

## AR Series

### IN AHU AND IN DUCT UVC FIXTURES

Our commercial AR series UVC fixtures are designed for effective coil cleaning and improved indoor air quality (IAQ) in any type of AHU system and are prewired at the factory for code compliance and easy install. The fixtures are constructed to be amazingly durable, scalable to custom fit any AHU, and are engineered with non-proprietary lamps and ballasts.

#### Features

- **‘Boxed I-beam’ Aluminum Unistrut Extrusion Construction**

Horizontal and vertical adjustable support and lamp structures are rated to support more than 2000 lb. / in<sup>2</sup>.

- **Water-proof Electrical Quick-connects**

Metal-clad, three-pin modular quick-connects permit fast, easy, installation of any size AR fixture.

- **Metal-clad Wiring and Connectors**

No wire coverings, rubber, plastic, or other degradable within the AHU; meets all local, state and national codes.

- **Magnetic ‘Proximity’ Door Switches**

Magnetic proximity door switches are guaranteed to switch 10,000,000 times to eliminate installation adjustments and service call-back costs.

- **Accessible Ballasts**

Philips / Advance electronic UVC ballasts mount directly to the Unistrut to reduce heat, improve product life, and are enclosed in an easily removable ballast cover for simple maintenance.

Works invisibly within existing HVAC systems to create a safe, comfortable, germ-free indoor environment.



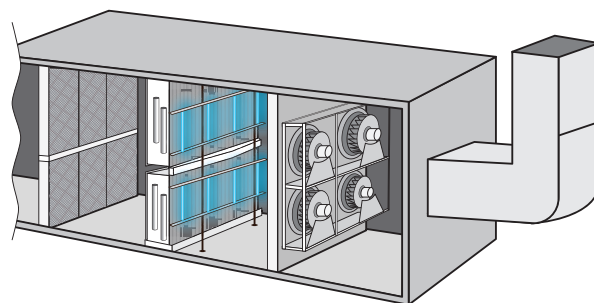
Slide-out fixture option for modular AHUs; removable option for modular AHUs, provides fast, simple, tool-less options for easy maintenance and lamp replacement.



Works 24/7 to keep air free and clear of airborne contaminants.



Neutralizes and eliminates the infectious airborne pathogens that cause respiratory illness and disease.



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### Product Specifications

#### Standard Specifications

Lamp Specs	PL-L 60W, 95W TUV (non proprietary)
Wavelength	254 Nanometers
Expected Lamp/Bulb Rated Life <sup>1</sup>	18 months
Lamp Socket	Single Ended, 4 Pin, 2G11
Input Voltage	Self Regulated Electronic UV Ballast 120V to 277V
Electrical Requirement	Varies by Model
Housing Finish	Aluminum

#### Certifications:



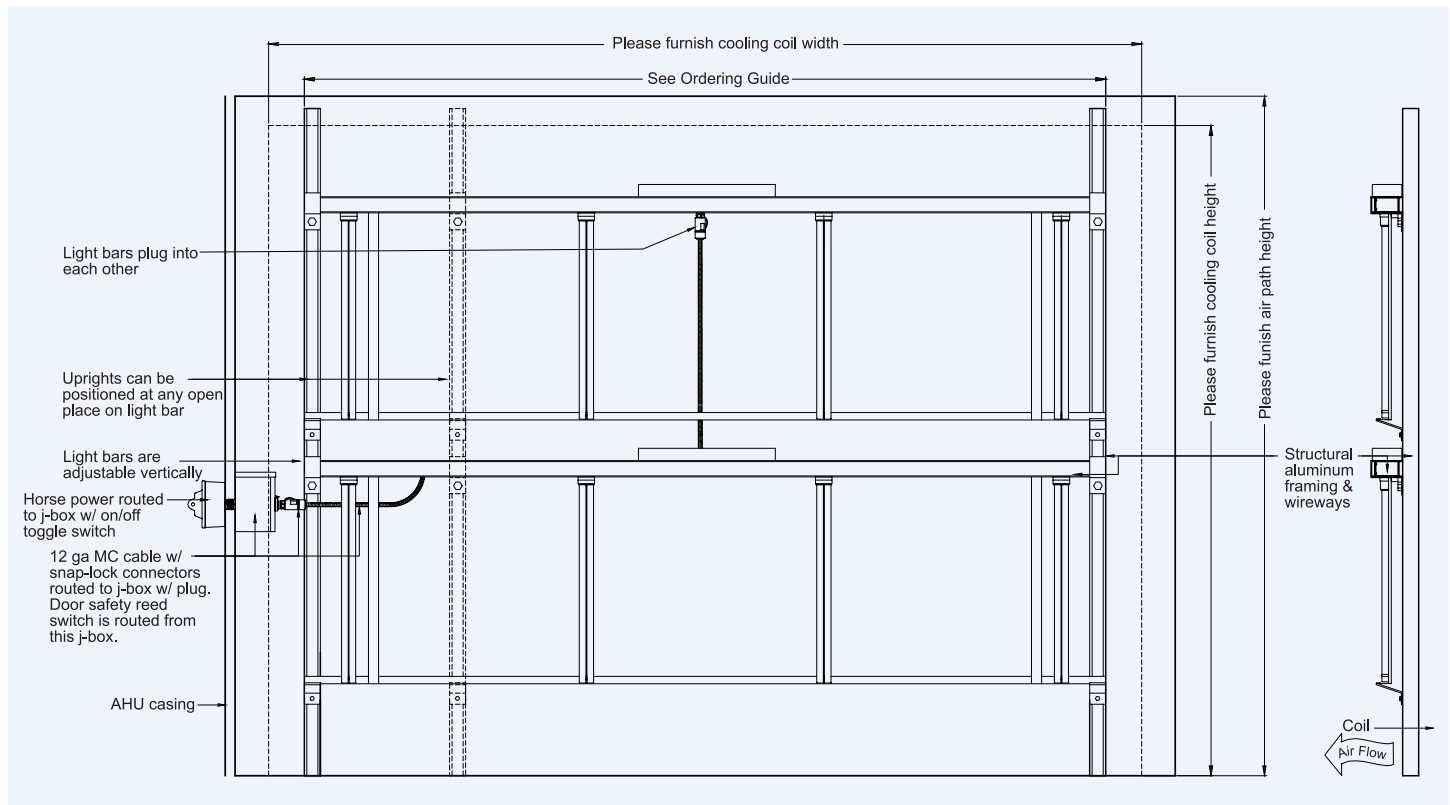
ASHRAE	meets ASHRAE TC 2.09
EPA <sup>2</sup>	EST. NO. 91347-TN-001
ETL	CDR100230620ATL-001A

#### Warranty

Lamps/2 years; Parts/5 years

<sup>1</sup>With 80% utilization

<sup>2</sup>The manufacturer is registered with the US EPA. Clinical lab testing has been performed in independent labs.



# AR Series

## COMMERCIAL IN DUCT UVC FIXTURES

### Sizing Guide

Effective February 1st, 2021

99%* disinfection rate		DUCT WIDTH								
		24"-40"	41"-55"	56"-70"	71"-85"	86"-100"	101"-115"	116"-130"	131"-145"	146"-160"
DUCT HEIGHT	28"-59"	1x2	1x3	1x4	1x5	1x6	1x7	1x8	1x9	1x10
	60"-99"	2x2	2x3	2x4	2x5	2x6	2x7	2x8	2x9	2x10
	100"-150"	3x2	3x3	3x4	3x5	3x6	3x7	3x8	3x9	3x10

Note: Number of Rows x Number of Lamps (Ex. 1x2 = 1 Row x 2 Lamps)

### Ordering Guide

AR95- ADJUSTABLE IN DUCT RACK UVC RACK WITH 95 WATT UVC HO LAMP

#### Number of Rows Required (See sizing grid for correct number of rows)

- 1 ROW OF LAMPS
- 2 ROW OF LAMPS
- 3 ROW OF LAMPS

#### Number of Lamps Per Row (See sizing guide for correct number of lamps)

- x2-15 TWO 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x3-15 THREE 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x4-15 FOUR 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x5-15 FIVE 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x6-15 SIX 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x7-15 SEVEN 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x8-15 EIGHTH 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x9-15 NINE 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING
- x10-15 TEN 95 WATT HIGH OUTPUT LAMPS WITH 15 INCH SPACING

AR95- 2 x4-15 Adjustable Rack with four 95 watt high output bulbs, 2 rows of lamp bars, 4 lamps on each bar, with 15 inch lamp spacing on each bar

\* Assumptions:

- 8 Feet of plenum length @ 500 FPM = one second of dwell (treatment) time. Adjust dwell time based on available plenum length. Ex/ 4 Feet @ 500 FPM = 1/2 second of dwell time
- Air moving at less than 500 FPM will improve performance.
- Reflectivity is not considered for the sizing guide. Call a Lumalier sales rep to discuss reflectivity variables.
- Disinfection rates will vary based on filtering and number of air passes.

# AR Series

## COMMERCIAL IN DUCT UVC FIXTURES

### Sizing Guide

Effective February 1st, 2021

95%* disinfection rate		DUCT WIDTH				
		34"-57"	58"-81"	82"-109"	110"-133"	134"-160"
DUCT HEIGHT	28"-59"	1x2	1x3	1x4	1x5	1x6
	60"-99"	2x2	2x3	2x4	2x5	2x6
	100"-150"	3x2	3x3	3x4	3x5	3x6

Note: Number of Rows x Number of Lamps (Ex. 1x2 = 1 Row x 2 Lamps)

### Ordering Guide

AR95- ADJUSTABLE IN DUCT RACK UVC RACK WITH 95 WATT UVC HO LAMP

#### Number of Rows Required (See sizing grid for correct number of rows)

- |   |              |
|---|--------------|
| 1 | ROW OF LAMPS |
| 2 | ROW OF LAMPS |

#### Number of Lamps Per Row (See sizing guide for correct number of lamps)

- |       |  |
|-------|--|
| x2-24 | TWO 95 WATT HIGH OUTPUT LAMPS WITH 24 INCH SPACING   |
| x3-24 | THREE 95 WATT HIGH OUTPUT LAMPS WITH 24 INCH SPACING |
| x4-24 | FOUR 95 WATT HIGH OUTPUT LAMPS WITH 24 INCH SPACING  |
| x5-24 | FIVE 95 WATT HIGH OUTPUT LAMPS WITH 24 INCH SPACING  |
| x6-24 | SIX 95 WATT HIGH OUTPUT LAMPS WITH 24 INCH SPACING   |

AR95-	2	x3-24	Adjustable Rack with three 95 watt high output bulbs, 2 rows of lamp bars, 3 lamps on each bar, with 24 inch lamp spacing on each bar
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\* Assumptions:

- 8 Feet of plenum length @ 500 FPM = one second of dwell (treatment) time. Adjust dwell time based on available plenum length. Ex/ 4 Feet @ 500 FPM = 1/2 second of dwell time
- Air moving at less than 500 FPM will improve performance.
- Reflectivity is not considered for the sizing guide. Call a Lumalier sales rep to discuss reflectivity variables.
- Disinfection rates will vary based on filtering and number of air passes.

## Accessories for In Duct UVC Fixtures

Effective February 1st, 2021

**One door switch, view port, exterior toggle switch with lock-out/tag-out, safety signage, and set of lamps are included with each AR Fixture. Additional units are available as priced below.**

<b>Fixed Radiometer</b>	Digital LCD readout with LED and audible alarms, 3 ports for BAS connectivity
<b>Interior Door Interlock Safety Switch with J-box</b>	Included in all AR racks; Price is for additional units for additional doors (optional)
<b>2" glass view port and safety information</b>	Included in all AR racks; Price is for additional units for additional doors (optional)
<b>Exterior switch/ J-box for mounting near access door</b>	Included in all AR racks; Price is for additional units for additional doors (optional)
<b>Lock-out / tag-out switch cover</b>	Included in all AR racks; Price is for additional units for additional doors (optional)
<b>Clip-on UVC reflector</b>	Directs UVC energy towards coils & away from surfaces, prevents line of sight exposure
<b>Install kit: safety glasses, gloves, 2 warning labels</b>	Included in all AR-60 racks listed above; price is for extra kits, if needed
<b>Photocatalytic Oxidation (PCO) lamp protector</b>	Optional PCO reduces Volatile Organic Compounds (VOC's) & eliminate odors

**Philips UV high performance (HO), non-proprietary, long-life germicidal lamps (Philips lamps contain less than 5mg of Hg)**

	nominal watts	Base			direct $\mu$ W intensity at 1 meter
TUV PL-L 18W	18 W	twin tube, 4 pin	replace annually < 5Mg, Hg	Philips UV-C lamp, ambient, 9"	54 $\mu$ W
TUV PL-L 35W HO	35 W	twin tube, 4 pin	replace annually < 5Mg, Hg	Philips UV-C lamp, chill corrected, 9"	105 $\mu$ W
TUV PL-L 36W	36 W	twin tube, 4 pin	replace annually < 5Mg, Hg	Philips UV-C lamp, ambient, 16"	108 $\mu$ W
TUV PL-L 60W HO	60 W	twin tube, 4 pin	replace annually < 5Mg, Hg	Philips UV-C lamp, chill corrected, 16"	180 $\mu$ W
TUV-PL-L 55W	55 W	twin tube, 4 pin	replace annually < 5Mg, Hg	Philips UV-C lamp, ambient, 20"	165 $\mu$ W
TUV-PL-L 95W HO	95 W	twin tube, 4 pin	replace annually < 5Mg, Hg	Philips UV-C lamp, chill corrected, 20"	285 $\mu$ W