



Nemesis™ UV-C Typhon™ Tower

USER MANUAL

For Models: NTT-XX-XXX-XXX

English

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Unpacking

The Nemesis™ UV-C Tower comes either on a pallet or in a custom designed ATA flight case. (Optional) Your Nemesis™ Tower has been sent out in perfect working order. Inspect your unit for any damages that may have occurred during shipping. If the packaging appears damaged, carefully inspect your unit. If you find any damage, contact customer support before attempting to operate your unit.

Contents:

- Nemesis™ Tower
- Nemesis™ Tower Slipcover
- 12 UVC Radiators
- Key Fob Remote
- Manual
- Safety Glasses
- Warning Signs for points of entry

Customer Support

The customer support line is available for any inquiries on your product. Visit <https://www.nemesisuvc.com/> or call (972) 423-0075, 8-5 M-F

For 24/7 support, contact: support@Nemesis™uvc.com

For servicing or repairs, contact: (972) 423-0075, or go to: <https://www.nemesisuvc.com/>

Limited Warranty

Terms and Conditions: This limited warranty is subject to the terms listed below.

For warranty service - Call: (972) 423-0075, M-F, 9-5

1. This warranty is void if the product serial number and/or labels are altered or removed; if the product is modified in any manner that affects the reliability of the product; if the product has been repaired or serviced by anyone other than a trained Nemesis™ technician, if the product is damaged because it is not properly maintained as set forth in the product instructions, guidelines and/or user manual.
2. This is not a service contract, and this warranty does not include routine cleaning or periodic check-up.
3. Nemesis™ reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products theretofore manufactured.
4. This is the only written warranty applicable to this product and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published
5. Warranty is limited to one year from date of purchase.

Activate Your Warranty:

Send the following information to: sales@nemesisuvc.com

Name/Company	Where Purchased
Product Model/Name	Physical Address
Date of Purchase	Email Address

Activating your warranty signifies that you have read and understand the limited warranty listed above. **YOU MUST ACTIVATE YOUR WARRANTY WITHIN TWO WEEKS OF THE PURCHASE DATE**

Benefits of UVC Technology:

- UVC radiation has been proven to be effective against waterborne and airborne pathogenic micro-organisms including those responsible for cholera, hepatitis, polio, typhoid, giardia, cryptosporidium and many other bacterial, viral and parasitic diseases
- UVC installations have low capital and operation cost
- UVC technology is environmentally friendly
- UVC installations are easy to operate and to maintain
- UVC radiation has no harmful effect when overdosed on surfaces, water or air
- UVC radiation works instantly and the effectiveness does not depend on the temperature
- UVC disinfection is a physical process: no substances are added
- The UVC disinfection effect is directly related to the UV dose (which is the product of intensity and exposure time of the micro-organisms) so it's effectiveness can be simply measured once the system design is validated

UV-C Disclaimer

The products being sold pursuant to this Agreement must be installed correctly and used properly to be effective. Nemesis™ is not responsible for improper installation, usage or damages caused by the end user. Nemesis™ makes no representations, guarantees or assurances as to the final effectiveness of using a UV lighting system for sanitization. Nemesis™ warrants that with proper installation and usage, scientific evidence exists proving the efficacy of UV-C sanitation. Nemesis™ does not warrant that 100% of viruses, bacteria and germs shall be eliminated. Effective UV-C sanitation times are calculated by information provided by the specific radiator manufacturer. Times vary according to radiator, distance, dosage and type of viruses, bacteria, germ or mold to be eliminated. Customer understands and accepts that the use of UV lighting can cause fading and discoloration of some materials over extensive prolonged exposure and that Nemesis™ is not responsible for any damages whatsoever to any materials or equipment due to the use of the products.

Safety



HIGH INTENSITY ULTRAVIOLET LIGHT RISK OF EXPOSURE TO ULTRAVIOLET RADIATION AVOID DIRECT EYE AND SKIN EXPOSURE



WARNING: This product can expose you to chemicals including mercury, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.



All Nemesis™ units are built and registered under our EPA™ registered facility #99690 as a Risk Group 3 UV-C product under 40 CFR 156

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

a) This equipment is designed for use with germicidal UV radiation sources and must be installed in compliance with competent technical directions to prevent risk of personal injury from UV radiation.



b) UV and optical radiation can be reflected by surrounding surfaces such as ceilings and walls. Since the reflective properties of surfaces can vary widely, it should be considered as part of site planning. Follow the manufacturer's recommendations for selecting appropriate ceiling and wall finishes.



c) IT IS THE RESPONSIBILITY OF THE INSTALLER TO OPERATOR THAT PERSONS WILL NOT BE EXPOSED TO EXCESSIVE UV OR OPTICAL RADIATION DURING EQUIPMENT OPERATION. THIS WILL REQUIRE THE OPERATOR TO CONDUCT AN ASSESSMENT OF THE AREA PRIOR TO USE



WARNING

d) Maintenance and servicing of this UV generating equipment shall be performed by authorized personnel. Service personnel must wear appropriate Personal Protective Equipment (PPE) if the equipment will be in operation during the maintenance or servicing work. Contact Nemesis UV-C for PPE recommendations and guidance.



▲WARNING

g) When replacing lamps, replace them only with the lamps for which the equipment is marked and intended.

▲WARNING

h) The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

▲WARNING

i) Do not use this equipment for other than intended use.

▲WARNING

SAVE THESE INSTRUCTIONS

Never allow humans, animals or plants to have direct exposure of UV-C light without proper PPE. Since UV-C is not visible light, the fixtures have safety protocols built-in to avoid exposure. Many studies have been done on the effects of UV-C and the results show minimal effect in the short term. Studies have shown short term, temporary damage to the eye can be an effect of exposure to UV-C light. Long term exposure may produce fading or degradation of some materials. Amounts of degradation are completely dependent on types and quality of materials and if they have UV-C protection built-in. The FDA approved waivers on UV-A, UV-B and UV-C, more information is available from the FDA at: <https://www.fda.gov/media/136533/download>



For the proper, safe, and effective use of your device it is ESSENTIAL that the user follows all guidelines and instructions in this manual. Proper installation and use is essential for the effectiveness and safety of this product.

▲WARNING

Disconnect the device from power source before cleaning the device or replacing radiators (see page 16 for detailed instructions)

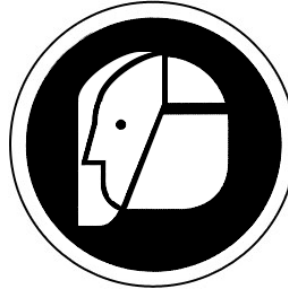
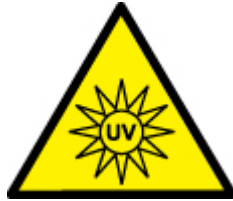


There are no serviceable parts inside the unit. DO NOT attempt to do any repairs beyond basic cleaning and lamp replacement. Any attempts to repair the unit will void the warranty. Nemesis is not responsible for any damages or harm caused by your repairs. Please contact Nemesis at: (972) 423-0075 for repair assistance.

▲WARNING

WARNING: To guard against injury, basic safety precautions should be observed, including the following:

1. Read and save all notices, warnings and safety instructions received with equipment.



2. **Avoid exposure to direct or reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.**
3. **Always disconnect power to the equipment and unplug before performing any service or maintenance.**
4. **Do not operate without proper electrical ground.**
5. Equipment is intended for indoor use only.
6. Do not alter the construction or design. Do not remove safety labels or devices
7. Do not use equipment for other than its intended purpose, as described in the equipment manual.
8. Keep inlet and outlet vents, clean and clear of objects.
9. **Over time germicidal ultraviolet rays may break down plastic, rubber, or other non-metallic materials, can fade colors, and can be damaging to plant life. Shield all plastic, rubber, or other non-metallic parts, plant life, etc. which may be exposed to direct or reflected germicidal ultraviolet rays.**
10. Do not operate equipment if the power cord and/or plug are damaged, or if any other damage to the unit is visible or suspected.
11. Utility power must match power requirements listed on the unit label.
12. Equipment should be protected from the elements and from temperatures below freezing.
13. Do not exceed equipment's maximum rated flow capacity and/or operating pressure.

CAUTION

DANGER

WARNING

CAUTION

Safety Warnings

All occupants and personnel should be alerted to the potential hazards indicated by the product safety labeling on this unit.

The following conventions are used to indicate and classify precautions and on product safety

labeling. Failure to observe precautions could result in injury to people or damage to property.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

Danger indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

Warning indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Caution indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.

CAUTION

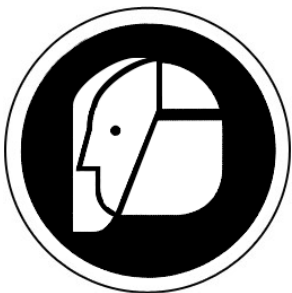
Caution used without the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in property damage.



This symbol / pictorial is used to identify an ELECTRICAL SHOCK or ELECTROCUTION hazard.



This symbol / pictorial is used to identify an ULTRAVIOLET LIGHT hazard.



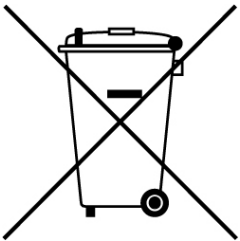
This symbol / pictorial is used to identify the need to wear approved ultraviolet resistant face shield.



The symbol / pictorial is used to identify the need to wear approved ultraviolet resistant eyewear.



This symbol / pictorial is used to identify the need to wear protective gloves.



*This symbol / pictorial is used to identify components which must not be disposed of in the trash.

Product safety labels should be periodically inspected and cleaned, as necessary, to maintain good legibility. Always replace illegible safety labels. Contact the factory to obtain replacement safety labels.

These instructions do not purport to cover all details or variations in equipment nor to provide every possible contingency to meet in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's or owner's purposes, this matter should be referred to Nemesis Customer Service.

Failure to follow any of these instructions could void product warranties. For a complete listing of product Terms and Conditions, please visit www.nemesisuvc.com

Nemesis UV-C, LLC. assumes no responsibility for claims arising out of improper or careless installation or handling of its products.

General Guidelines:

DO NOT attempt any repairs on the Nemesis™ Tower. Anything beyond replacing the radiator and basic cleaning must be done by a trained technician. Attempts to repair the device will void the warranty.

DO NOT operate the device while people are in the area.

DO NOT use power cable to maneuver the device.

DO NOT utilize the True1 connections for any fixture other than the ones included with the Nemesis Tower.

Avoid touching the radiators. Oils and moisture from the skin can cause the coating on the radiator to deteriorate. Light dusting can be done carefully with a microfiber cloth. Take care when replacing radiators.

For any questions or concerns, contact the Nemesis™ Customer Service Line 24/7 at:

(469) 466-2UVC

Technical Specifications:

Features:

- 360 degree disinfection
- Designed in USA. Ships From USA.
- Safe and environmental- No harsh chemicals, No landfill.
- Convenient Key Fob Remote or Web Application for setting timers and schedules
- Emits germicidal wavelength of 254nm
- Kills 99% of all viruses and bacteria
- Motion activated temporary shutdown
- Audible alerts during use
- Visual alerts during use
- Optional flight case
- Heavy duty slip-cover protection
- Custom branded labeling
- All aluminum construction

Lamp Source: Philips TUV 55 W HO lamp technology

Dimensions: Height: 5' 10 ½" x Width: 2' 5 ½"

Weight: 220lbs without flight case / 275lbs in flight case

Input voltage:

AC 95-120V 50/60Hz

7 amps @ 120v

Rating: Indoor use only

Fixture Overview



*Optional ATA flight case shown

How do I use my Nemesis UV-C Tower?

Step 1: Unpack your unit and remove the safety glasses, signs and other literature out of the pockets of the slipcover. Undo the Velcro on both sides of the cover and use the black straps at the top and sides of the unit to remove the slipcover.

Step 2: Determine the size of your space and place the unit as close to the center of that space as possible. Make note of time needed for proper disinfection by referring to the disinfection chart on the following page.

Step 3: Plug in the power cable and turn on the power switch on top of the base.

Step 4: Place included placards on entry doors or around space to warn of UVC disinfection in progress.

Step 5: Once you are clear of the unit use either your key fob or web-based application to start the system.

Step 6: You will hear an alert running as soon as the system starts. The disinfection time starts 1 minute from activation. Then run appropriate amount time for your space. If you are using the web app you can set a timer or schedule for disinfection duration.

Step 7: Deactivate the unit at the completion of pre-determined disinfection time before entering the space to remove the tower.

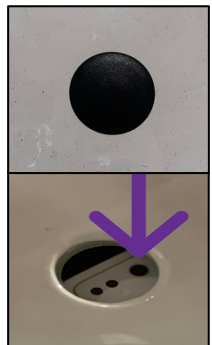
Setting Up Your Tower:

1. Unpack your unit and remove the safety glasses, signs and other literature out of the pockets of the slipcover. Undo the Velcro on both sides of the cover and use the black straps at the top and sides of the unit to remove the slipcover.
2. Plug your Tower into a requisite power source and locate the power switch at the top of the base of the unit near the center.
3. Ensure the power switch is turned to 'On'.

4. Download the 'eWeLink' application to your Wi-Fi enabled device.

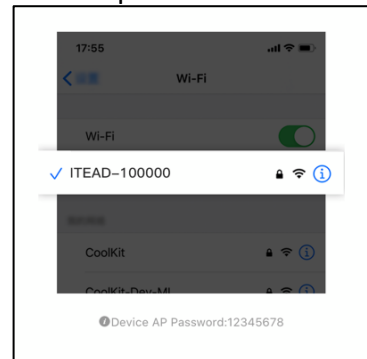


5. Turn the Wi-Fi unit to Hot Spot Mode:
 - a. Locate the Wi-Fi unit access port at the top of the base in the center and remove the dust cover
 - b. Press and hold the Wi-Fi button until the red indicator light blinks a second time (approximately 14 seconds) The blue indicator light should blink in a constant pattern.
 - c. Your device is in Hot Spot Mode

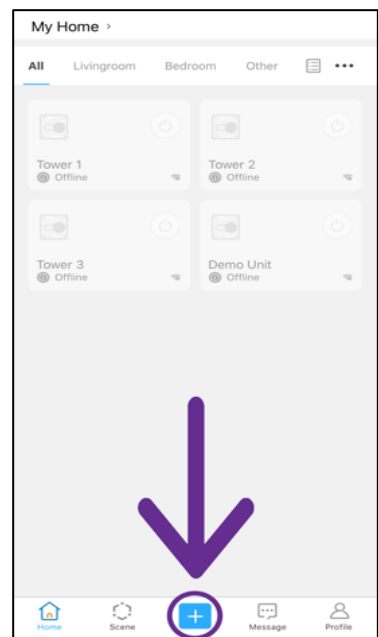


WARNING: Pressing the button on your Wi-Fi unit for less than 7 seconds will power the Tower on.

6. Connect to the device's Wi-Fi through your phone
 - i. ITEAD-#####
 - ii. Password:12345678

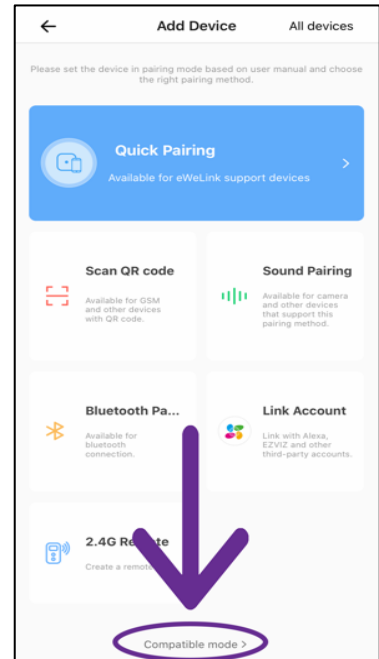


7. Open the 'eWeLink' Application

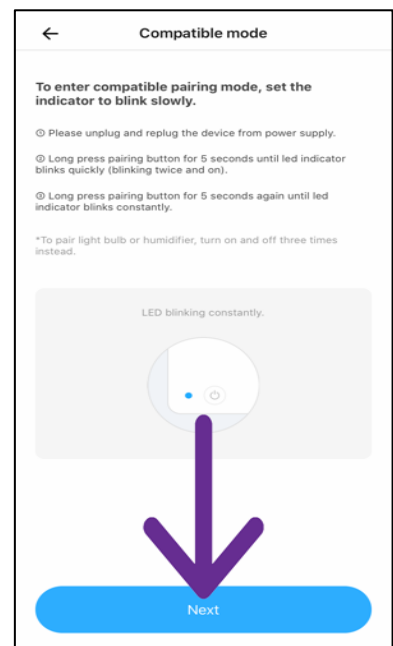


8. Tap the + button in the bottom center

9. Press '**Compatible Mode**' at the bottom of the screen

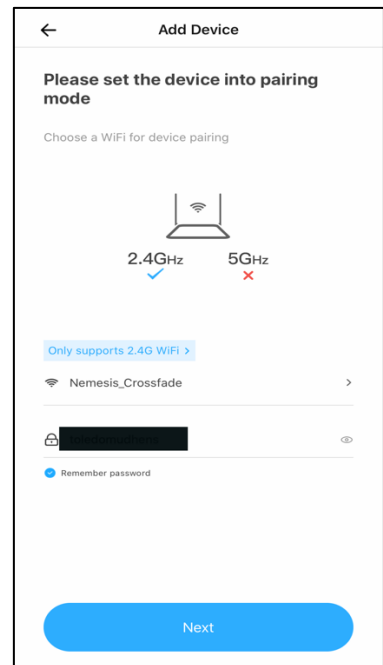


10. Ensure the blue LED maintains a constant blinking pattern, then press "Next"

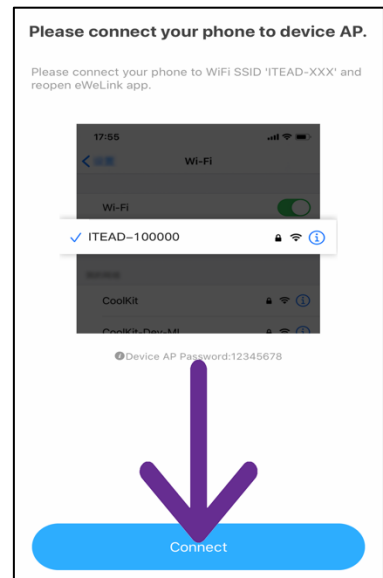


11. Set the network you would like to control your Tower from by entering it here. Then press Next.

NOTE: 2.4 GHZ Wi-Fi is required for these devices



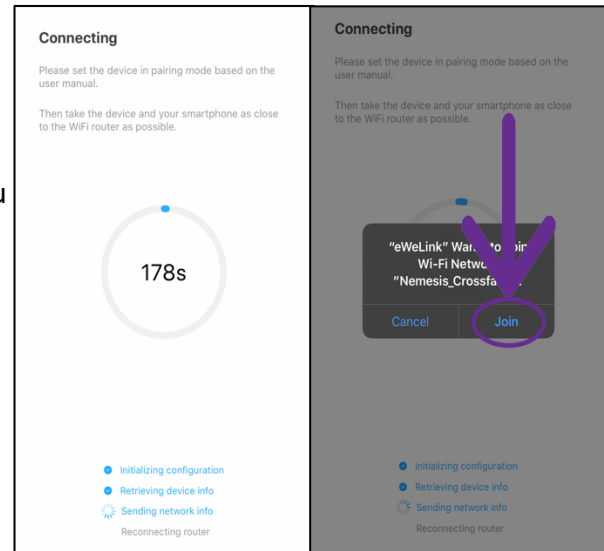
12. Tap "Connect"



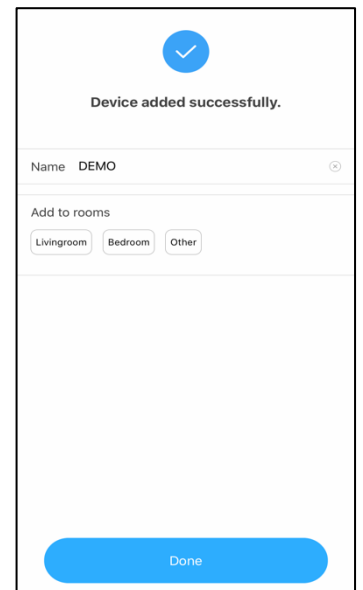
13. This will take you to your device settings. There, connect to the ITEAD-##### device. Password: 12345678

14. Once connected, return to the application. The "Connect" button should read "Next"

15. The device will begin to configure. After some time, you will be prompted to connect the device to the Wi-Fi network. Tap “Join”.



16. Your Tower is now connected to the Wi-Fi network. Here you will be prompted to name your Tower and assign it a room. After this you will be sent to the app’s Home screen. The device will take a few minutes to fully configure into the network. Leave your Tower connected to power for a few minutes after completing this step.



App Use

1. On the Home Screen, your newly connected Tower should appear.
2. Tapping on that Tower will open a second menu, from here you can
 - a. Power on your Tower
 - b. Set a schedule
 - c. Set a Timer
 - d. Set a Loop Timer
 - e. If needed, you can update your device from here as well:
 - i. Press the “...” button in the top right of your screen
 - ii. From here you will open the settings, and an option to update to the current software version will be available.



Key Fob Remote Setup

1. Hold the button on the Wi-Fi unit down for approximately 7 seconds/the red indicator light blinks once
2. Press and hold desired button on your 433mhz remote to program the key fob to the device
3. Your device will turn on during pairing setup, use your newly connected key fob to turn it off

NOTE: If pairing is unsuccessful, use the power switch to shut off your device. Restart and repeat the process. If problems persist, contact customer support 24/7 at: (972) 423-0075

Resetting the Wi-Fi Unit

1. Press and hold the button at the top of the Wi-Fi unit until the red indicator light blinks three times. (21 seconds) This will completely reset your Wi-Fi unit. It will be removed from the network and will no longer be paired to any key fob remote.

Photometrics and Disinfectant Times*

Contaminated surfaces are everywhere. Whether you need a second line of defense, or an alternative to chemicals or liquids- Nemesis™ is an essential tool in protecting yourself against the invisible germs lurking on all the objects you touch. With a press of a button, a **high-output array of 360° UVC (ultraviolet C) light at a 254nm germicidal wavelength is emitted from multiple Philips radiator's**, effectively sanitizing surfaces in a very effective fast method. The Nemesis™ UVC light damages DNA of bacteria and viruses, rendering up to 99% unable to replicate, thus unable to cause infection. Read our FAQ section for more detailed information on how UVC works

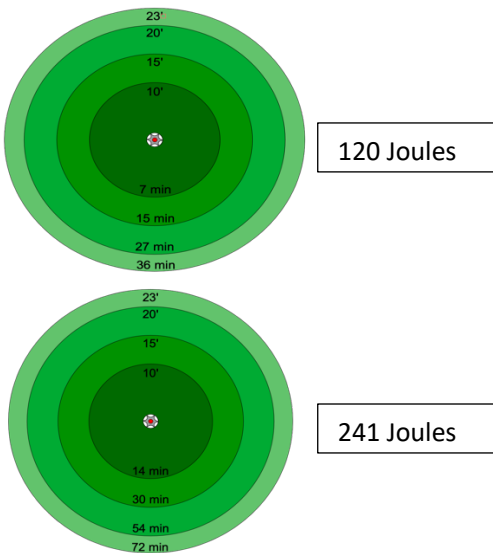
Our **high quality durable and robust designs** are built to withstand the most rugged conditions. You can now use this technology anywhere to sanitize small and large spaces up to 40' x 40' with a single unit.

To Calculate Disinfection Times:

1. Measure the distance from your tower, to the wall
2. Use the handy conversion chart at nemesisuvc.com to determine the exact time required to disinfect your space.

This graph offers general guidelines for disinfection times based on distance:

UV Doseage Chart



Microbe	Dose (J/m ²)	k
Coronavirus	7	0.358
Bovine virus (Coronaviridae)	7	0.321
Murine Coronavirus (MHV)	15	0.134
Canine Coronavirus (CCV)	20	0.081
Murine Coronavirus (MHV)	20	0.081
SARS Coronavirus Cov-P9	40	0.058
Murine Coronavirus (MHV)	103	0.022
SARS Coronavirus (Hanoi)	134	0.017
SARS Coronavirus (Urabi)	241	0.009

Bacteria	Dose	k
Bacillus anthracis	45.2	0.051
B. megatherium sp. (spores)	27.3	0.084
B. megatherium sp. (veg.)	13	0.176
B. paratyphosus	32	0.072
B. subtilis	71	0.032
B. subtilis spores	120	0.019
Campylobacter jejuni	11	0.209
Clostridium tetani	120	0.019
Corynebacterium diphtheriae	33.7	0.069
Dysentery bacilli	22	0.105
Eberthella typhosa	21.4	0.109
Escherichia coli	30	0.077
Klebsiella terrifanti	26	0.089
Legionella pneumophila	9	0.256
Micrococcus candidus	60.5	0.038
Micrococcus sphaeroides	100	0.023
Mycobacterium tuberculosis	60	0.038
Neisseria catarrhalis	44	0.053
Phytonomas tumefaciens	44	0.053
Pseudomonas aeruginosa	55	0.042
Pseudomonas fluorescens	35	0.065
Proteus vulgaris	26.4	0.085
Salmonella enteritidis	40	0.058
Salmonella arafyphi	32	0.072
Salmonella typhimurium	80	0.029
Sarcina lutea	197	0.012
Serratia marcescens	24.2	0.095
Shigella paradytenteriae	16.3	0.141
Shigella sonnei	30	0.077
Spillium rubrum	48	0.053
Staphylococcus albus	18.4	0.126
Staphylococcus aureus	26	0.086
Streptococcus faecalis	48	0.052
Streptococcus hemolyticus	21.6	0.106
Streptococcus lactus	61.5	0.037
Streptococcus viridans	20	0.115
Shentertidis	40	0.057
Vibrio cholerae (V. comma)	35	0.066
Yersinia enterocolitica	11	0.209

Yeasts	Dose	k
Baker's yeast	30	0.06
Brewer's yeast	33	0.07
Common yeast cake	60	0.038
Saccharomyces cerevisiae	60	0.038
Saccharomyces ellipsoideus	60	0.038
Saccharomyces sp.	80	0.029

Mold Spores	Dose	k
Aspergillus flavus	600	0.003
Aspergillus glaucus	400	0.003
Aspergillus niger	1320	0.0014
Mucor racemosus A	170	0.013
Mucor racemosus B	170	0.013
Osospora lactis	50	0.046
Penicillium digitatum	440	0.004
Penicillium expansum	130	0.018
Penicillium rooseforti	130	0.018
Rhizopus nigricans	1110	0.002

Virus	Dose	k
Hepatitis A	73	0.032
Influenza Virus	36	0.064
MS-2 Coliphage	186	0.012
Pollio virus	58	0.04
Rotavirus	8	0.028

Protozoa	Dose	k
Cryptosporidium parvum	25	0.092
Giardia lamblia	11	0.209

Algae	Dose	k
Beta Green	3000	0.0008
Chlorella vulgaris	120	0.019

*Note: Times are calculated but may not be wholly accurate for specific rooms. A specific measurement for your space is necessary for complete efficacy and efficiency

Cleaning:

- Unplug fixture from AC power before performing any maintenance.
- Never use alcohol or solvents
- Use vacuum or air compressor (on low PSI setting) and soft brush to remove dust on fixture & vents
- Clean fixture with a moist, lint-free cloth
- Dust radiators lightly with a microfiber cloth, DO NOT touch the radiators with bare hands

Replacing Radiators:

- Remove the Nemesis light guard by loosening the four thumb screws located at the corners on the back of the fixture. Then slide the Nemesis light guard up and off of the fixture. This will allow you to access the radiators.
- DO NOT touch radiators with bare hands, oils from the skin will deteriorate the coating on the outside of the glass, use sterile gloves and eye protection when working with radiators
- Twist the top and bottom of the radiator ¼ turn to 'unlock' the radiator from the socket
- Remove the old radiator
- Place one end of the new radiator into the socket, gently apply pressure to depress the socket and allow the other end of the radiator to slide into place
- Twist the top and bottom of the radiator ¼ turn to 'lock' it into place
- Test the unit to ensure proper installation of radiators.
- For any issues, contact Nemesis Customer Support at: (469) 466-2UVC



User Manual - Version 1.5

Updated: 03-22-2021

www.nemesisuvc.com

(469)-466-2UVC