LUMENFOCUS

ANTI-VIRAL
ANTI-BACTERIAL

Project: _____
Location: _____
Cat. #: _____
Type: _____
Quantity: _____

LED

GAC LED Germicidal Air Chamber with down light

Features:

- Anti-viral and anti-bacterial disinfection lighting in a lay-in fixture
- Surface disinfection out of the front, purification out of the back - fan and chamber work to kill airborne pathogens (viruses, including COVID-19 and SARS), spores and any other living organism that passes through
- Carbon filter catches all leftover fine particulates
- High performance disinfecting LED technology utilizing IllumiPure LEDs
- Continuously disinfect any hard or soft surfaces simply by keeping the lights on
- Effective against MRSA, C. Difficile, Salmonella, E. Coli
- Down lighting completely harmless to humans and animals as the antibacterial spectrum is part of the normal visible LED spectrum
- Dimming for down light available
- UV chamber mounted in the back of the fixture pulls in air via surface-mounted fans. Air pulled into chamber is cleansed of airborne pathogens (viruses and bacteria) utilizing 260-265nm UVC with a 99-plus % inactivation rate. All viruses are known to be affected by UVC, however, inactivation time varies from virus to virus
- IoT option available

Applications:

Suitable for most commercial and institutional applications. May be placed in room, plenum or return duct.

- Office
- Retail
- Classrooms
- Healthcare Facilities

Predicted Lifetime:

- Fixture lifespan: >50,000 hrs
- Disinfection chamber lifespan: >35,000 hrs

Construction:

- Aluminum housing
- Lens constructed of proprietary polycarbonate

Certifications:

- CE and UL pending
- Patent pending

Warranty:

- 405nm LED boards for downlight: 4 years
- 260-265nm LED boards in back chamber: 30,000 hours
- Fans: 3 years
- Balance of fixture: 10 years

MADE IN USA
USING DOMESTIC AND FOREIGN COMPONENTS

c UL us

illumPure

UVFOCUS

LumenFocus, LLC.
880 Facet Rd.
Henderson, NC 27537
Tel. 252-430-6970

Ordering Guide:

example: GAC 22 HI UV FP 845 DK

Series	Size	Output	Voltage	Fan	Shielding	CRI/CCT	Duct Kit	-	Options
GAC		HI	UV		FP		DK	-	
GAC	22 24	HI	UV	Blank HF	FP	845 850	DK		Blank W6 W10 D IoT

Size: 22 2'x2'; 24 2'x4'

Lumen Output: HI High

Voltage: UV 120-277V

Fan: Blank Normal Volume; HF High Flow (2x4 only)

Shielding: FP Frosted Polycarbonate

CRI/CCT: 845 80 CRI / 4500K; 850 80 CRI / 5000K

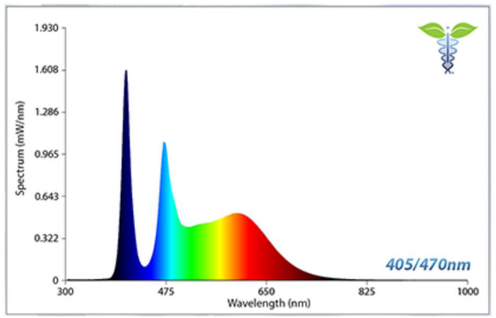
Duct Kit: DK Vents and Vent Tubing

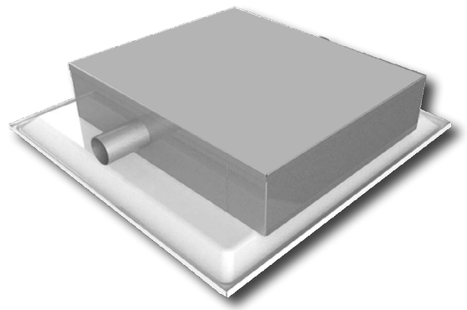
Options: Blank None; W6 6' Whip; W10 10' Whip; D Dimming; IoT IoT-ready controls *(Contact factory for details)*

Performance Chart:

Catalog #	Watts	Watts (Disinfection Chamber)	Fan CFM	Lumens (845)	LPW (845)	Lumens (850)	LPW (850)
GAC 22 HI UV FP 8xx	60	18	55	6900	115	6900	115
GAC 24 HI UV FP 8xx	78	36	95	8970	115	8970	115
GAC 24 HI UV HF FP 8xx	78	36	200	8970	115	8970	115

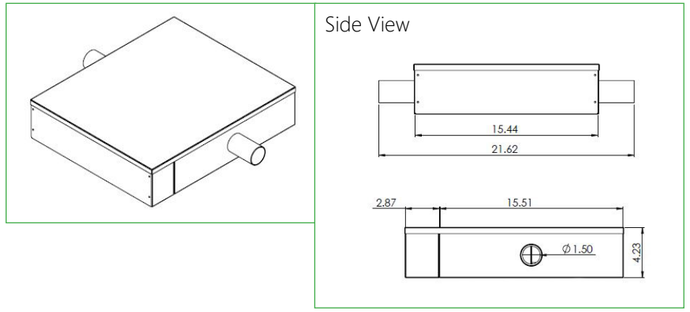
Wavelength (Down light):





GAC LED Germicidal Air Chamber with down light

Schematics:



Notes:

Fan in 2x2 unit pulls in air at 55 CFM; dual fans in 2x4 unit pull in air at 95 CFM - or 200 CFM with the "HF" option (exhaust ports need to be 6 feet from fixture).
The GAC 24 with"HF" option produces about five air changes per hour (ACH) for a 300 square-foot room with 8-foot ceiling; and about 3.75 ACH for 400 square-foot room with 8-foot ceiling (see table below for more details).

Air changes per hour:

The table below shows the number of air changes per hour (ACH) and time in minutes required for removal efficiencies of 90%, 99% and 99.9% of airborne contaminants.

ACH	Minutes required for a removal efficiency of: 90%	99%	99.9%
1	138	276	414
2	69	138	207
3	46	92	138
4	35	69	104
5	28	55	83
6	23	46	69
7	20	39	59
8	17	35	52
9	15	31	46
10	14	28	41
11	13	25	38
12	12	23	35
13	11	21	32
14	10	20	30
15	9	18	28

This table has been adapted from the formula for the rate of purging airborne contaimants (99). Values have been derived from the formula $t_1 = [\ln (C_2 \div C_1) \div (Q \div V)] \times 60$, with $T_1 = 0$ and $C_2 \div C_1$ - (removal efficiency ÷ 100), and where:

- t_1 = initial timepoint
- C_1 = initial concentration of contaminant
- C_2 = final concentration of contaminants
- Q = air flow rate (cubic feet per hour)
- V = room volume (cubic feet)
- Q ÷ V = ACH

The times given assume perfect mixing of the air within the space (i.e., mixing factor = 1). However, perfect mixing usually does not occur, and the mixing factor could be as high as 10 if the air distribution is very poor (98). The required time is derived by multiplying the appropriate time from the table by the mixing factor that has been determined for the booth or room.

Total exposed surface area of titanium dioxide (UVC disinfection) within GAC box: <19 feet. Total length covered by air in GAC box: <18 feet.

KILL > 99% OF COVID-19

Note: *UVFocus products are designed utilizing proven germicidal and anti-bacterial technology. UVC 254nm and 260-265nm products work to deactivate most common viruses (as well as bacteria, molds and yeasts), and 405nm near-UV products are shown to substantially reduce bacterial presence. While these products can be considered disinfecting products, they should be used in conjunction with standard, proper disinfecting cleaning procedures to have the greatest impact for maintaining a clean environment. Successful UV disinfection requires a systems approach taking into account dose, optics and safety relevant to the specific application. Please consult with factory any questions or concerns.*

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LumenFocus reserves the right to change specifications without notice. Consult factory for most up to date specifications.

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