

EEE Light® UV Chips (255-300nm) – advance information

LightLab's UVC Chip Light Sources are based on a new technology - EEE Light® - Field Emission UVC technology.

The technology offers significant advantages compared to other existing and emerging technologies. High performance in combination with attractive cost makes it uniquely suited for intermittent consumer near applications.

The chips deliver a broad UVC spectrum with a peak at 267nm. The technology and the devices are designed for easy integration with a **proven high germicidal effectiveness**.

The low power dissipation and optimized power density allows plug and play operation without any further thermal management considerations needed



Benefits

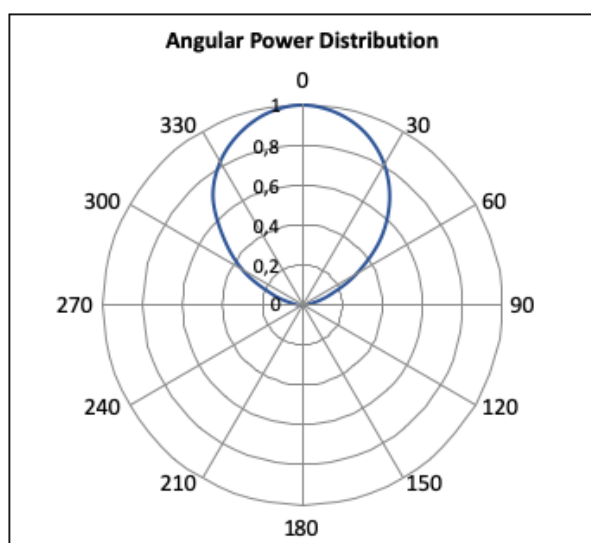
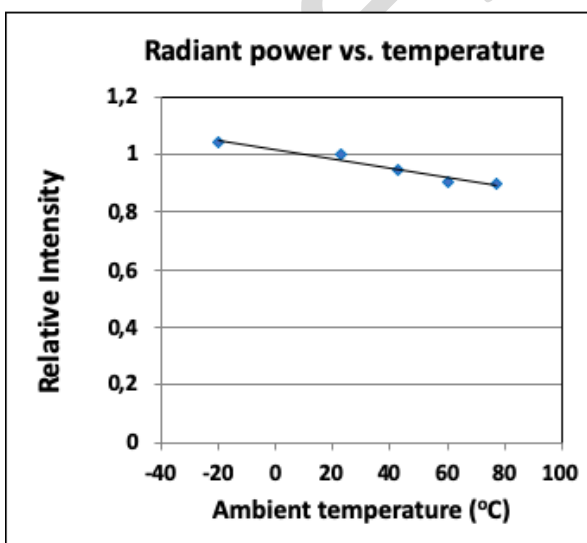
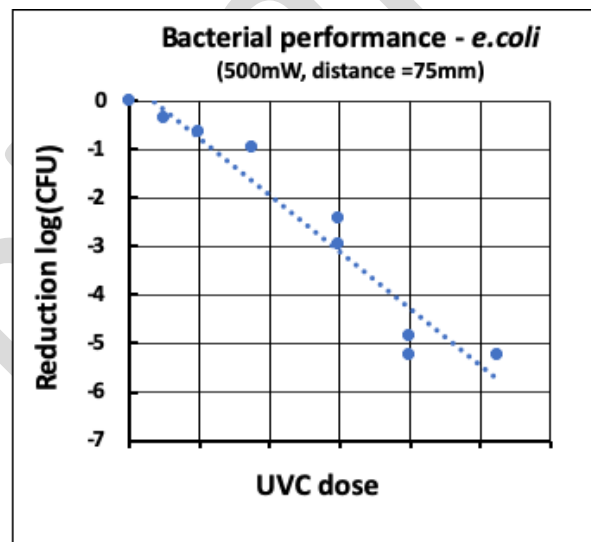
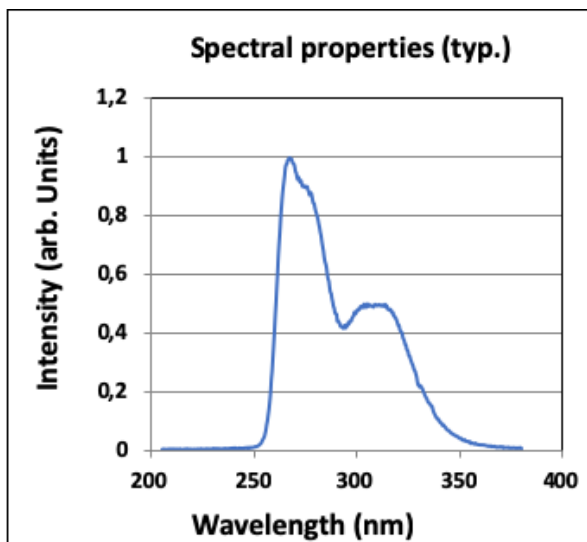
- ✓ 100% mercury free
- ✓ Immediate turn-on/turn-off
- ✓ Extremely low temperature variation from -20 to +100°C
- ✓ No need for heat sinks or thermal management
- ✓ No germicidal tailing
- ✓ 99.999999% bacterial reduction demonstrated

Product performance and characteristics

Radiant power (mW)¹

Input Power	Min	Typ	Max
250 mW		5	
500 mW		10	
750 mW		15	

Other characteristics	Min	Typ	Max
Peak wavelength (nm)		267	
View angle (deg)		100	
Storage temperature (°C)	-20		80
ESD sensitivity	not applicable		



¹ Measured by far field radiometry at 40 mm.

Electronic driver

An electronic driver is available for the different power classes and can be supplied to support 1 to 6 chips in parallel. LightLab's UVC chips must use this driver in order to guarantee functionality, performance and reliability.

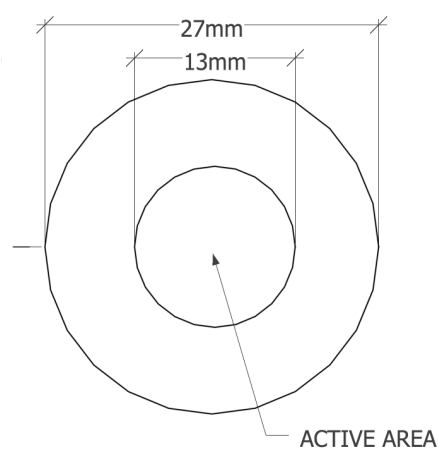
Ordering and availability

LightLab's UVC chips, electronic drivers and development kits are delivered to selected customers.

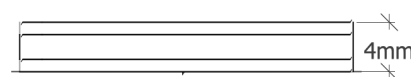
ITEM	Ordering code	Status
UVC-chip	12000	Released
250mW driver 1 channel	12501	Engineering samples
250mW driver 2 channel	12502	Engineering samples
250mW driver 6 channel	12506	Engineering samples
500mW driver 1 channel	15001	Engineering samples
500mW driver 2 channel	15002	Engineering samples
500mW driver 6 channel	15006	Preproduction
Development kit 250mW	13010	n/a
Development kit 500mW	13011	n/a

Other channel configurations are available on request

Mechanical outline



Top view



Side view

Regulatory

LightLab's UV chips and electronics are RoHS compliant according to EU directive 2011/65/EU



UV-radiation

LightLab UVC chips emit high intensity ultraviolet (UV) light, which is harmful to skin and eyes. Only about 2% of the emitted light is visible. UV light is hazardous to skin and may cause cancer. Avoid exposure to the UV light and do not look directly at the UV light without the use of UV light protective glasses.



Disclaimer

LightLab Sweden AB disclaims all warranties, expressed or implied. The customer must ensure that the UVC chips and electronics are handled complying with all relevant requirements (legal and others) and standards in whichever country it is used. The customer accepts any and entire risk arising out of the use of the UVC chips and electronics. In no event shall LightLab be liable to any loss, damage related to the use of its product. This document is for information purposes only and any information given herein shall in no event be regarded as a warranty, guarantee or description of any functionality, conditions and/or quality of the products, or any suitability for a particular purpose. We reserve the right to change this document and/or the information given herein at any time without notice. LightLab Sweden AB specifically disclaims any and all liability for harm arising from buyer's use or misuse of UVC devices either in development or end-use.