



Made in Korea



FDA

ISO13485 : 2016

IEC/EN 61331-1,3:2014

PPE Module D (CE2895, UKCA0338)

PPE Module B EU Type-Examination

TRU+LITE
LEAD-FREE

TRU+COMFI
LEAD

RADIATION SHIELD

Products www.choiworld.com



Welcome to CWORLD

Since 2001, CWORLD has been researching radiation protection products to protect the human body from radiation. Our radiation shielding aprons and accessories developed with lead-free materials are very popular among our customers who use them in the field of medical radiation and nuclear industries.

We promise to develop better products and will soon lead the global market in this field.

Thank you



Radiation Shielding Apron & Accessories

Customers can choose from several different styles and sizes (page 12) with familiar colors and patterns. Our aprons can be made of two types of protective core materials.

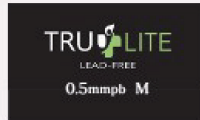
1. Lead-free (TRU-LITE)
2. Lead compound (TRU-COMFI)

CWORLD lead-free aprons are remarkably lighter than traditional leaded aprons in the same protection rate.

CWORLD manufactures a full line of lead-free and lead aprons.

Radiation Shielding Apron & Accessories

Cost effective
Quality you can trust
Proven radiation protection
The sheet is not sticky.
Waterproof nylon outer fabric.



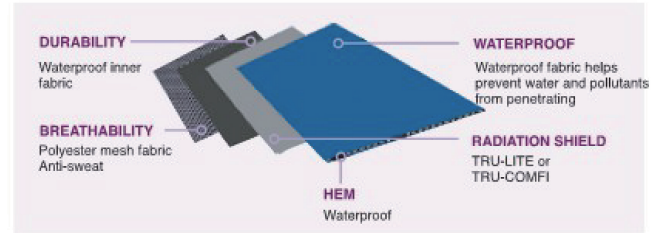
Inner net prevents apron from adhering to the body due to perspiration



The thyroid cover connector prevents separation from the apron



Apron Layer



Custom Made

CWORLD offers customized radiation protection aprons and accessories according to customer's request.

Colors

CWORLD aprons and accessories have seven standard colors as below. Logo and embroidery options are available. Any colors are available for OEM



Lead-free TRU-LITE

Eco-friendly, lightweight, safe for non-hazardous disposal, recyclable

Materials



N-XR-Lead-free sheet

Tungsten compound

Standard Dimensions :

62cm in width

Thickness : 0.48~0.53mm

mmpb equivalency : 0.25, 0.35, 0.5



The lead-free materials are remarkably lighter than traditional lead only materials.
It is cost-effective for customers to purchase our lead-free sheet rolls.



Lead compound TRU-COMFI

Materials



N-XR-leaded compound sheet

Standard Dimensions :

620cm in width

Thickness : 0.53~0.62mm

mmpb equivalency : 0.25 , 0.35, 0.5

Leaded apron is generally used in the radiologic and nuclear parts.
It is cost-effective for customers to purchase our leaded sheet rolls.

Apron Styles



Front Shield Apron N-XR-1



Buckle Type Front Shield Apron

N-XR-1-a / N-XR-1-a-L

The apron buckles can be fastened and unfastened quickly.

This shield apron provides 0.25, 0.35, 0.5 mmPb protection



Tie Type Front Shield Apron

N-XR-1-b / N-XR-1-b-L

The tie apron is the most basic apron type. This apron is easy to put on and can be adjusted to fit variety of sizes.

This shield apron provides 0.25, 0.35, 0.5 mmPb protection

Front Back Shield Apron N-XR-2 / N-XR-2-L

The front back shield apron with detachable shoulder allows for you to remove your apron quickly and easily without breaking the sterile field. Shoulder detachable type is available.

This shield apron provides 0.25, 0.35, 0.5 mmPb protection



Vest Skirt Shield Apron N-XR-3 / N-XR-3-L

The Vest-Skirt combination is the preferred choice for full protection and it can reduce back fatigue.

You control the amount of back support by adjusting the inner elasticized belt.

Shoulder detachable type is available.

This shield apron provides 0,25, 0,35, 0,5 mmpb protection.



X-Type Shield Apron N-XR-4 / N-XR-4-L

Our X-type Velcro band offers ultimate comfort as well as quick and easy adjustability.

Shoulder detachable type is available.

This shield apron provides 0,25, 0,35, 0,5 mmpb protection.





Half Shield Apron N-XR-5 / N-XR-5-L

This shield apron provides 0,25, 0,35, 0,5 mmpb protection.



40(L)x50(W)cm



Dental Panorama Shield Apron N-XR-6 / N-XR-6-L

During panorama radiation shooting in dental units, this apron can be used as a patient shield. This apron has a non-shielding sheet upper shoulder part to not prevent shooting. This shield apron provides 0,25, 0,35, 0,5 mmpb protection.



88(L)x58(W)cm



Dental Panorama N-XR-6-1 / N-XR-6-1-L

Excellent front and back protection for panoramic imaging.

It is designed to prevent ghost images caused by shielding sheet over clavicle on the back.

This shield apron provides 0,25,0,35,0,5mmpb protection.

Front : 50(L)x58(W)cm
Back : 76(L)x58(W)cm

Dental Panorama N-XR-6P / N-XR-6P-L

Childs size for panoramic X-ray imaging. Designed based on a height of 130cm.

This shield apron provides 0,25,0,35,0,5mmpb protection.



Front : 40(L)x50(W)cm
Back : 50(L)x50(W)cm



Dental Intraoral Shield Apron N-XR-7 / N-XR-7-L

During intraoral radiation shooting in dental units, this apron can be used as a shield. The attached thyroid cover is helpful and convenient.

This shield apron provides 0.25, 0.35, 0.5mmPb protection.



70(L)x58(W)cm

Dental Intraoral N-XR-7-1 / N-XR-7-1-L

Radiation protection for patients during intraoral radiographic imaging. In order to protect thyroid from X-ray, thyroid collar is attached with velcro.

This shield apron provides 0.25, 0.35, 0.5mmPb protection.



70(L)x58(W)cm

Thyroid Shield N-XR-7P / N-XR-7P-L

Designed based on a height of 130cm.

This shield apron provides 0.25, 0.35, 0.5mmPb protection.



50(L)x50(W)cm



Maternity Shield N-XR-8 / N-XR-8-L

The maternity apron provides 0.5mmPb protection.

98(L)x58(W)cm

Maternity Shield N-XR-8-1/N-XR-8-1-L

The maternity apron provides 0.5mmPb protection. It is used in mammography area.



55(L)x60(W)cm

Amplus Shield N-XR-Armpus

The armpus shield provides 0.25, 0.35, 0.5mmPb protection. It is used for upper arm protection and detachable.



31(L)x41(W)cm

Thyroid Shield N-XR-9 / N-XR-9-L

It provides 0,25, 0,35, 0,5mmpb protection to the neck area, Especially the thyroid gland



25(L)x59(W)cm

Thyroid Shield N-XR-9-1 / N-XR-9-1-L

It provides 0,25, 0,35, 0,5mmpb protection to the neck area, Especially the thyroid gland



25(L)x59(W)cm

Thyroid Shield N-XR-9-2 / N-XR-9-2-L

It provides 0,25, 0,35 0,5mmpb protection to the neck area, Especially the thyroid gland



17(L)x61(W)cm

Disposable Thyroid Shield Cover N-XR-9 Disposable

A disposable thyroid shield cover allows the customer to feel clean and fresh



100pieces/box
S) 27(L) x 14(W) x 4.5(H)cm
L) 19(L) x 34(W) x 5(H)cm



Thyroid Shield

N-XR-9-3 / N-XR-9-3-L

It provides 0,25, 0,35, 0,5mmpb protection to the full neck area, Especially the thyroid gland



Cotton Thyroid Shield Cover

N-XR-9-1 cover

Cotton thyroid shield cover allows the user to feel clean and fresh as absorption of sweat,



50(L)x30(W)cm

Male Gonad Shield N-XR-10 / N-XR-10-L

Gonad shield provides 0,25, 0,35, 0,5mmpb protection



31(L)x31(W)cm

Male Gonad Pantytype Shield

N-XR-10-1 / N-XR-10-1-L

Gonad Shield provides 0,25, 0,35, 0,5mmpb protection



36(L)x40(W)cm

Pediatric Gonad Shield

N-XR-10-Ped

Gonad shield provides 0,25, 0,35, 0,5mmpb protection



15(L)x15(W)cm

Infant Gonad Shield

N-XR-10-Infant

Gonad shield provides 0,25, 0,35, 0,5mmpb protection



6(L)x6(W)cm

Female Gonad Shield N-XR-11 / N-XR-11-L

Gonad shield provides 0,25, 0,35, 0,5mmpb protection,



28(L)x37(W)cm



Head shield N-XR-12 / N-XR-12-L

Head shield helps protect the the skull from radiation, providing 0,25, 0,35, 0,5mmpb protection on all sides and 0,25mm protection on top.
One size fits all.
Back velcro helps size adjustability.



10(L)x19(D)cm



Leg Shield N-XR-13 / N-XR-13-L

Legs and feet can be protected from radiation by our leg cover.
This shield apron provides 0,25,0,35, 0,5mmpb protection.



49(L)x22(W)cm

TLD Poket N-XR-TLD

For the safety of the user, it is an apron attached to the chest lining of all aprons at the request of the user,



8(L)x4(W)cm

Arm Shield N-XR-14 / N-XR-14-L

Arms can be protected from radiation by our arm cover.
This shield apron provides 0,25,0,35, 0,5mmpb protection.,



26(L)x16(W)cm

Arm Shield N-XR-14-2 / N-XR-14-2-L

It is used in animal hospital.
Arm shields have 0,25, 0,35, 0,5mmpb protection,



37(L)x16(W)cm

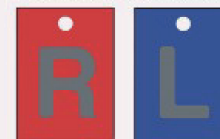
Arm Shield N-XR-14-3

This product have 0,25, 0,35, 0,5mmpb protection



37L x 20 / 13 cm

Lead Marker N-XR-R / N-XR-L



3,7(L)x2,7(W)x0,3(H)cm

Lead Ruler N-XR-ruler 30 / ruler 150 / ruler 180

The thickness and size
6(W)x30(L)cm x0,3(H) / 6(W)x150(L) x0,3(H)cm / 6(W)x180(L) x0,3(H)cm



Radiation Shield

Shield is made of lead glass. Customer can select several different shield types. It has rolling casters for smooth movement. Protection strengths and sizes are as follows.



Lead glass shield
(two-thirds shield)
N-XR-g-1

180(L)x90(W)cm with
120(L)x90(W)cm
window size

Protection :1,65mmpb,
Lead glass thickness : 8mm
Lead plate thickness :1,5mm



Lead glass shield
(half shield)
N-XR-g-2

180(L)x90(W)cm with
80(L)x90(W)cm
window size

Protection :1,65mmpb,
Lead glass thickness : 8mm
Lead plate thickness :1,5mm



Lead glass shield
(partial shield)
N-XR-g-3

180(L)x90(W)cm with
20(L)x30(W)cm
window size

Protection :1,65mmpb,
Lead glass thickness : 8mm
Lead plate thickness :1,5mm



Lead plate shield
N-XR-g-4

180(L)x90(W)cm
lead plate size

Lead plate
thickness : 1,5mm



Lead glass shield
(dual)
N-XR-g-2D

180(L)x90(W)cm dual
with 80(L)x90(W)cm
window size

Protection :1,65mmpb,
Lead glass thickness : 8mm
Lead plate thickness :1,5mm



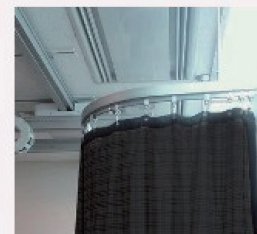
Lead Rotating shield
N-XR-g-rotating

180(L)x80(W)cm
Lead plate thickness : 0,5mmpb



Lead curtain shield N-XR-g-5-L

Lead curtain shield can be attached in the ceiling with sliding rail.



200(L)x150(W)cm / Protection : 0,25mmpb,

Lead curtain shield N-XR-g-6-L

It can be used in the part that uses a radiology machine or the airport examination part for shielding scattered radiation.



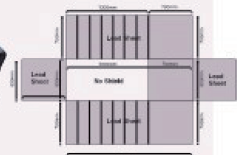
100(L)x65(W)cm
Protection : 0,25, 0,35, 0,5mmpb,

Saddle curtain shield N-XR-g-6-D-L

It can be used in the angioroom for angio table shield curtain as part or total shield



Custom made size is available,



ERCP cover N-XR-g-7-L 70(L)x47(W)x 40/125(H)



Shielding cover to block scattered X-ray.

It is a shielding cover to protect medical staff from scattering X-ray generated from equipment during ERCP procedures. Beside ERCP, this cover is applied as the same purpose.

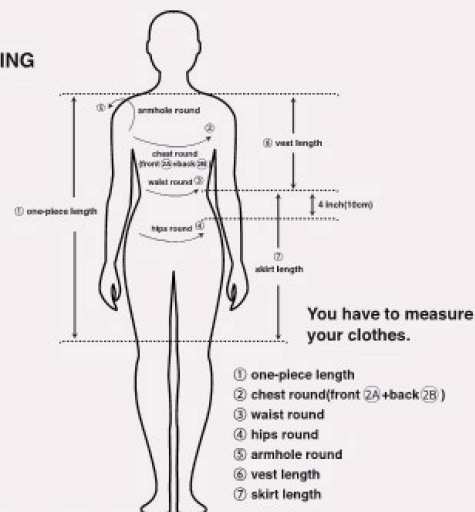


When not in use, the upper part may be separated, and the shield may be raised simply as using velcro. The upper part is made of a net to allow air to pass through.



The upper part is made of a net to allow air to pass through.

CWORLD APRON SIZING



EUROPEAN APRON SIZE CHART

Cat No.	Apron Product Name	XS	S	M	L	XL	XXL
		L x W cm	L x W cm	L x W cm	L x W cm	L x W cm	L x W cm
N-XR-1	Front Shield	80 x 48	90 x 52	100 x 60	110 x 63	120 x 69	130 x 78
N-XR-2	Front Back Shield	80/70 x 45	90/80 x 48	100/90 x 55	110/100 x 60	120/110 x 65	130/120 x 70
N-XR-3	Vest Skirt Shield (Vest)	43 x 40	47 x 45	55 x 55	62 x 58	72 x 60	82 x 65
	Vest Skirt Shield (Skirt)	50 x 85	50 x 95	60 x 110	65 x 125	65 x 135	70 x 145
N-XR-4	X-type	80 x 48	90 x 52	100 x 60	110 x 63	120 x 69	130 x 78

Skirt(W) : Hip circumference

INTERNATIONAL APRON SIZE CHART

Cat No.	Apron Product Name	S	M	L	LL
		L x W cm	L x W cm	L x W cm	L x W cm
N-XR-1	Front Shield	88 x 55	98 x 58	108 x 58	113 x 63
N-XR-2	Front Back Shield	85 / 77 x 53	90 / 82 x 55	96 / 88 x 57	102 / 94 x 60
N-XR-3	Vest Skirt Shield (Vest)	48 x 48	52 x 53	60 x 58	67 x 60
	Vest Skirt Shield (Skirt)	35 x 85	45 x 100	47 x 115	50 x 129
N-XR-4	X-type	88 x 55	98 x 58	108 x 58	113 x 63

Skirt(W) : Hip circumference

Apron Hanger

Customer can select from several apron hanger styles.

Materials : Stainless steel



10arm apron hanger N-XR-h-10-1
60(L)x90(W)x147(H)cm



10 arm apron hanger N-XR-h-10
50(L)x60(W)x140(H)cm



10 arm Apron with skirt hanger N-XR-h-10-S
50(L)x60(W)x140(H)cm (with 6 bar)



8 arm apron hanger N-XR-h-8
60(D)x147(H)cm



5 arm apron hanger N-XR-h-5
50(L)x40(W)x140(H)cm



5 arm apron hanger N-XR-h-5-1
50(L)x23(W)cm



2 arm apron hanger N-XR-h-2
25(L)x23(W)cm



2 arm apron hanger N-XR-h-2-1
50(L)x15(W)cm



1 arm apron hanger N-XR-h-1
27(L)x44(W)cm

Zone Barrier

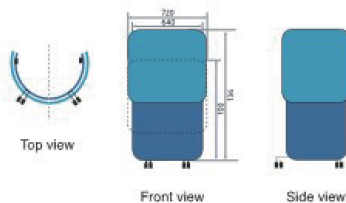
Protect yourself during X-ray monitoring surgery

Model : N-XR-g-8-L



Up and Down

Without a motor, Zone Barrier moves up with hands and down with lever.



Tru-guard N-XR-E-1

Tru-guard Cworld Radiation Protective Goggles have comfort frame design, constructed of Cellulose acetate.

Front and lateral side protection ensures maximum protection with 0.12mmpb lead equivalency.

Red and black colored frames are available.

X-Ray Protective eyewear - Acrylic Lead



Model : N-XR-E-1(Red)



Model : N-XR-E-1(Black)

Flip-up glasses to ensure wearing **Tru-guard** in addition to your normal glasses.

Specifications

Lens material	Acrylic lens
Frame material	Cellulose acetate
Weight	70g
Lead equivalency / Front	0.12mmpb
Lead equivalency / Side	0.12mmpb
Approx. Size	16Cm(L)x5.5Cm(H)
Color	Red / Black



To protect patients during CT scanning Radiation Shield Cover



Patient Protection

Radi Shield-Eyes N-XR-C-1

Size : 8(L)x24(W)cm



Radi Shield-Thyroid N-XR-C-2

Size : 9(L)x19(W)cm



Radi Shield-Breast N-XR-C-3

Size : 34(L)x50(W)cm



Radi Shield-General N-XR-C-4

Size : 40(L)x50(W)cm



Custom made is available.

Core material ☐ Lead-free (Tru-Lite)
Color selection ☐ Olive green ☐ Orange red ☐ Blue ☐ Pink ☐ Dark blue ☐ Lime light ☐ Black



** Color samples may not represent an exact color match
** Logo printing is also available (Optional)

TRU-LITE
LEAD-FREE

Lead equivalency ☐ 0.5mmPb
Outer ☐ Waterproof nylon
Inner ☐ Polyester fabric + Nylon mesh

Protection rate	Lead equivalency
100kVp : 97%	0.5mmPb

Protection for
the **breast**,
the **eyes**,
the **thyroid**
and the **abdomen**

Radiation Shield Sheet, Apron Protection

Lead equivalency	Attenuation (100kvp, 400mA)	Shield Sheet, kg/Lbs(62x100cm)	Shield Front Apron kg/Lbs(Male, M, 60x92cm)
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Lead (TRU-COMBI)	.25 mmpb	91.88%	1.98kg (4.18 Lbs)	2.26kg (4.97 Lbs)
	.35 mmpb	94.20%	2.84kg (6.24 Lbs)	2.90kg (6.38 Lbs)
	.5 mmpb	96.60%	3.81kg (8.38 Lbs)	3.75kg (8.36 Lbs)

Leadfree (TRU-LITE)	.25 mmpb	91.92%	1.62kg(3.54 Lbs)	1.8kg (3.967 Lbs)
	.35 mmpb	94.21%	2.39kg (5.25 Lbs)	2.43kg (5.34 Lbs)
	.5 mmpb	96.99%	3.24kg (7.12 Lbs)	3.08kg (6.77 Lbs)

Certificates and Declarations of Conformity

Certificate of U.S. FDA Medical Device Establishment Registration

FF 2021
Established in:
CAUSA
145, St. Severino, 1-10, Genova
Italy - 16126, Genova, 16126
RSCG, RSCG LLC
Registration Number: 141393316
T11 Number: 2025450
Registration No. 141393316
Registration Date: December 31, 2021

...for compliance with the requirements of the Federal Food, Drug, and Cosmetic Act, as amended, and the regulations thereunder, the undersigned hereby certifies that the information furnished herein is true and correct to the best of his knowledge and belief, and that the same are in accordance with the facts and circumstances of the establishment and its operations, and that the same are in accordance with the requirements of the Federal Food, Drug, and Cosmetic Act, as amended, and the regulations thereunder, and that the undersigned is duly qualified to make such a statement.

Provision
145, St. Severino, 1-10, Genova
Italy - 16126, Genova, 16126
RSCG, RSCG LLC
Registration Number: 141393316
T11 Number: 2025450
Registration No. 141393316
Registration Date: December 31, 2021

EU Declaration of Conformity (CE PPE)

This declaration of conformity is issued under the sole responsibility of the manufacturer:
Cworld
145, St. Severino, 1-10, Genova
Italy - 16126, Genova, 16126
RSCG, RSCG LLC
Registration Number: 141393316
T11 Number: 2025450
Registration No. 141393316
Registration Date: December 31, 2021

Product Name: RADIATION SHIELD SHEET, APRON
Declaration of Conformity: PPE (CE PPE)

...for compliance with the requirements of the European Union Directive 89/686/EEC, as amended, and the regulations thereunder, the undersigned hereby certifies that the information furnished herein is true and correct to the best of his knowledge and belief, and that the same are in accordance with the facts and circumstances of the establishment and its operations, and that the same are in accordance with the requirements of the European Union Directive 89/686/EEC, as amended, and the regulations thereunder, and that the undersigned is duly qualified to make such a statement.

Positioner

Head Positioner for CT

Scan Coated-Black Easy to cleaning
Minimized Attenuation for Brain Scan
Provides a comfortable head support
for patient during supine imaging
Designed to support the head in an
anatomically correct position

Cat.no: N-RP-1

Dimensions : 27(L) x 20(W) x 14(H)cm



Head Holder for Gamma Camera

Scan Coated-Black Easy to cleaning
Minimized Attenuation for Brain Scan
Provides a comfortable head support for
patient during supine imaging
Designed to support the head in an
anatomically correct position

Cat.no: N-RP-1-1

Dimensions : 40(L) x 23(W) x 15(H)cm



Hands Up Positioner for CT, PET-CT

Scan Coated-Black Easy to cleaning
Provides a comfortable head, shoulder
and arms support for patient during chest
and abdominal imaging.
Designed to support the head, arms in an
anatomically correct position
Scan Coated-Black Easy to cleaning

Cat.no: N-RP-2

Dimensions : 53(L) x 50(W) x 18(H)cm





Flat Panel Intervention Table

N-FPIT-1 95(L)x60(w)x17/30(H)cm

The FPIT is an electric operating table that can be adjusted to the desired height and moved left and right during the procedure using the Updown switch.



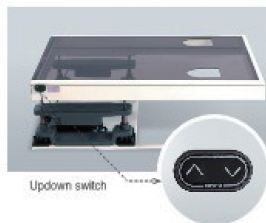
The FPIT is an operating table developed in the Intervention Room to improve environmental conditions during procedures for precise diagnosis and treatment, reducing user fatigue and saving time for installation and storage.

The FPIT is designed to ensure that there is no intermediate joint in the operating table and that the height is constant to relieve stability and inconvenience of the treatment.

The FPIT is designed to adjust the height according to the patient's body type to relieve the patient's discomfort caused by thigh and toe pressure.

The FPIT is made of transparent plastic to help determine the patient's condition.

The FPIT has been designed with magnetic aids to secure the operating instrument by attaching a magnetic plate on the treatment table to address the risk of changes in the treatment instrument position and loss of stability.



Updown switch

Intervention aidtable

Model no: N-FPIT-2

50(L) x 50(W) x 16/27(H)cm

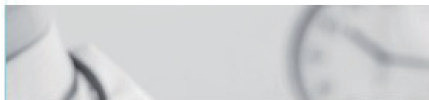
It is used for abdomen approach in Intervention operation by ua down switch moved.



CLEAN NANO

Deodorizing/deodorizing agent for radiation shield apron.

It is a product capable of nano-deodorizing from indoor visible light using tungsten oxide.



Deodorizing/deodorizing agent
for radiation shield apron.

CLEAN NANO



CLEAN NANO-300



CLEAN NANO-750

Transparent photocatalyst.

When light is received, it causes a catalytic reaction, and the substance itself does not change, absorbs light and promotes the reaction, and is an eco-friendly substance harmless to the human body that turns various pollutants into harmless substances.

The representative effect of clean nano photocatalysts.

1. Antibacterial: Remove germs, fungi, viruses
2. Plution prevention: Decomposition and removal of pollutants attached to the surface of the substrate.
3. Deodorization: Remove odors such as acetaldehyde, ammonia, etc.
4. Atmosphere cleanup: removal of noxious substances in air.
5. Hydrostatic: Decomposing and removing harmful organic compounds from wastewater

Clean nano

Rather than covering the odor with other chemicals, it reliably removes various bacteria and odors through the oxidation of photocatalysts applied with nanotechnology.

Patent and FDA certification.

Unlike conventional photocatalysts, the self-developed practical transparent photocatalyst "Clean Nano" also works in visible light. Use it with confidence through the US FDA safety certification.

TRU+LITE
LEAD-FREE



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