

# ad notam®

HIDDEN TECHNOLOGY – TECHNOLOGY BECOMES INVISIBLE.

## UVC MIRROR NL SERIES

SMART MIRROR  
SERIES

### DISINFECTION PRODUCT



Made in  
**Germany**

### ARTICLE NO.

| Art.No.   |   | Code | Width (W) |   | Code | Height (H) |
|-----------|---|------|-----------|---|------|------------|
| UV275.NL- | → | 0600 | 600mm     | → | 0900 | 900mm      |
|           |   | 0900 | 900mm     |   |      |            |
|           |   | 1200 | 1.200mm   |   |      |            |
|           |   | 1600 | 1.600mm   |   |      |            |

Example:

UVC Mirror's article number with width 600 and height 900 is as follows:  
**UV275.NL-0600-0900**

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SMART MIRROR  
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## UVC MIRROR NL SERIES

### KEY FEATURES



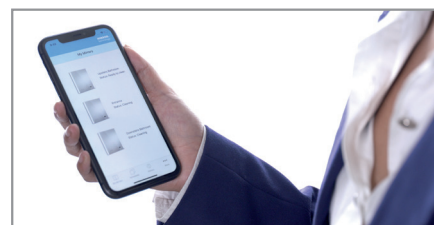
**SAFE FOR USER-OCCUPIED ROOM.  
MOTION SENSOR TURNS OFF UVC LEDs.**



**STATUS INDICATOR FOR  
DISINFECTION PROCESS**



**VANITY UV-LIGHT DISINFECTS  
WITHIN A FEW SECONDS**



**ACTIONABLE DATA CRITICAL  
TO ADMINISTRATORS**

### KEY FEATURES DISINFECTION UNIT

- Fully automated; no human intervention
- Disinfects Sink, Drain, Basin, Backsplash, Handles & Faucet
- Eliminates up to 99.99% (Log 4) of most common pathogens within seconds
- Motion Sensor deactivates UV Light during use of the mirror
- The UV disinfection process is continued after a preset time without movement
- Laboratory tested
- Mercury Free

### KEY FEATURES MIRROR

- Crystal Mirror with real color index
- Mirror Defogger, optional
- Touch Control, optional

### AREAS OF USE

- Homes
- Offices
- Schools & kindergartens
- Airports & train stations
- Hospitals
- Bars & restaurants
- Stadiums
- Hotels
- Public areas
- Production facilities

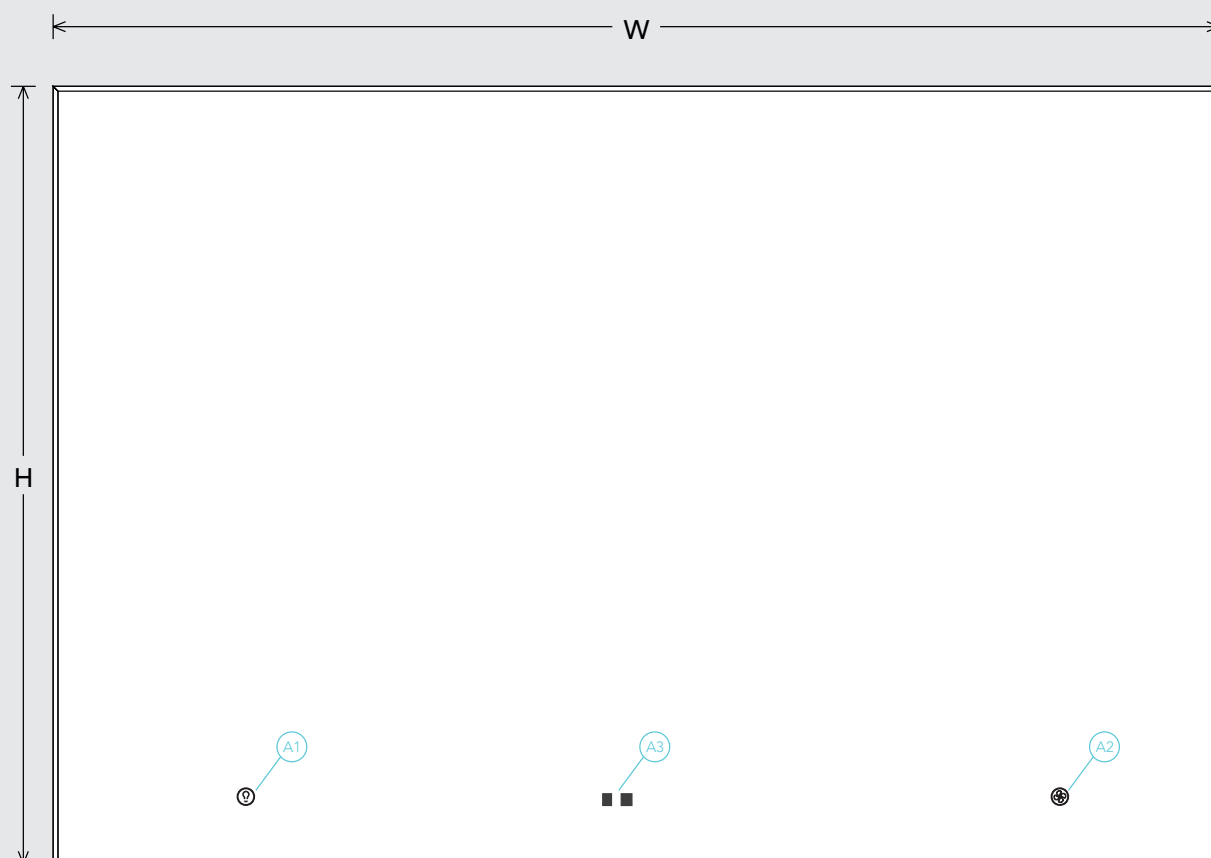
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## UVC MIRROR – NL SERIES

### PRODUCT INFORMATION

|                       |                                             |
|-----------------------|---------------------------------------------|
| Installation method   | On-Wall Installation                        |
| Product Dimensions    | Different sizes available                   |
| Width (W)             | (W) in mm 600   900   1.200   1.600         |
| Height (H)            | (H) in mm 900                               |
| Depth (D)             | (D) in mm 45                                |
| Product Usage         | For In-Door Use only                        |
| Operating Temperature | 5° to 40° Celcius                           |
| Humidity              | 20% - 80%                                   |
| HS Code               | 70 09 91 00                                 |
| Packaging type        | Carton Box                                  |
| Packaging dimensions  | W (Product Width + 125) x H 1015 x D 150 mm |
| Storage Temperature   | -10° to 60° Celcius                         |

CE IP44



A1

Defogger touch key, only in combination with a mirror defogger (Upgrade Art. No. HF-220)

A2

Status Indicator / Manual Activation touch key for UV disinfection mode

A3

Integrated Motion Sensor

Drawing measure mm

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## UVC MIRROR – NL SERIES

## TECHNICAL SPECIFICATION VANITY UV DISINFECTION UNIT

|                     |       | Mirror Width (W) / mm |          |          |           |
|---------------------|-------|-----------------------|----------|----------|-----------|
|                     |       | 600                   | 900      | 1.200    | 1.600     |
| GENERAL INFORMATION |       |                       |          |          |           |
| Projected Surface   | Width | W 300 mm              | W 600 mm | W 900 mm | W 1200 mm |
|                     | Depth | D 480 mm              |          |          |           |
| Number of UV-C LEDs |       | 15                    | 30       | 45       | 60        |
| Number of UV-A LEDs |       | 5                     | 10       | 15       | 20        |

## ELECTRICAL CHARACTERISTICS

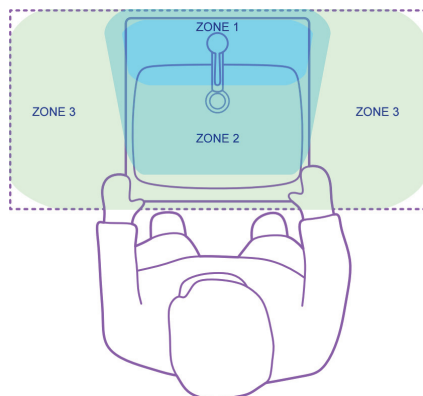
| Power Consumption   | 3W    | 6W    | 9W    | 12W   |
|---------------------|-------|-------|-------|-------|
| Current Consumption | 125mA | 250mA | 375mA | 500mA |

## OPTICAL CHARACTERISTICS

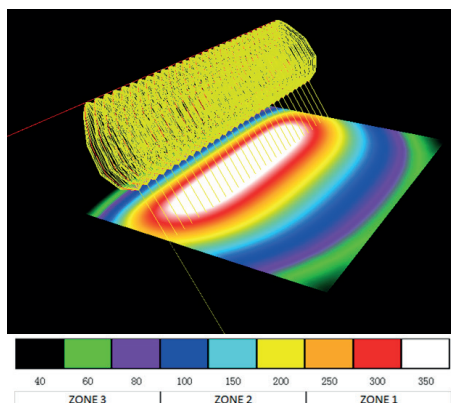
| UV-C Wavelength          | 275nm                       |       |          |        |
|--------------------------|-----------------------------|-------|----------|--------|
| UV-A Wavelength          | 400nm                       |       |          |        |
| UV-C Radiation Power     | ≥37.5mW                     | ≥75mW | ≥112.5mW | ≥150mW |
| Beam Angle               | 60°                         |       |          |        |
| Max. Radiation Intensity | 403uW/cm <sup>2</sup> @25cm |       |          |        |
| Avg. Radiation Intensity | 174uW/cm <sup>2</sup> @25cm |       |          |        |

GERMIDICAL EFFECTIVENESS <sup>1</sup><sup>1</sup> UVC Mirror installed at 200 mm above surface.

| 99% reduction (Log2 @ 10mJ/cm <sup>2</sup> )    | 57 seconds (Avg.)  |
|-------------------------------------------------|--------------------|
| Zone 1                                          | 30 seconds         |
| Zone 2                                          | 75 seconds         |
| Zone 3                                          | 166 seconds        |
| 99,99% reduction (Log4 @ 20mJ/cm <sup>2</sup> ) | 115 seconds (Avg.) |
| Zone 1                                          | 60 seconds         |
| Zone 2                                          | 155 seconds        |
| Zone 3                                          | 333 seconds        |



Radiation Zones

Radiation Intensity Map (uW/cm<sup>2</sup>)

Surface size: W 600mm D 480mm. UVC Mirror at 210mm above surface.

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## UVC MIRROR – NL SERIES

## TECHNICAL SPECIFICATION MIRROR

## GLASS &amp; MIRROR

|            |                     |
|------------|---------------------|
| Type       | Crystal Mirror 5 mm |
| Surface    | Float               |
| Tint       | Neutral             |
| Reflection | 95% +/- 5           |

## INTEGRATED MOTION SENSOR

|                    |                                                                                                                                                                                                   |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type               | The sensor is an active motion detector; it emits a high-frequency electromagnetic wave 5.8 GHz and receives its echo. The sensor detects the change in echo from movement in its detection zone. |
| Hf System          | 5.8GHz CW radar                                                                                                                                                                                   |
| Transmission Power | <0.2mW                                                                                                                                                                                            |
| Detection Angle    | 30° - 150°                                                                                                                                                                                        |
| Detection Range    | Max. 12 m in diameter, adjustable                                                                                                                                                                 |

## UPGRADE MIRROR DEFOGGER

Article No. HF-220

Description The integrated mirror defogger prevents the mirror surface from steam condensation in wet environments, providing a fogless mirror with clear vision at all times.

If combined with the **ad notam** touchpad upgrade, the mirror defogger can be switched off in order to save energy.



## Mirror Width (W) / mm

600

900

1.200

1.600

|         |              |              |              |              |
|---------|--------------|--------------|--------------|--------------|
| Size    | 200 x 300 mm | 400 x 400 mm | 800 x 400 mm | 800 x 400 mm |
| Power   | 11W, 0.05A   | 28W, 0.13A   | 56W, 0.26A   | 56W, 0.26A   |
| Voltage | AC 220V      |              |              |              |

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## UVC MIRROR – NL SERIES

## OPTIONS &amp; UPGRADES

## UPGRADE TOUCH CONTROL

## Description

The easy to use Touch Control is seamlessly integrated into the mirror. Change the settings of your mirror at the touch of your fingers - no need to look for a light switch or a remote, simply direct your touch to the elegant touch keys on your mirror and enjoy the rare and elegant combination of style and comfort.



## Technology

Capacitive

## Article No.

TC-01-MD <sup>1</sup>

## Number of keys

1

## Functions

Mirror Defogger  
ON/ OFF<sup>1</sup> only in combination with Mirror Defogger upgrade

## UPGRADE UPPER UV DISINFECTION (ROOM LIGHT)

## Article No.

UPG-SU-RL

## Description

Disinfecting Room Air with  
GUV (Germicidal UV)

Upper-room GUV is a safe means  
of air disinfection that is possible  
in rooms with high ceilings.

This upgrade adds another  
disinfection unit to your UVC Mirror  
for the upper part of your room.  
Upper-room GUV disinfects large  
volumes of room air (above  
occupants' heads) at once, resulting  
in high "equivalent" air changes per  
hour (ACH) in terms of air  
disinfection only—GUV does not  
dilute odors or CO<sub>2</sub>.

This upgrade requires an installation with  
a floor height of at least 210 cm for the  
room air disinfection unit.



## Technical Specification

see page 4

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## UVC MIRROR – NL SERIES

APPENDIX <sup>1</sup>

The following table shows the irradiation time of the Vanity UV Disinfection Unit with a distance of 200 mm (Zone 1) to the surface and an irradiation intensity of 300 uW/cm<sup>2</sup> on various microorganisms. Log3 relates to a Germicidal Effectiveness of 99,9%.

| MICROORGANISM                       | LOG3<br>DOSAGE<br>(mJ/cm <sup>2</sup> ) | RADIATION<br>TIME<br>(mm:ss) <sup>1</sup> | MICROORGANISM                               | LOG3<br>DOSAGE<br>(mJ/cm <sup>2</sup> ) | RADIATION<br>TIME<br>(mm:ss) <sup>1</sup> |
|-------------------------------------|-----------------------------------------|-------------------------------------------|---------------------------------------------|-----------------------------------------|-------------------------------------------|
| <b>SPORE</b>                        |                                         |                                           | Mucor racemodus B                           | 51                                      | 02:50                                     |
| Bacillus subtilis ATCC6633          | 47                                      | 02:37                                     | Oospora lactis                              | 15                                      | 00:50                                     |
| Bacillus subtilis WN626             | 1,3                                     | 00:04                                     | Penicillium expansum                        | 39                                      | 02:10                                     |
| <b>BACTERIUM</b>                    |                                         |                                           | <b>PROTOZOAN</b>                            |                                         |                                           |
| Campylobacter jejuni ATCC 43429     | 4                                       | 00:13                                     | Chlorella Vulgaris                          | 39                                      | 02:10                                     |
| Citrobacter diversus                | 9                                       | 00:30                                     | Cryptosporidium parvum                      | 2,9                                     | 00:10                                     |
| Citrobacter freundii                | 13                                      | 00:43                                     | Encephalitozoon cuniculi, microsporidia     | 13                                      | 00:43                                     |
| Escherichia coli O157:H7 CCUG 29193 | 5,5                                     | 00:18                                     | Encephalitozoon intestinalis, microsporidia | 6                                       | 00:20                                     |
| Escherichia coli O157:H7 CCUG 29197 | 4,6                                     | 00:15                                     | Paramecium                                  | 33                                      | 01:50                                     |
| Escherichia coli O157:H7 CCUG 29199 | 1                                       | 00:03                                     | <b>VIRUSES</b>                              |                                         |                                           |
| Klebsiella pneumoniae               | 17,5                                    | 00:58                                     | Adenovirus type 4                           | 69                                      | 03:50                                     |
| Legionella pneumophila ATCC33152    | 5,8                                     | 00:19                                     | Bacteriophage – E. Coli                     | 7,8                                     | 00:26                                     |
| Pseudomonas stutzeri                | 195                                     | 10:50                                     | Calicivirus canine                          | 22                                      | 01:13                                     |
| Salmonella typhi ATCC 19430         | 6,4                                     | 00:21                                     | Coxsackievirus B4                           | 18                                      | 01:00                                     |
| Salmonella typhi ATCC 6539          | 5,5                                     | 00:18                                     | Coxsackievirus B5                           | 21                                      | 01:10                                     |
| Salmonella typhimurium              | 24                                      | 01:20                                     | Echovirus I                                 | 25                                      | 01:23                                     |
| Shigella dysenteriae ATCC29027      | 2                                       | 00:07                                     | Echovirus II                                | 20,5                                    | 01:08                                     |
| Shigella sonnei ATCC9290            | 6,5                                     | 00:22                                     | Hepatitis A                                 | 15                                      | 00:50                                     |
| Staphylococcus aureus ATCC25923     | 6,5                                     | 00:22                                     | Hepatitis A HM175                           | 12,3                                    | 00:41                                     |
| Streptococcus faecalis ATCC29212    | 9,9                                     | 00:33                                     | Infectious Hepatitis                        | 17,4                                    | 00:58                                     |
| Yersinia ruckeri                    | 3                                       | 00:10                                     | Influenza                                   | 10,2                                    | 00:34                                     |
| <b>YEASTS</b>                       |                                         |                                           | MS2 ATCC 15977-B1 (Phage)                   | 52                                      | 02:53                                     |
| Baker's yeast                       | 11,7                                    | 00:39                                     | MS2 DSM 5694 (Phage)                        | 38                                      | 02:07                                     |
| Brewers yeast                       | 9,9                                     | 00:33                                     | Murine norovirus                            | 22                                      | 01:13                                     |
| Saccharomyces ellipsoideus          | 18                                      | 01:00                                     | PHI X 174 (Phage)                           | 7,5                                     | 00:25                                     |
| Saccharomyces spores                | 24                                      | 01:20                                     | Poliovirus – Poliomyelitis                  | 9,45                                    | 00:32                                     |
| Torula sphaerica (Milk und cream)   | 6,9                                     | 00:23                                     | PRD-1 (Phage)                               | 23,5                                    | 01:18                                     |
| <b>MOLDS</b>                        |                                         |                                           | Reovirus                                    | 36                                      | 02:00                                     |
| Aspergillus flavus                  | 180                                     | 10:00                                     | Rotavirus SA-11                             | 25                                      | 01:23                                     |
| Mucor racemodus A                   | 51                                      | 02:50                                     | SARS-CoV-2                                  | 11                                      | 00:37                                     |

<sup>1</sup> A more extensive list with more microorganisms can be provided upon request

**From the media**

The National Emerging Infectious Diseases Laboratories (NEIDL)<sup>2</sup> at Boston University in the US has conducted research that validates the effectiveness of UV-C light sources on the inactivation of SARS-CoV-2, the virus that causes COVID-19.

Since the start of the SARS CoV-2 pandemic, Dr. Anthony Griffiths, Associate Professor of Microbiology at Boston University School of Medicine and his team have been working on developing tools to support scientific advancement in this field.<sup>3</sup> During their research they have treated inoculated material with different doses of UV-C radiation coming from a UV light source and assessed the inactivation capacity under various conditions. The team applied a dose of 5mJ/cm<sup>2</sup>, resulting in a reduction of the SARS-CoV-2 virus of 99% in 6 seconds. Based on the data, it was determined that a dose of 22mJ/cm<sup>2</sup> will result in a reduction of 99.9999% in 25 seconds.

<sup>2</sup> The NEIDL is a state-of-the-art research facility that encompasses significant containment laboratories at Biosafety Level -2, -3, and -4

<sup>3</sup> Dr. Griffiths' team develops vaccines and therapeutics for Risk Group 3 and 4 viruses, which include organisms that can cause serious or deadly diseases in humans

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