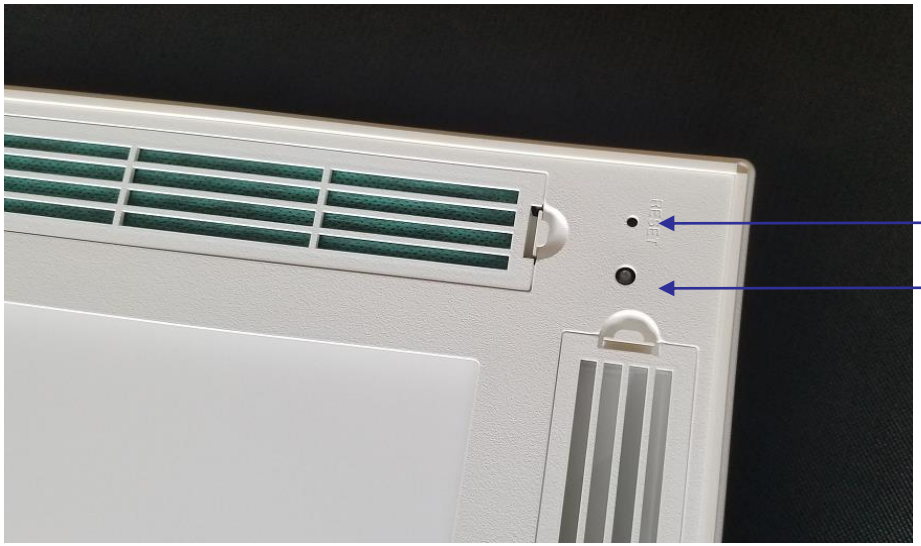
◆ Composition and function of air intake vent filter





◆ Instructions for replacement of the filter

Filter working hours / time need to replace	**2160 hours** - 24 hours/day, use 3 month - 12 hours/day, use 6 month - 8 hours/day, use 9 month
Phenomenon at the expiration of working hours	LED indicator light shines, Fan power turn off, Power supply of lighting system keep working
Replacement of filters	According to the instructions for filter , open the filter mask, insert new filter screen, and cover the mask
Pressing RESET button	Press the button on the left side of LED light for 4 seconds, LED light is switched off, and circulatory system power restarts Timer recalculates until next change hour is full.

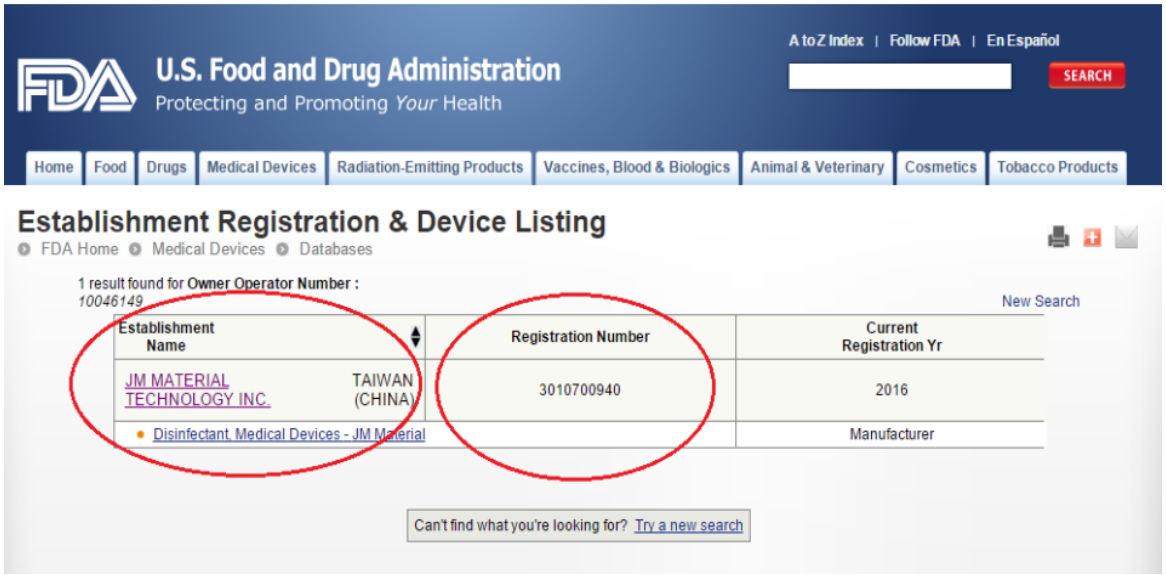


◆ Test and verification for anti-viral effect of new namometer compound material

MIKROBEFRI Skandinavien
Steri-Light Series
Desinficering via lys

FDA certificate, EMC, LVD, SGS certificate

US FDA(美國)醫療一級環境用藥消毒劑



- CE EN60598 LVD certificate
- CE EN60598 test report
- CE EN61547 certificate
- CE EN61547 test report
- CE EN62493 certificate EMC VoC+DoC
- CE EN62493 test report
- FDA MicroBAC EV test
- FDA MicroBAC H1N1 test
- FDA
- Hospital TB test
- SGS E.Coli. test
- SGS Formaldehyde test
- SGS Funfus test
- SGS MRSA test
- SGS Pseudomonas aeruginosa test
- SGS RoHS test
- SGS Staphylococcus aureus test
- SGS TVOC test

FDA report (H1N1, Enterovirus test report)

MIKROBEFRI Skandinavien
Steri-Light Series
Desinficering via lys

MICROBAC® MicroBioTest Division

FINAL REPORT

VIRUCIDAL SUSPENSION EFFICACY TEST
Influenza A Virus (H1N1)

TEST AGENT
Nanocomposite Material

Author
Zheng Chen, M.S.

Performing Laboratory
MicroBioTest
Division of Microbac Laboratories, Inc.

105 Carpenter Drive
Sterling, Virginia 20164

Laboratory Project Identification Number
852-101

Sponsor
JM Material Technology Inc
O. 5F.-3, No. 40-2, Sec. 1, Minsheng N. Rd.
Guishan Township,Taoyuan County 333
Taiwan (R.O.C.)

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Guishan Township,Taoyuan County 333
Taiwan (R.O.C.)

◆ SGS report

SGS

Test Report

Sample Description :

Specimen No.	SGS
1	GZF20

Test Result(s) :

Test Requested : Test

Test Method : GB/T plasti

GZF20-015089.001

Test organism

Test inoculum (CFU/mL)

Volume of test inoculum

U_0

Ut

At

B (CFU/cm²)

C (CFU/cm²)

R

*Antibacterial activity (%)

Notes :

1.The untreate

2.U_0: the avera after inoculatio

SGS

Test Report No. SHAEC1817031001 Date : Aug. 20, 2018 Page 2 of 3

Table of Results:

Reference Standard: GB/T 18801-2015
Test Item: Clean air delivery rate (CADR) of Formaldehyde.
Clean air delivery rate (CADR) of Formaldehyde:0.4 m³/h

Remark :
(1) Test chamber: 3m³
(2) Natural decay: K_n=0.000
(3) 1st round data for Formal

Temperature:25.3 ℃ Humi

Test time (min)
0.00
2.50
7.50
12.50
17.50
22.50
27.50
32.50
37.50
R^2
Ke(min⁻¹)
CADR (m³/hr)

(4) 2nd round data for Formal

Temperature:25.6 ℃ Humi

Test time (min)
0.00
2.50
7.50
12.50
17.50
22.50
27.50
32.50
37.50
R^2
Ke(min⁻¹)
CADR (m³/hr)

SGS

Test Report GZF20-018737-02 Date: 18 Sep 2020

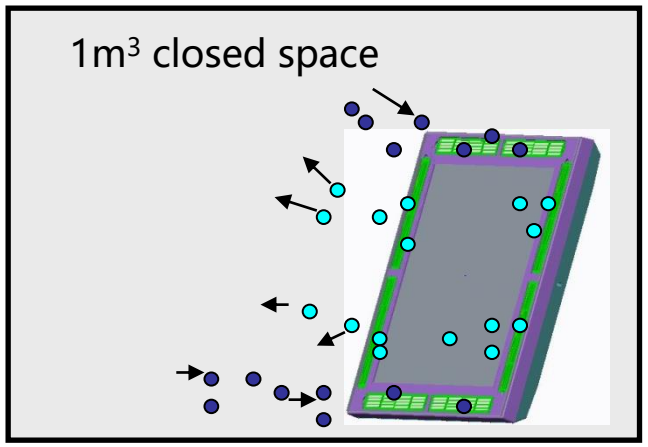
Sample Description:

Specimen No.	SGS Sample ID	Description
1	GZF20-018737.001	Block sample

Test result(s):
Assessment of Antimicrobial activity
Test method: GB/T 21510-2008, Appendix C

Name of test bacteria	Test repeat times	Concentration of bacteria (cfu/mL)	The number of bacteria recovered from different contact time (cfu/mL)			Antibacterial rate (%)	Average antibacterial rate (%)
			/	"0 hour"	"24 hour"		
Candida albicans ATCC 10231	1	1.0×10^5	Sample	/	9.2×10^4	90.8	90.9
			Control sample	2.2×10^4	1.0×10^6		
	2	1.1×10^5	Sample	/	9.0×10^4	90.8	
			Control sample	2.2×10^4	9.8×10^5		
	3	1.1×10^5	Sample	/	8.8×10^4	91.2	
			Control sample	2.2×10^4	1.0×10^6		

Remark:
1. The control sample is cotton fabric without antimicrobial activity, provided by SGS laboratory.
2. Pre-treatment: UV sterilization of both sides for 15min.

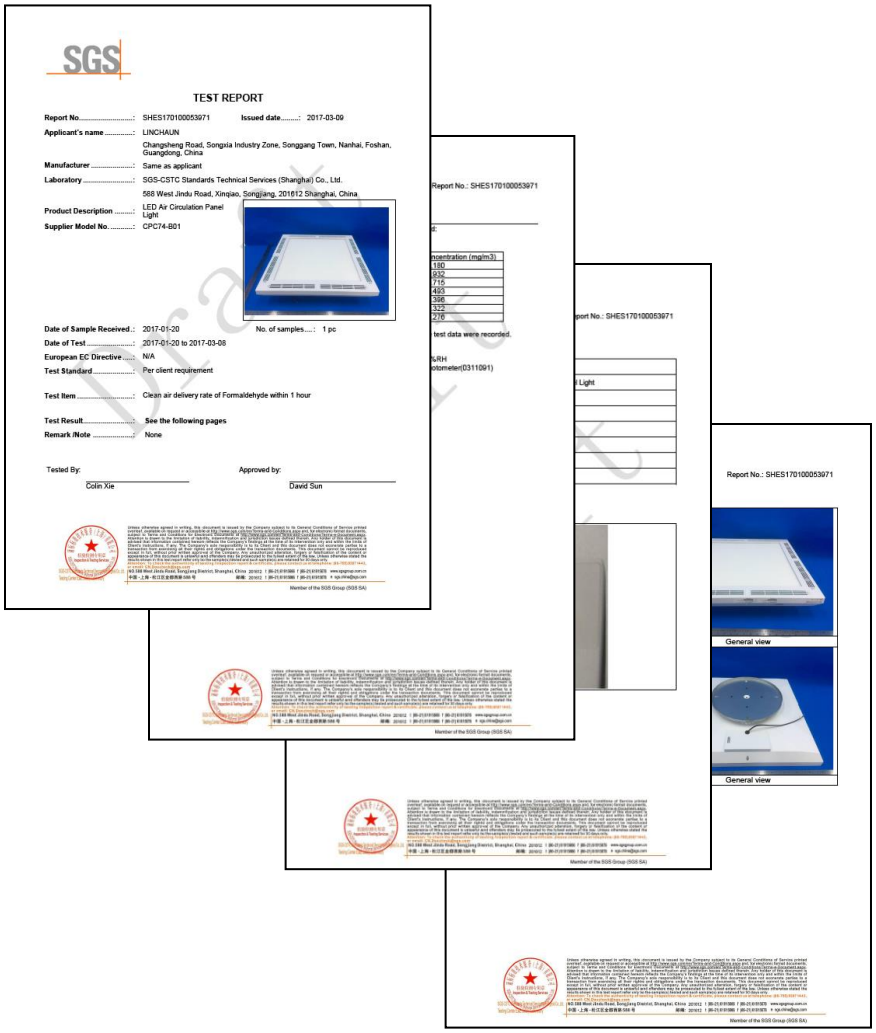


Specification reference GB21551

(test space is revised as large as 1 m³)
Infuse gaseous staphylococcus into one-cubic meter space and calculate ratio of natural colony number/ratio of formaldehyde concentration before and after being placed into lamps and electric lights from which its antiseptic effect can be seen.

Staphylococcus
Antiseptic rate after 24 hours>99%

◆ Air cleaning light SGS Formaldehyde Decomposition Test



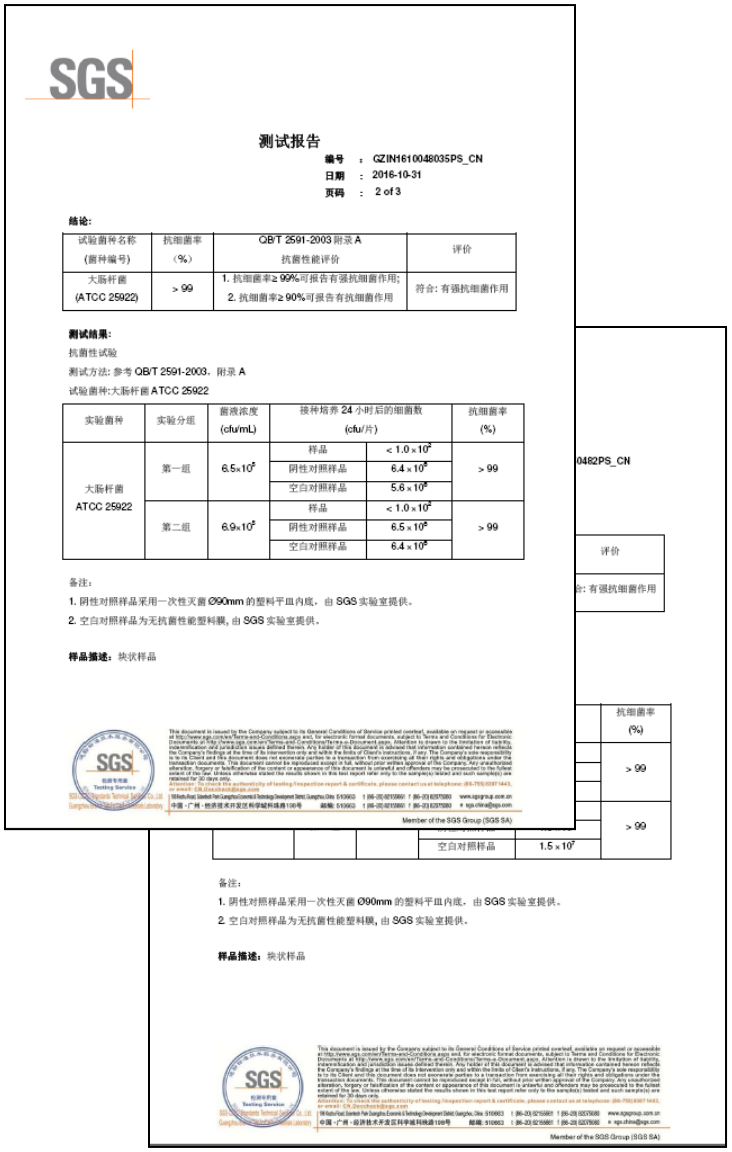
Test time(min)	Formaldehyde concentration	Removal rate(%)
0	1.18	/
10	0.932	21.02%
20	0.715	39.41%
30	0.493	58.22%
40	0.396	66.44%
50	0.322	72.71%
60	0.276	76.61%

Pass the SGS Lab Test

Conduct the experiment according to national standard GB18801-2015
Use 30-cubic meters experimental chamber

Decomposition and removal rate of formaldehyde reaches 76.61% in an hour

◆ Air cleaning light SGS Antiseptic test



测试报告

编号 ： GZIN1610048035PS_CN
日期 ： 2016-10-31
页码 ： 2 of 3

结论：

试验菌种名称 (菌种编号)	抗细菌率 (%)	QB/T 2591-2003 附录 A 抗菌性能评价	评价
大肠杆菌 (ATCC 25922)	> 99	1. 抗细菌率≥ 99%可报告有强抗细菌作用; 2. 抗细菌率≥ 90%可报告有抗细菌作用	符合: 有强抗细菌作用

测试结果：

抗菌性试验

测试方法: 参考 QB/T 2591-2003，附录 A

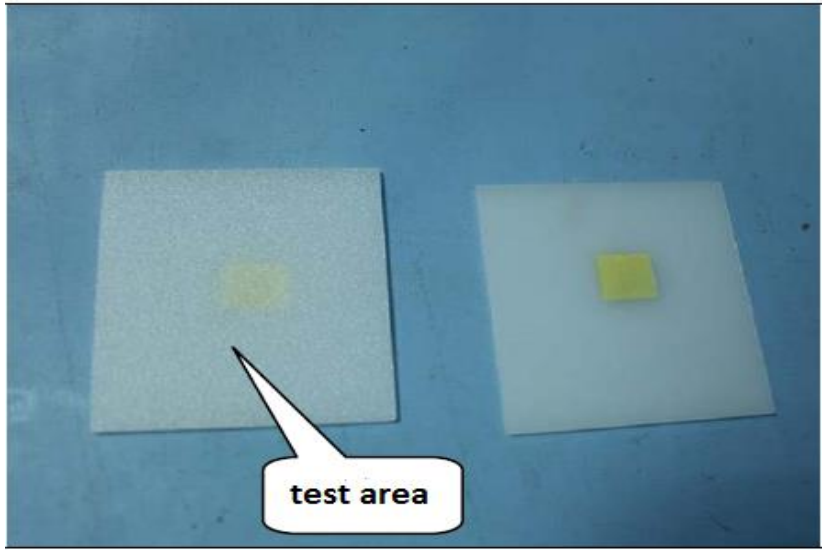
试验菌种:大肠杆菌 ATCC 25922

实验菌种	实验分组	菌液浓度 (cfu/mL)	接种培养 24 小时后的细菌数 (cfu/片)		抗细菌率 (%)
大肠杆菌 ATCC 25922	第一组	6.5×10^5	样品	$< 1.0\times10^2$	> 99
			阴性对照样品	6.4×10^5	
			空白对照样品	5.6×10^5	
	第二组	6.9×10^5	样品	$< 1.0\times10^2$	> 99
			阴性对照样品	6.5×10^5	
			空白对照样品	6.4×10^5	

备注：

1. 阴性对照样品采用一次性灭菌 Ø90mm 的塑料平皿内底，由 SGS 实验室提供。
2. 空白对照样品为无抗菌性能塑料膜，由 SGS 实验室提供。

样品描述：块状样品



Shiny surface (expanded panel)
Antiseptic test

Pass the SGS lab test
Conduct the experiment according to national standard QB/T2591-2003

Removal rate of staphylococcus reaches 99%

Other test reports

Test and Verification for Anti--viral Effect of New Namometer Compound Material

Classfication	Type	Effect	Verification
Virus	H1N1	99.99% of virus is eliminated after 20 minutes	H1N1
	Enterovirus	99.99% of virus is eliminated after 20 minutes	肠病毒
	Respiratory mixed virus	Inhibiting ability reaches 90.0%	呼吸道融合病毒

Test and Verification for Organic Gas Decomposition

Classfication	Type	Effect	Verification
Microbe	5 common microbes	No microbe growing after 28-day culture	微菌
Environment	Formaldehyde	Antisepic rate after 24 hours>99%	甲醛
	TVOC	Antisepic rate after 24 hours>99%	TVOC
	RoHS	No Pb, Hg, Cd, Cr, PBB, PBDE	RoHS

Test and Verification for Anti--viral Effect of New Namometer Compound Material

Classfication	Type	Effect	Verification
Bacteria	Superbug	Antisepic rate after 24 hours>99%	超级细菌
	Tuvercle	Inhabiting rate of tubercle>80.8%	结核菌
	Pseudomonas aeruginosa	Antisepic rate after 24 hours>99%	绿脓杆菌
	Staphylococcus	Antisepic rate after 24 hours>99%	葡萄球 大肠杆菌
	Colibacillosis	Antisepic rate after 24 hours>99%	
	White Candida	Antisepic rate after 10 minutes>99%	白色念球菌
	Pneumophilia	Antisepic rate after 24 hours>99%	退伍军人菌
	Salmonella	Antisepic rate after 30 minutes>99%	沙门氏菌

◆ Applications


Dust-free room


Kindergarten


Hospital

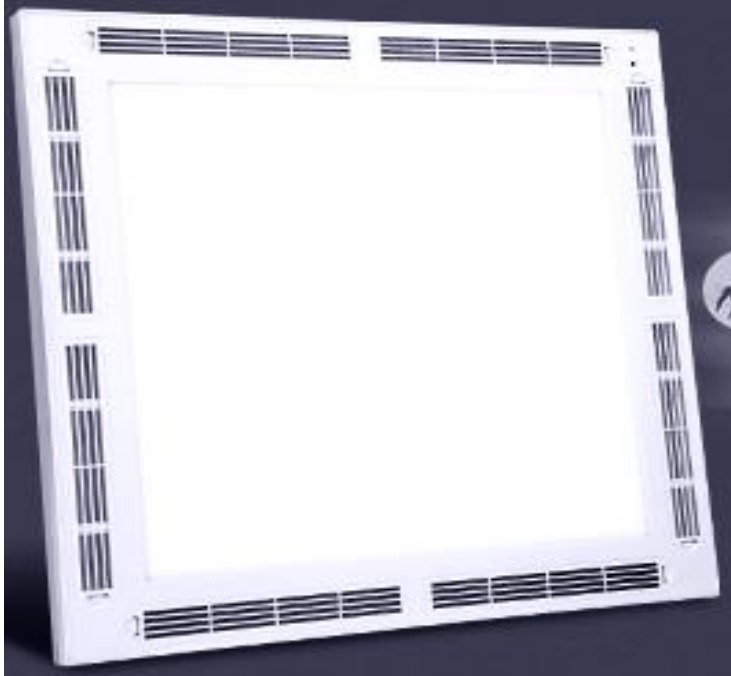

School


Office

AATECH project at Italy Milan MALPENSA airport

MIKROBEFRI Skandinavien
Steri-Light Series

Looking for global agency cooperaton!



Pollen

Smog

Pet odor

Insects

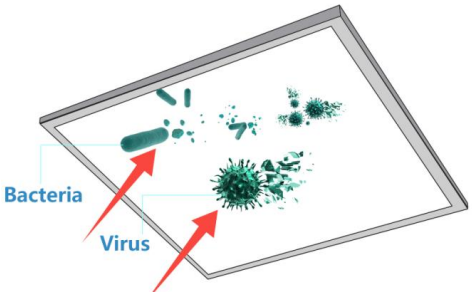
Soot

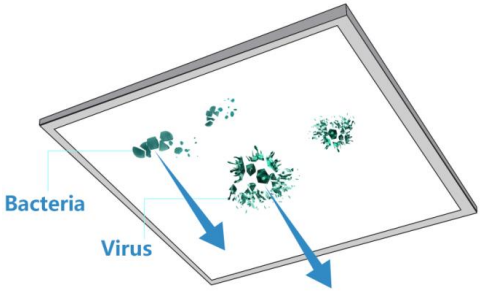
COVID-19

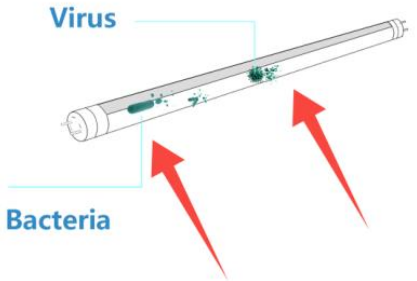
Virus

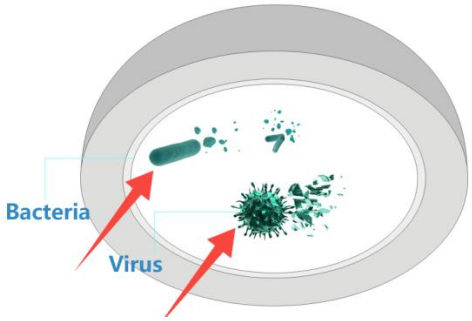
Formaldehyde

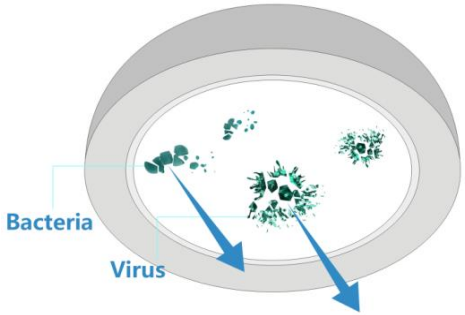
◆ Nano material used on more products

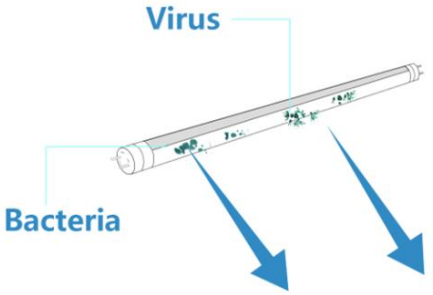


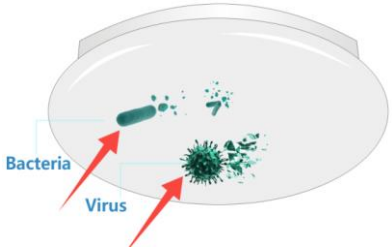


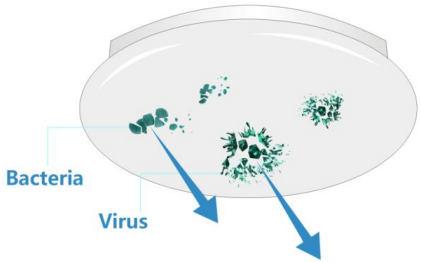












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