DATA SHEET MODULAR

EIKOScare

vyv Antimicrobial Light

CE RoHS Compliant

FEATURES

SERIES: MODULAR

LIGHT ENGINE: (SEE TABLE)
- VVLE64 VYV PCB
- VVLE63 VYV PCB

NOMINAL POWER: 69W (59W) (SEE TABLE) White (Enhance) Antimicrobial Mode

SYSTEM CONSUM: 74W (64W) (SEE TABLE) White (Enhance) Antimicrobial Mode

NOMINAL FLUX: 4.400lm (SEE TABLE) White Antimicrobial Mode

OUTPUT FLUX: 3.100lm (SEE TABLE) White Antimicrobial Mode

COLOR TEMPERATURE: 4.000K White Antimicrobial Mode

CRI: >80 / >90 (SEE TABLE) White Antimicrobial Mode

Small colour tolerance MacAdam 3

SPAM LIFE: L80 / F10 >36.000h

WARRANTY: 3 Years

Disinfection Technology: The fixture includes vyv Antimicrobial Light Technology which uses antimicrobial effect of visible light at 405 nm (violet). This technology is safe for humans, animals and plants when exposed to either of both modes (White and Enhance).

Applications: Hospitals, Labs, Offices, etc.

DESCRIPTION: Rectangular light fixture that fits into a modular dropped ceiling grid (optional frame for plasterboard ceiling recessed installation is available) with DUAL vyv Antimicrobial Light Technology (White Antimicrobial Light Mode/ Enhanced Antimicrobial Light Mode)

- Body of the luminaire made of top-quality steel sheet, degreased, phosphated and thermo enamelled in white, black or grey (RAL 9006) with epoxy-polyester resin polymerized in the oven at a temperature of 200º.
- Regulable DSI-DALI-SWITCH DIM-BLUETOOTH CASAMBI READY optional
- Automatic wire connectors WAGO or WIELAND.
- Osram or Tridonic electronic driver.
- Occupancy and movement sensor optional.
- Diffusers PMMA micro prismatic Conical De-Glaring Prism, with high transmittance and UGR <19.
- Side reflectors in QMCPET for very high performance.
- Adaptable to exposed T ceilings of 600x600mm (or other sizes) supported on profiles or plasterboard ceilings by means of an optional frame.
- Adaptable to ceiling with hidden T type. CLIP-IN on request.
- Adaptable to any type of ceiling upon request.
- Upon request, the blind area can be micro drilled, to suit customer aesthetic preferences. Optional

CLASIFICATION: REFERENCE: UNE-EN 60598. CLASS I (CLASS II UPON REQUEST) IP20 (RECESSED SIDE) IP44 (EXPOSED) OR IP65 (SEE TABLE)

Model	Reference	Light Engine	Nominal Power	System Consum	Nominal Flux	Output Flux	Dimentions mm Width x Length x Height	Mode	IP	CRI
MODULAR R 2X2-2040-DUAL	EIK-150 2 VVLE64 CDP	2xVVLE64	70 W / 56 W	76 W / 62 W	4000 lm	3500 lm	596x596x50	Dual (W + E)	IP 65	>80
MODULAR R 1X2-2040-DUAL	EIK-150 1 VVLE64 CDP 30X60	1xVVLE64	35 W / 28 W	38 W / 31 W	2000 lm	1750 lm	296x596x50	Dual (W + E)	IP 65	>80
MODULAR R 1X4-2040-DUAL	EIK-150 2 VVLE64 CDP 30X120	2xVVLE64	70 W / 56 W	76 W / 62 W	4000 lm	3500 lm	296x1196x50	Dual (W + E)	IP 65	>80
MODULAR R 2X4-2040-DUAL	EIK-150 2 VVLE64 CDP 60X120	2xVVLE64	70 W / 56 W	76 W / 62 W	4000 lm	3500 lm	596x1196x50	Dual (W + E)	IP 65	>80
MODULAR SR 2X2-65 -DUAL	EIK-443 2 VVLE63 CDP 60X60	2xVVLE63	80 W / 64 W	87 W / 71 W	5400 lm	4725 lm	596x596x50	Dual (W + E)	IP 65	>90
MODULAR ST 1X4-65 -DUAL	EIK-443 2 VVLE63 CDP 30X120	2xVVLE63	80 W / 64 W	87 W / 71 W	5400 lm	4725 lm	296x1196x50	Dual (W + E)	IP 65	>90

OPTIONS:

Model	Reference	Description
	& IntSensor 5DP 14F	Integrated presence and movement sensor for automatic modes switching

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FIXTURE COMPONENTS — MODULAR

SET		COMPONENT			STANDARD	TREATMENT	TEST
P.	DESCRIPCIÓN	P.	DESCRIPCIÓN	MATERIAL			
1	BODY	1-1	STEEL SHEET 0,5mm	AP-01	UNE.360865	PAINTED	EN-90598-1
		1-2	PAINT COLOUR WHITE, BLACK OR GREY RAL 9006	EPOXI POLYESTER			DIN 50017
2	ELECTRICAL	2-1	CONVERTIDOR ELECTRÓNICO OSRAM O TRIDONIC		UNE. 20152		UNE. 20152
		2-2	BJB CONECTORS				UNE. EN EN60598 COMPLIANT
		2-3	WIRES	Cu. 0,75 mm2. PVC- 105			
3	OPTICS	3-1	MICROPRISMATIC DIFUSSER	PMMA CONICAL DEGLARING PRISM DE 3mm			
		3-2	VERY HIGH PERFORMANCE SIDE REFLECTOR	QMCPET 1mm	UNE-2117		
4	PACKAGING	4-1	CARDBOARD	KRAFT BICOLOUR	DIN-1712		

UNE EN 60598: PARTE 1: REGLAS GENERALES Y GENERALIDADES SOBRE ENSAYO
DIN 50017: ENSAYO DEL ENVEJECIMIENTO DE RECUBRIMIENTOS
UNE 20152: BALASTOS PARA LAMPARAS FLUORESCENTES
UNE 21117: CONDUCTORES

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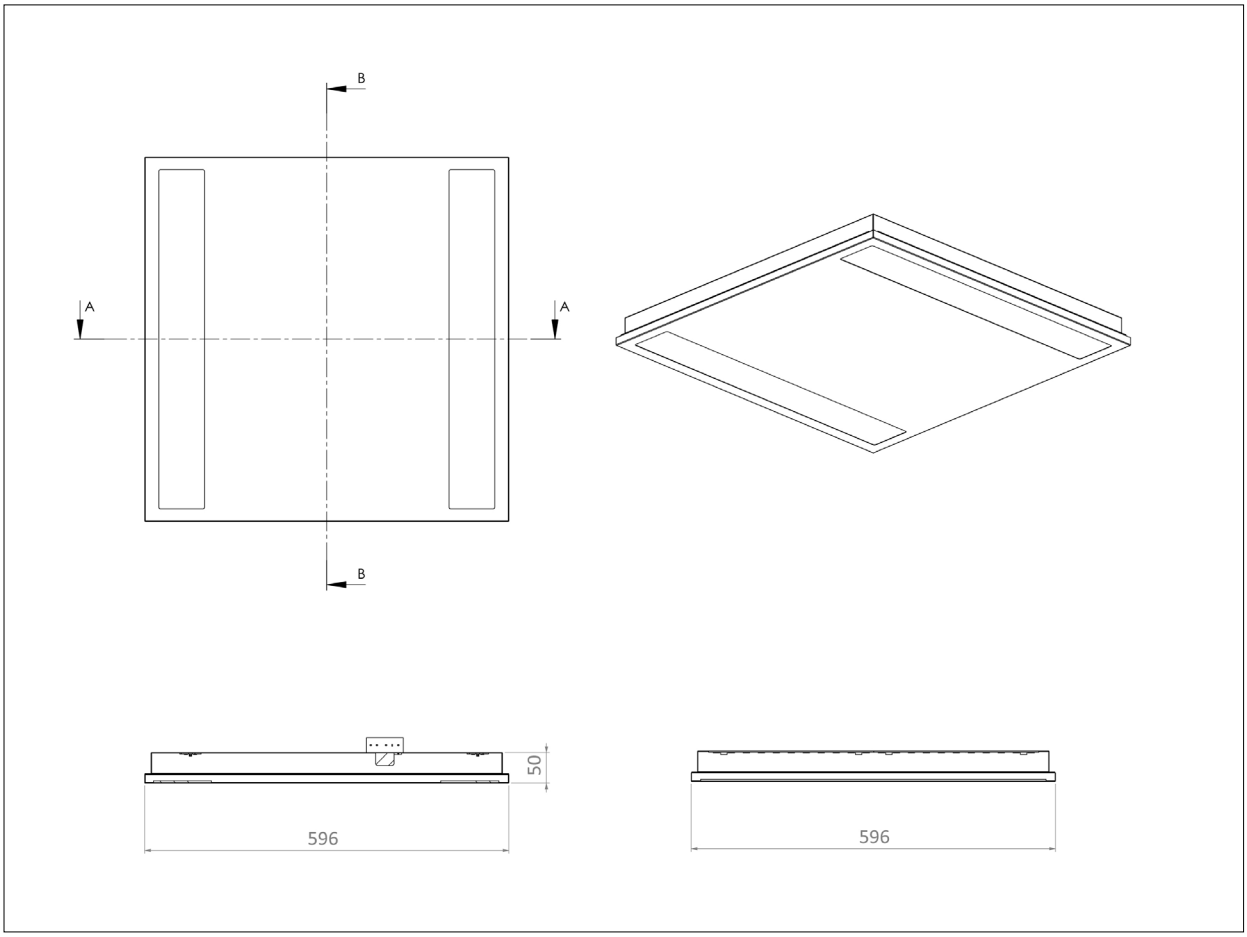

MODULAR R 2X2-2040-DUAL

MODULAR SR 2X2-65 -DUAL

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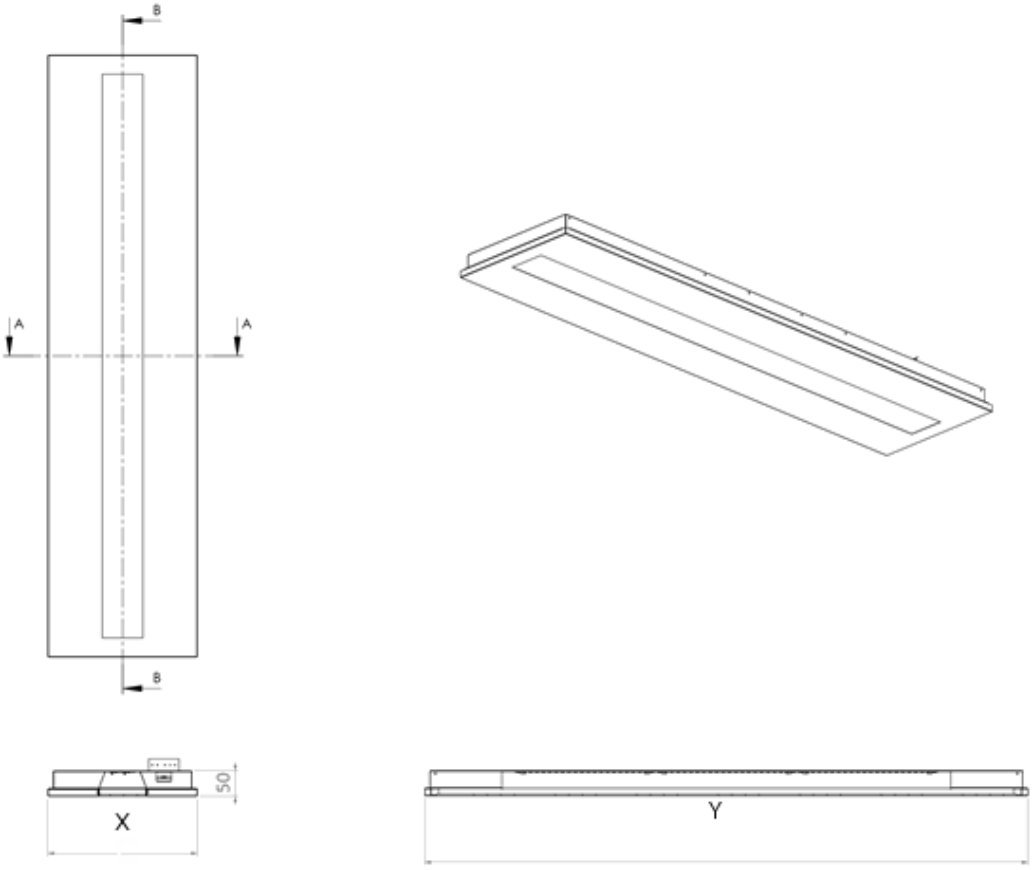

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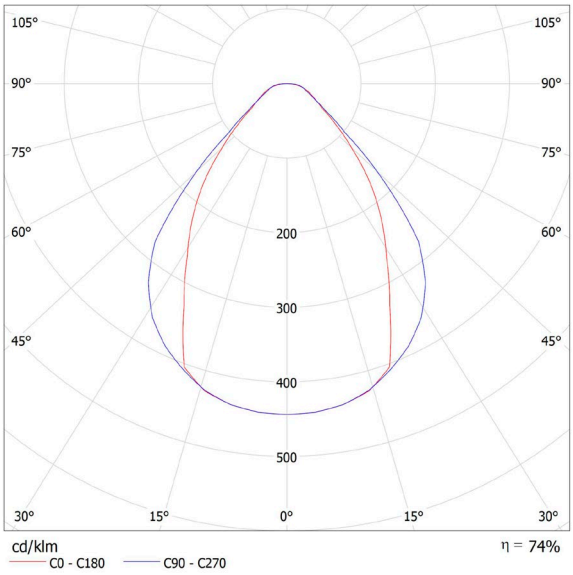
Valoración de deslumbramiento según UGR

ρ Techo		70	70	50	50	30	70	70	50	50	30
ρ Paredes		50	30	50	30	30	50	30	50	30	30
ρ Suelo		20	20	20	20	20	20	20	20	20	20
Tamaño del local X	Y	Mirado en perpendicular al eje de lámpara					Mirado longitudinalmente al eje de lámpara				
2H	2H	13.7	14.7	13.9	14.9	15.1	14.9	15.9	15.1	16.1	16.3
	3H	14.4	15.4	14.7	15.6	15.9	15.4	16.3	15.7	16.6	16.8
	4H	14.9	15.7	15.2	16.0	16.3	15.7	16.6	16.0	16.8	17.1
	6H	15.3	16.1	15.6	16.3	16.6	16.1	16.9	16.4	17.2	17.5
	8H	15.4	16.2	15.7	16.5	16.8	16.2	17.0	16.6	17.3	17.6
	12H	15.5	16.2	15.8	16.5	16.8	16.4	17.1	16.7	17.4	17.7
4H	2H	14.0	14.8	14.3	15.1	15.4	15.0	15.9	15.3	16.2	16.4
	3H	14.9	15.7	15.3	16.0	16.3	15.8	16.5	16.2	16.8	17.2
	4H	15.5	16.2	15.9	16.5	16.9	16.3	16.9	16.7	17.3	17.6
	6H	16.1	16.6	16.5	17.0	17.4	16.8	17.3	17.2	17.7	18.1
	8H	16.3	16.8	16.7	17.2	17.6	17.0	17.5	17.4	17.9	18.3
	12H	16.4	16.9	16.9	17.3	17.7	17.2	17.7	17.7	18.1	18.5
8H	4H	15.8	16.3	16.2	16.7	17.1	16.4	16.9	16.9	17.3	17.7
	6H	16.4	16.9	16.9	17.3	17.7	17.1	17.5	17.5	17.9	18.3
	8H	16.7	17.1	17.2	17.5	18.0	17.4	17.7	17.8	18.2	18.7
	12H	17.0	17.3	17.5	17.7	18.2	17.7	18.0	18.2	18.5	19.0
12H	4H	15.8	16.2	16.2	16.6	17.1	16.4	16.9	16.9	17.3	17.7
	6H	16.5	16.9	17.0	17.3	17.8	17.1	17.5	17.6	17.9	18.4
	8H	16.8	17.1	17.3	17.6	18.1	17.4	17.8	17.9	18.2	18.7

Variación de la posición del espectador para separaciones S entre luminarias		
S = 1.0H	+0.4 / -0.6	+0.6 / -0.7
S = 1.5H	+0.8 / -0.9	+1.6 / -1.2
S = 2.0H	+1.7 / -1.2	+2.9 / -1.6
Tabla estándar	BK04	BK04
Sumando de corrección	-2.3	-1.4

Índice de deslumbramiento corregido en relación a 5200lm Flujo luminoso total

Los valores UGR se calculan según CIE Publ. 117. Spacing-to-Height-Ratio = 0.25.



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Vyv Technology

Bacteria

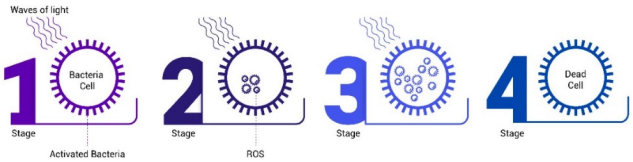
- **Gram Positive**
  Staphylococcus aureus (incl. MRSA)
  Clostridium perfringens
  Clostridium difficile
  Enterococcus faecalis
  Staphylococcus epidermidis
  Staphyloccocus hyicus
  Streptococcus pyogenes
  Listeria monocytogenesBacillus cereus
  Mycobacterium terrae
  Lactococcus lactis
  Lactobacillus plantarum
  Bacillus circulans
  Streptococcus thermophilu

- **Gram Negative**
  Acinetobacter baumanniis
  Pseudomonas aeruginosa
  Klebsiella pneumoniae
  Proteus vulgaris
  Escherichia coli
  Salmonella enteritidis
  Shigella sonnei
  Serratia spp.
  Salmonella typhimurium

Bacterial Endospores

- Bacillus cereus
  Clostridium difficile

- **Yeast and filamentous fungi**Aspergillus niger
  Candida albicans
  Saccharomyces cerevisiae

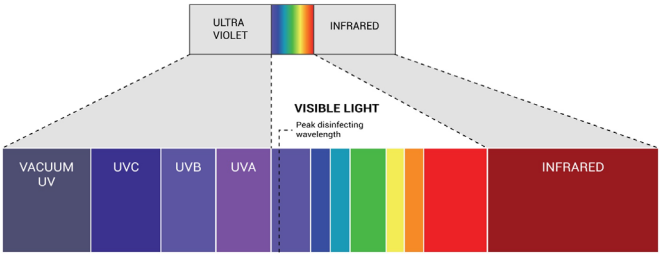


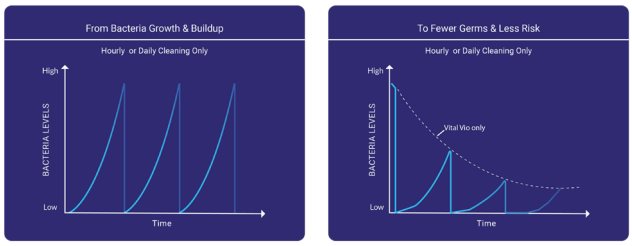
Vyv's antimicrobial light wavelengths initiate a photo-reaction with endogenous non-iron porphyrin molecules found only in microorganisms. The porphyrin molecules are photo activated. Vyv's light frequencies excite the porphyrins, causing a break-off of excess Reactive Oxygen Species (ROS). This causes irreparable damage within the cell, ultimately destroying the cellular membrane from the inside out.

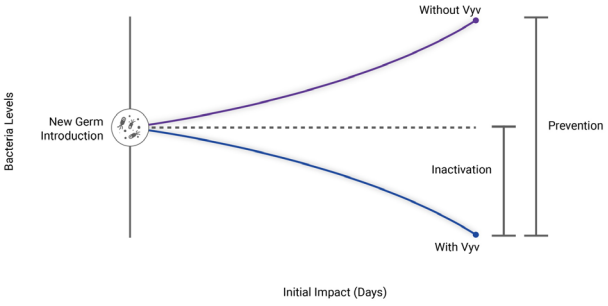
Vyv attacks the cell from multiple vectors preventing the cell from building up any new defenses against this form of attack. This is unlike approaches used with antibiotics that can cause germs to mutate and develop resistance.

Use Vyv anywhere and get a new kind of continuous antimicrobial

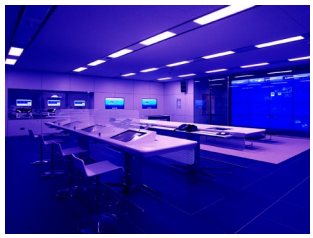
Comparison Category	Vyv	Ultraviolet (UV-C)
Timing of Antimicrobial Impact	Continuous	Point in time
Used Around People	✓ **Yes** Meets IEC standards for unrestricted & continuous use	× **No** Does not meet IEC standards for unrestricted & continuous use
Environmental Considerations	No degradation effects to materials	Material degradation to materials such as plastics & rubber
Use Case Applications	Occupied & unoccupied spaces - broad use cases	Unoccupied spaces only
Kill Mechanism	Destruction of cell via ROS produced by porphyrin molecules when excited by 405mm light.	Destruction of DNA/RNA - all genetic material
Delivery Mechanism	Individual LEDs allow for integration into any size light, space, etc	Primanly bulbs, early stage LEDs (expensive, inefficient)
Investment (capital, people, service)	Low/Med. upfront cost, one time install, no manual labor or service	Med/High upfront cost, regular bulb replacements, manual operation & oversight w/each use







Vyv Antimicrobial+Light™



Vyv Enhanced Antimicrobial™

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