

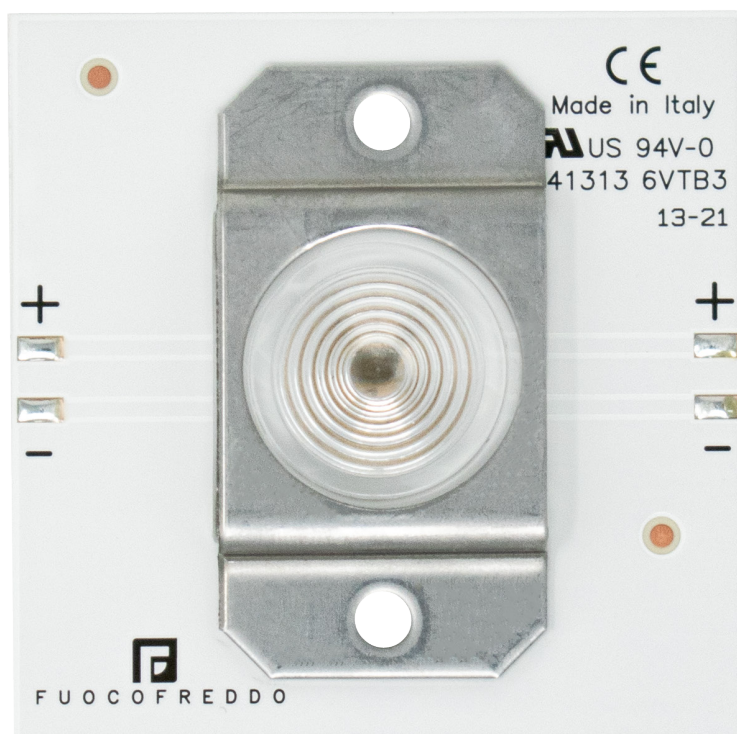


VIOLETTA LED UV-C

Modulo per la disinfezione di aria - acqua - superfici

EFFICACIA

testata su VIRUS E BATTERI in laboratorio*
disattiva fino al 99,9999% dei microrganismi





SCHEMA TECNICA VIOLETTA LED UVC

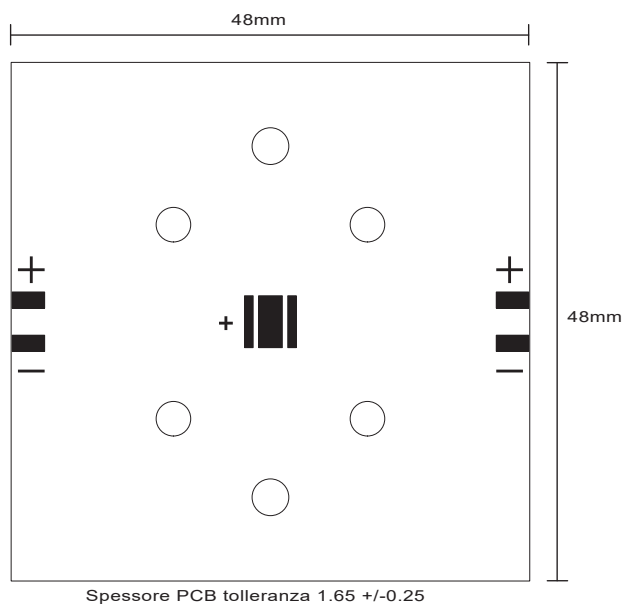
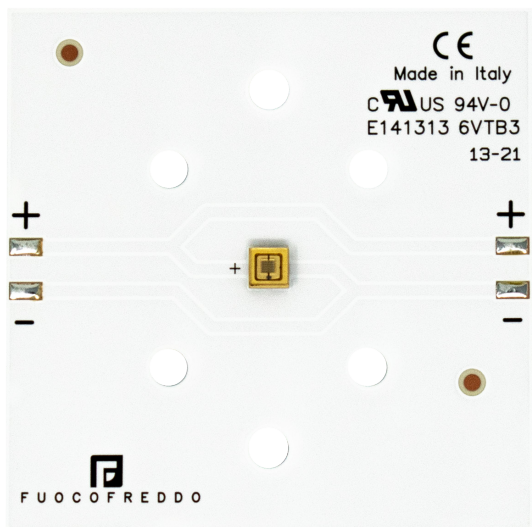
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Descrizione

Il modulo LED UV-C VIOLETTA è un modulo sviluppato appositamente per lavorare accoppiato con le lenti silconiche della famiglia VIOLETTA di LEDiL (cod. F17822_VIOLETTA-S, F17826_VIOLETTA-W). Il modulo risulta utile per la sanificazione e sterilizzazione di aria, superfici di lavoro e acqua. Realizzato con PCB in alluminio (IMS) altamente performante che garantisce un'ottima dissipazione termica. Le dimensioni molto ridotte lo rendono perfetto per soluzioni di sanificazione in ambienti ridotti.

Caratteristiche

- Bassa resistenza termica
- Dimensioni ridotte (48x48x3,4mm)



3,4 ± 1,8
1,6

codice	potenza tipica (UVC)*	flusso radiante tipico (UVC)*	PCB	picco lunghezza d'onda (UVC)**	angolo di emissione
CULBN1	30mA	4.7mW	IMS	275nm	120°
CULDN1	350mA	42mW	IMS	275nm	120°

*I dati riportati nella presente documentazione sono da intendersi con una tolleranza del +/- 5%.

** La lunghezza d'onda riportata nella presente documentazione è da intendersi con una tolleranza del +/- 5nm.

Istruzioni per la sicurezza

- Per utilizzare l'apparecchio è necessario indossare i seguenti DPI (Occhiali di protezione UVC cod. 913904CX e Guanti di protezione cod. 9392030X).
- Non utilizzare l'apparecchio in presenza di persone non protette dai DPI obbligatori indicati.
- Non guardare i LED UVC direttamente. La lunghezza d'onda UVC non risulta visibile all'occhio umano.
- Oltre all'utilizzo di tutti i dispositivi di protezione individuale (DPI), per un uso sicuro dell'apparecchio, si deve prendere nota di tutte le prescrizioni relative alla prevenzione degli infortuni riportate nei vari punti di questo manuale.
- Ogni persona che viene incaricata dell'uso e della manutenzione dell'apparecchio, deve aver prima letto il presente documento.
- Durante tutte le fasi dell'utilizzo dell'apparecchio, si raccomanda la massima cautela in modo da evitare danni a persone, a cose o all'apparecchio stesso.
- Utilizzate l'apparecchio solo ed esclusivamente per l'utilizzo previsto e nelle modalità qui descritte (sanificazione superfici).
- Non manomettere il dispositivo.
- Tenere l'apparecchio fuori dalla portata dei bambini

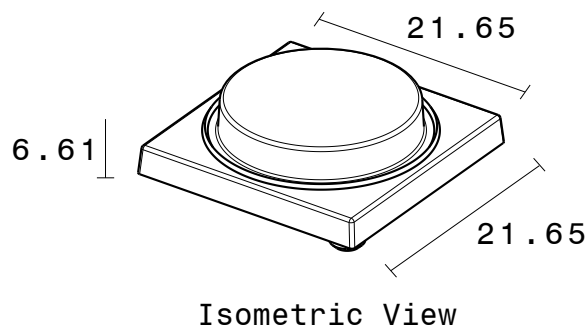
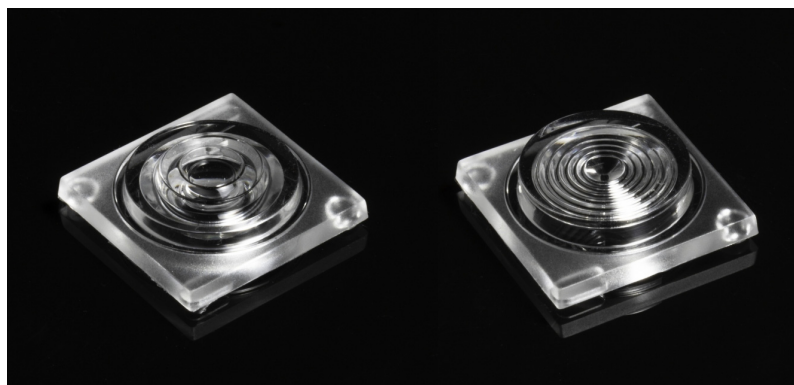
SCHEDA TECNICA VIOLETTA LED UVC

Modulo con lente siliconica VIOLETTA LEDiL

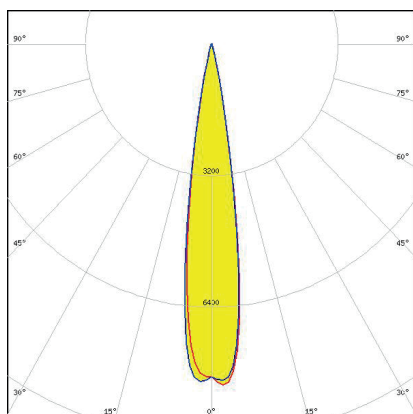
La lente VIOLETTA di LEDiL è un'ottica siliconica standard appositamente progettata per l'illuminazione UV-C professionale, con due fasci disponibili. VIOLETTA-S garantisce un fascio di circa 15° che permette un flusso concentrato. Questo la rende la soluzione perfetta per le applicazioni UV-C utilizzabili in diversi impieghi.

VIOLETTA-W garantisce un fascio di circa 60° che consente una diffusione più ampia ed efficiente da distanze ravvicinate.

Tutte le ottiche VIOLETTA sono protette dall'ingresso e sono dotate di un telaio in acciaio inossidabile.



F17822_VIOLETTA-S

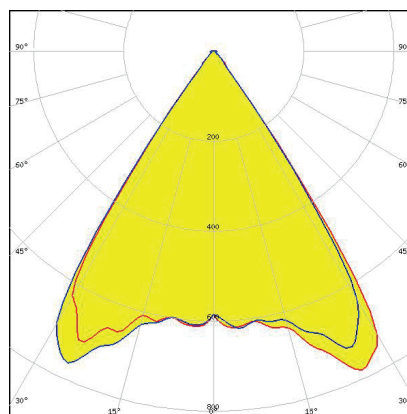


Dimensions: 21.7 mm x 21.7 mm

Height: 6.60 mm

~15° spot beam

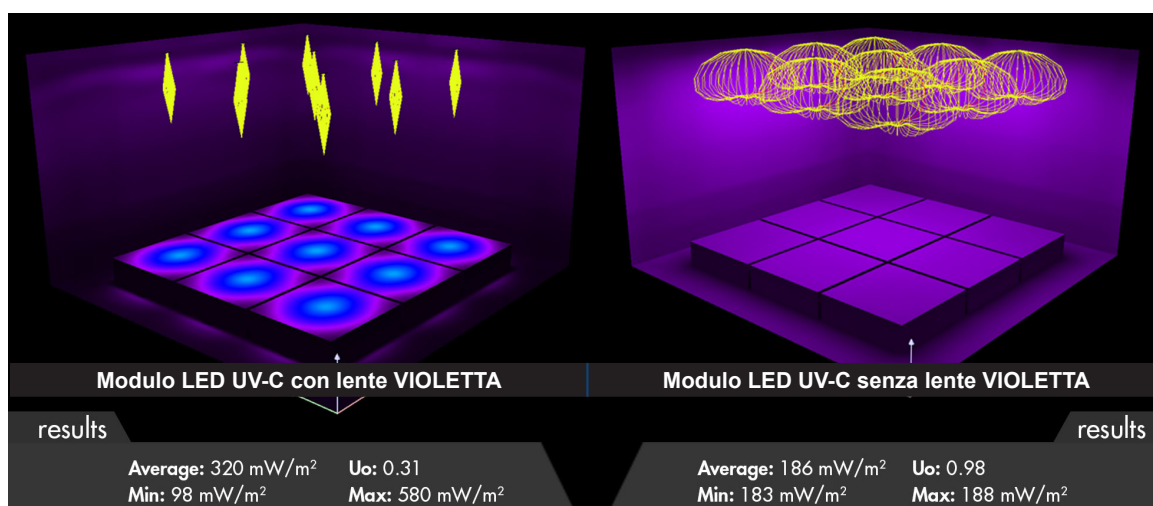
F17826_VIOLETTA-W



Dimensions: 21.7 mm x 21.7 mm

Height: 6.51 mm

~60° wide beam





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Installation must be carried out under observation of the relevant regulations and standards. The LED modules are designed for operation within a casing or luminaire. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains).

The following advice must be observed; non-observance can result in the destruction of the LED assembly modules, fire and/or other hazards.

- Consider safety regulations acc. EN 60598 in the luminaire design, especially when the operating LED driver is not galvanic isolated.
 - In mode of operation regard to sufficient isolation.
 - Live parts must not be touched in operation mode. Danger in life!!!
- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools should be used.
- LED assembly modules must not be subjected to any undue mechanical stress, e. g.:
 - do not treat as bulk cargo
 - avoid shear and compressive forces during handling and installation
 - do not damage circuit paths
 - avoid any pressure on the light emitting surface
- Safe operation only possible by the use of external constant current sources (I_{max}. see table "Electrical Characteristics").
- Operation only with power supply units that feature the following protection:
 - Short-circuit protection
 - Overload protection
 - Overheating protection
- The module can be fixed with M3 screws. Fixation only with flat or cylinder head screws (M3) (no countersunk screws) Max. torque: 1.2 Nm (M3)
- Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- For interconnection the LED modules is equipped with push-in terminals (WAGO 2060).
- Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceed the permitted touchable value.
- The following points must be observed when connecting LED modules in parallel:
 - All LED strings that are wired in parallel must contain the same number of LEDs (symmetrical loading).
 - Owing to differing forward biases, there can be a difference of up to 10% in brightness between modules connected in parallel.
- To ensure problem-free operation, the specified maximum temperature at the tp point (see "Operating Life") must be observed (and measured in accordance with EN 60598-1). To satisfy this point, it may be necessary to put measures in place to ensure any heat is dissipated from the PCB to the environment.
- In the event of outdoor applications or applications in damp locations, care must be taken to protect LED assembly modules against humidity, splashes and jets of water. Any corrosion damage resulting from humidity or contact with condensation will not be recognized as a defect or manufacturing fault. LED assembly modules are not specially protected against foreign bodies or dust. Depending on the type of application, further protection must be ensured to prevent dust and foreign bodies from entering.
- Due to the manufacturing process, the PCBs of the LED assembly modules can have sharp edges and corners. Care must therefore be taken during handling and installation to avoid injury.
- For optimal load of used constant current driver the modules can only be connected in series. The quantity of LED modules is limited by the sum of forward voltage and the capacity of used constant current driver. Safety regulations acc. to EN 60598 has to be observed if the sum of forward voltage exceed the permitted touchable value.
- Operating LED modules in the presence of certain chemical substances or in chemically enriched (aggressive) environments can impair module functionality or even cause total module failure.
- The photobiological safety of the LED modules must be classified into risk groups in accordance with IEC / TR 62778: risk group 1 (except HB, 6500 K, > 500 mA: risk group 2)

Vedere condizioni di vendita scaricabili dal sito www.fuocofreddo.it

See sales conditions downloadable from the website www.fuocofreddo.it

SCHEDA TECNICA VIOLETTA LED UVC



Precauzioni per lo stoccaggio

Per evitare la penetrazione di umidità, si consiglia di conservare il modulo UV in una scatola asciutta provvista di dispositivi essiccanti, ad una temperatura compresa tra 5°C e 30°C e un'umidità relativa non superiore al 50%.

Se il modulo UV viene conservato per oltre 3 mesi dopo la spedizione da parte di FUOCOFREDDO, deve essere utilizzato un contenitore sigillato con atmosfera di azoto.

Conservare i moduli UV sempre all'interno dei sacchetti antistatici e a prova di umidità. L'esposizione prolungata all'umidità può influire negativamente sul corretto funzionamento del modulo UV.

Non utilizzare (o conservare) insieme a materiali contenenti zolfo.

Precauzioni per la manipolazione

Non toccare a meno che non venga utilizzata la protezione ESD.

Non utilizzare materiale infiammabile vicino al prodotto.

Non toccare il prodotto con le mani bagnate

Non riparare o rimodellare il prodotto.

Preservare il prodotto da cadute o urti.

Il modulo UV è incapsulato con materiale speciale. Quindi deve essere gestito con cura come di seguito

-Evitare di toccare parti in vetro quarzo, specialmente con strumenti affilati come le pinzette

-Evitare di lasciare impronte digitali o depositi di sporcizia sulle parti in vetro quarzo

I prodotti emettono luce ultravioletta ad alta intensità che può danneggiare gli occhi e la pelle, quindi non guardare direttamente la luce UV e indossare dispositivi di protezione durante il funzionamento.

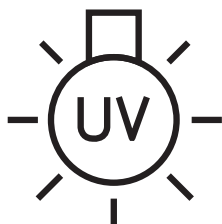
Assicurarsi di utilizzare sempre fonti di alimentazione che presentino le debite protezioni a scariche elettrostatiche ed eventuali correnti di spunto. La mancanza di un sistema di pilotaggio adeguato e debitamente protetto può causare il danneggiamento irreparabile dei LED UV.

Sono necessari ionizzatore, messa a terra e tasso di umidità adeguata per l'ambiente di lavoro.

Precauzioni per la pulizia

Non mettere a diretto contatto il prodotto con liquidi quali: acqua, olii o solventi. Eseguire la pulizia del modulo soltanto attraverso strumenti adeguati quali spazzole o pennelli.

L'aspetto, le specifiche tecniche e i rendimenti del prodotto possono essere modificati a fine migliorativo da parte di FUOCOFREDDO, in qualsiasi momento e senza preavviso. Per maggiori informazioni invitiamo a contattare i nostri uffici tecnici info@fuocofreddo.it o a visitare l'area download all'indirizzo www.fuocofreddo.it.



! ATTENZIONE !

I dispositivi VIOLET UVC emettono luce ultravioletta ad alta intensità che può danneggiare gli occhi e la pelle, seguire quindi scrupolosamente le istruzioni di sicurezza riportate dal presente documento.

Evitare l'esposizione diretta di occhi e pelle con la luce emessa dai LED UV-C.

Tenere fuori dalla portata dei bambini.



SCHEDA TECNICA
VIOLETTA LED UVC

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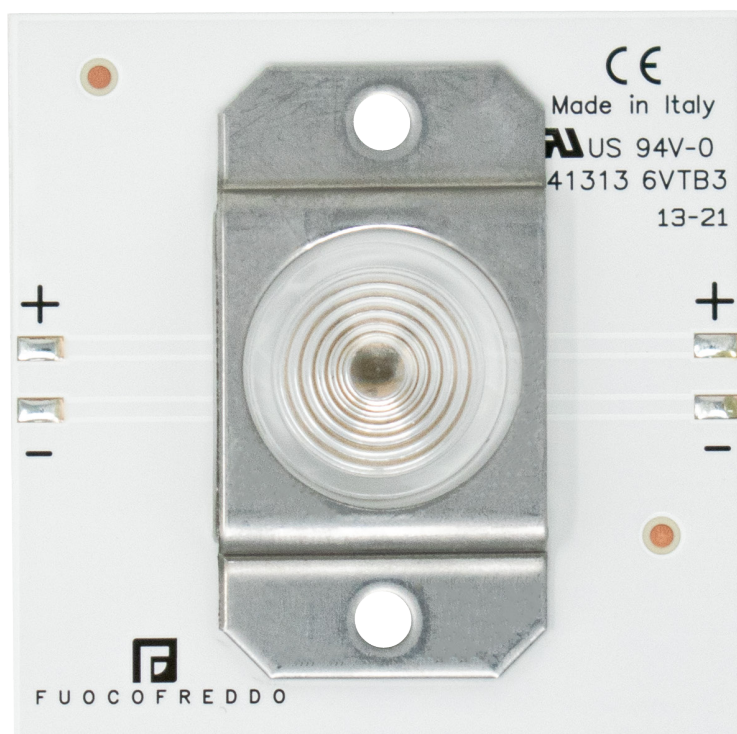
VIOLETTA LED UV-C

Module for the disinfection of air - water - surfaces

EFFECTIVENESS

tested on VIRUSES AND BACTERIA in the laboratory *

deactivates up to 99.9999% of microorganisms



* For detailed information, contact the technical department

SCHEMA TECNICA VIOLETTA LED UVC

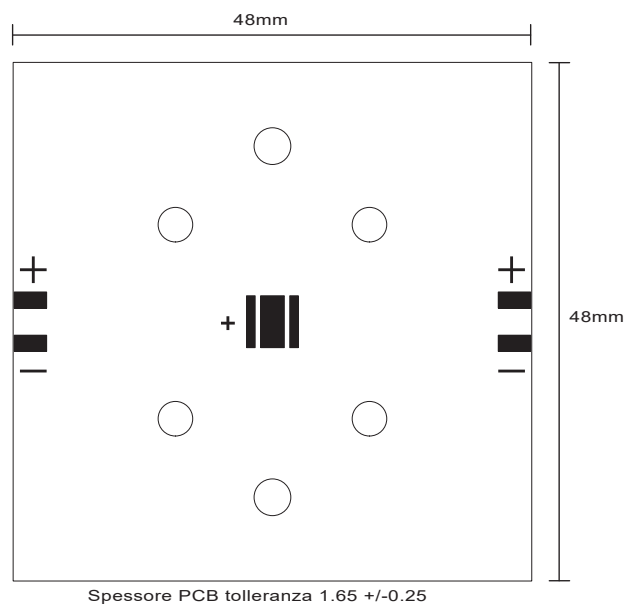
Description

The VIOLETTA UV-C LED module is a module specially developed to work coupled with the silicone lenses of the VIOLETTA family by LEDiL (cod. F17822_VIOLETTA-S, F17826_VIOLETTA-W). The module is useful for sanitizing and sterilizing air, work surfaces and water.

Made with high-performance aluminum PCB (IMS) that guarantees excellent heat dissipation. The very small size makes it perfect for sanitizing solutions in small environments.

Features

- Low thermal resistance
- Small size (48x48x3.4mm)



3,4 ± 1,8
1,6

code	typical power (UVC) *	typical radiant flux (UVC) *	PCB	peak wavelength (UVC) **	emission angle
CULBN1	30mA	4.7mW	IMS	275nm	120°
CULDN1	350mA	42mW	IMS	275nm	120°

* The data shown in this documentation are intended with a tolerance of +/- 5%.

** The wavelength shown in this documentation is intended with a tolerance of +/- 5nm.

Safety instructions

- To use the device, it is necessary to wear the following PPE (UVC protective goggles code 913904CX and protective gloves code 9392030X).
- Do not use the device in the presence of people not protected by the mandatory PPE indicated.
- Do not look at the UVC LEDs directly. The UVC wavelength is not visible to the human eye.
- In addition to the use of all personal protective equipment (PPE), for safe use of the device, you must take note of all the requirements relating to the prevention of accidents listed in the various points of this manual.
- Each person who is in charge of the use and maintenance of the appliance must first have read this document.
- During all phases of using the appliance, we recommend the utmost caution in order to avoid damage to people, property or the appliance itself.
- Use the device only and exclusively for its intended use and in the manner described here (surface sanitization).
- Do not tamper with the device.
- Keep the appliance out of the reach of children



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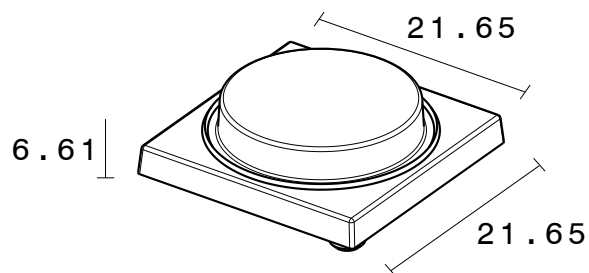
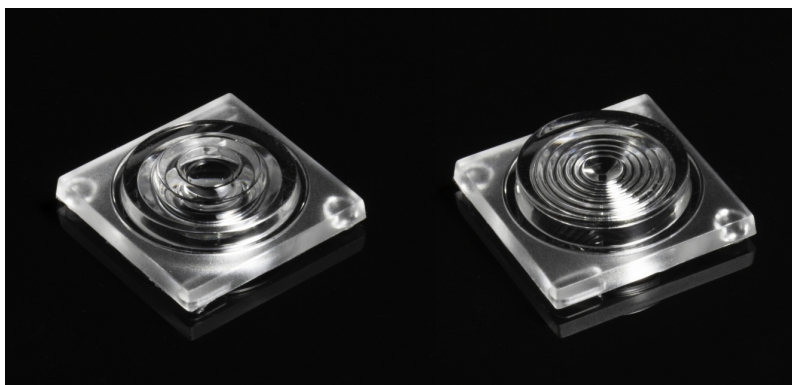
Module with VIOLETTA LEDiL silicone lens

The VIOLET lens by LEDiL is a standard silicone optic specially designed for professional UV-C lighting, with two beams available.

VIOLETTA-S guarantees a beam of about 15 ° which allows a concentrated flow. This makes it the perfect solution for UV-C applications that can be used in various uses.

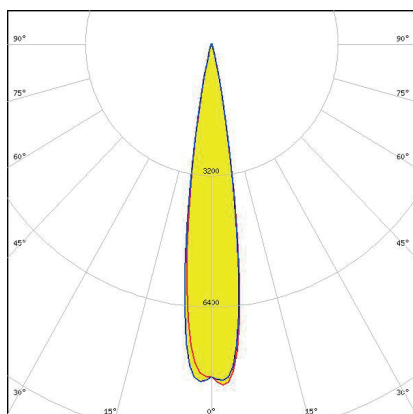
VIOLETTA-W guarantees a beam of about 60 ° which allows a wider and more efficient diffusion from close distances.

All VIOLETTA optics are protected from entry and are equipped with a stainless steel frame.



Isometric View

F17822_VIOLETTA-S

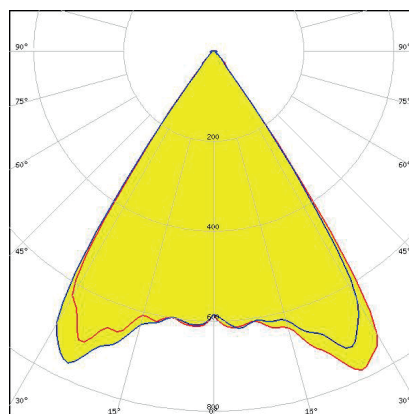


Dimensions: 21.7 mm x 21.7 mm

Height: 6.60 mm

~15° spot beam

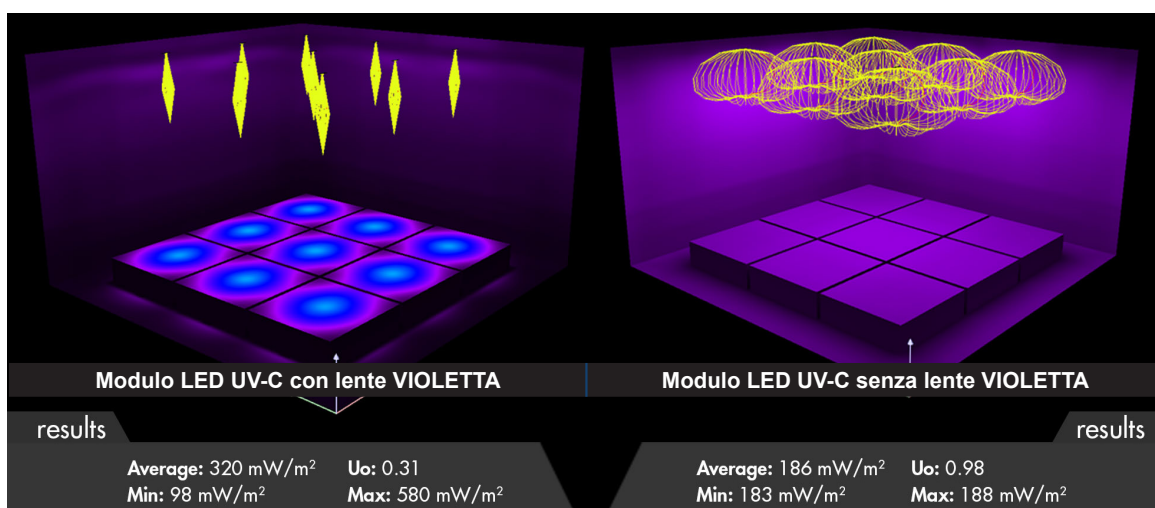
F17826_VIOLETTA-W



Dimensions: 21.7 mm x 21.7 mm

Height: 6.51 mm

~60° wide beam



SCHEDA TECNICA VIOLETTA LED UVC



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- Consider safety regulations acc. EN 60598 in the luminaire design, especially when the operating LED driver is not galvanic isolated.
- In mode of operation regard to sufficient isolation.
- Live parts must not be touched in operation mode. Danger in life!!!
- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools should be used.
- LED assembly modules must not be subjected to any undue mechanical stress, e. g.:
 - do not treat as bulk cargo
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 - do not damage circuit paths
 - avoid any pressure on the light emitting surface
- Safe operation only possible by the use of external constant current sources (I_{max}. see table "Electrical Characteristics").
- Operation only with power supply units that feature the following protection:
 - Short-circuit protection
 - Overload protection
 - Overheating protection
- The module can be fixed with M3 screws. Fixation only with flat or cylinder head screws (M3) (no countersunk screws) Max. torque: 1.2 Nm (M3)
- Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- For interconnection the LED modules is equipped with push-in terminals (WAGO 2060).
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- The photobiological safety of the LED modules must be classified into risk groups in accordance with IEC / TR 62778: risk group 1 (except HB, 6500 K, > 500 mA: risk group 2)



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Storage precautions

To avoid the penetration of moisture, it is advisable to store the UV module in a dry box equipped with drying devices, at a temperature between 5 ° C and 30 ° C and a relative humidity not exceeding 50%.

If the UV module is stored for more than 3 months after shipment by FUOCOFREDDO, a sealed container with a nitrogen atmosphere must be used.

Always store the UV modules inside the antistatic and moisture-proof bags. Prolonged exposure to humidity can adversely affect the proper functioning of the UV module.

Do not use (or store) in conjunction with materials containing sulfur.

Handling precautions

Do not touch unless ESD protection is used.

Do not use flammable material near the product.

Do not touch the product with wet hands

Do not repair or remodel the product.

Protect the product from falls or bumps.

The UV module is encapsulated with special material. So it needs to be handled with care as below

-Avoid touching quartz glass parts, especially with sharp tools such as tweezers

-Avoid leaving fingerprints or dirt deposits on the quartz glass parts

The products emit high intensity ultraviolet light which can damage the eyes and skin, so do not look directly into the UV light and wear protective gear during operation.

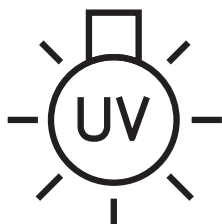
Make sure to always use power sources that have the necessary electrostatic discharge protections and any inrush currents. The lack of an adequate and duly protected driving system can cause irreparable damage to the UV LEDs.

An ionizer, grounding and adequate humidity for the work environment are required.

Cleaning precautions

Do not put the product in direct contact with liquids such as: water, oils or solvents. Clean the module only with suitable tools such as brushes or paintbrushes.

The appearance, technical specifications and performance of the product can be modified for improvement purposes by FUOCOFREDDO at any time and without notice. For more information, please contact our technical offices info@fuocofreddo.it or visit the download area at www.fuocofreddo.it.



! ATTENTION !

VIOLET UVC devices emit high intensity ultraviolet light that can damage the eyes and skin, therefore strictly follow the safety instructions contained in this document.

Avoid direct exposure of eyes and skin with the light emitted by UV-C LEDs.
Keep out of reach of children.