AUDAX ELECTRONICS

UVC PORTFOLIO

Rev07

KLARAN CONFIDENT

LIGHTING: DECORATIVE, INDUSTRIAL, STREET LIGHTING, COMMERCIAL & CUSTOM PROJECTS

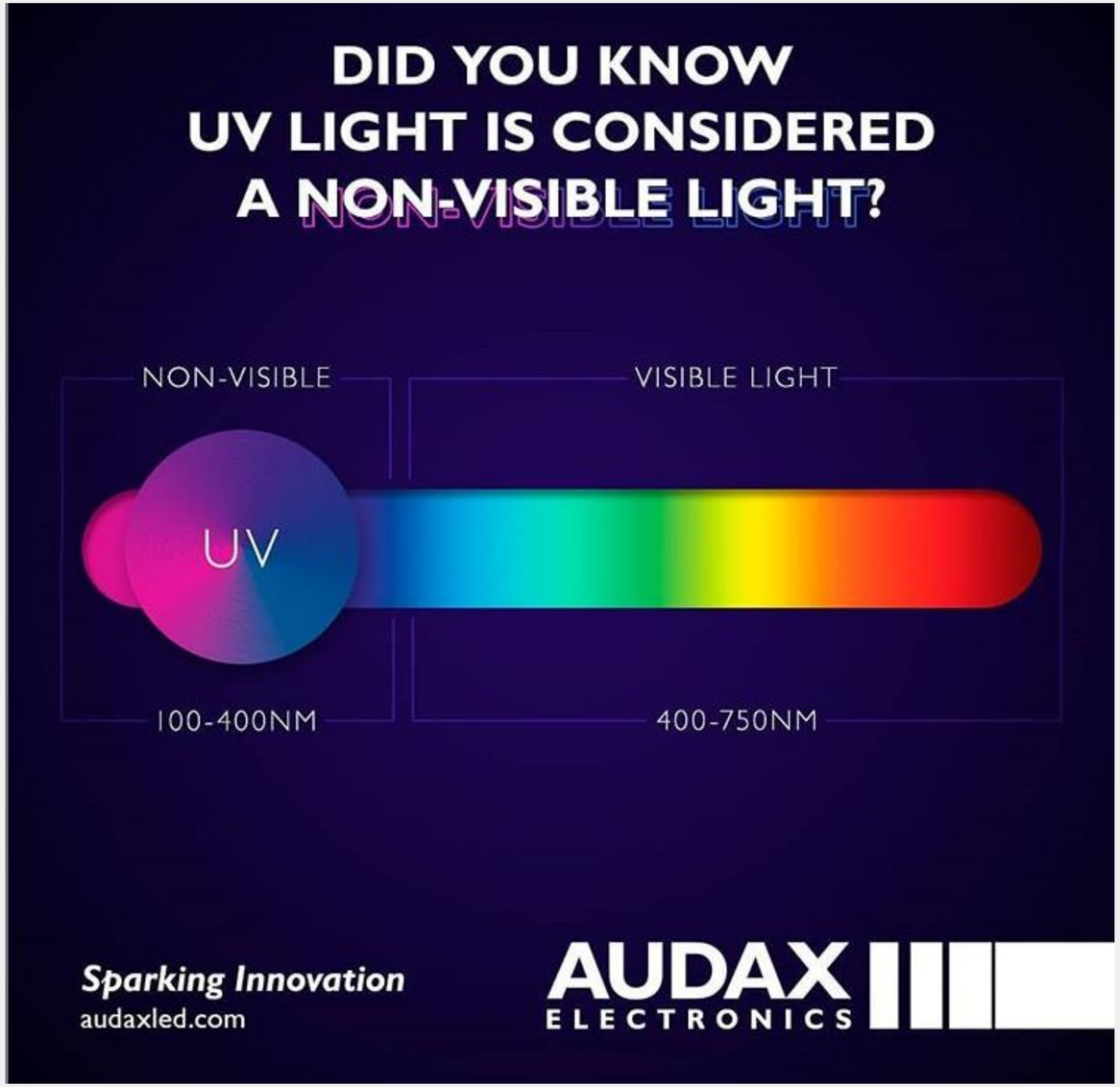
INTRODUCTION TO UV LIGHT

ULTRAVIOLET LIGHT

The human eye is sensitive to specific band of electromagnetic waves, known as the visible light spectrum.

At the ends of this very narrow spectrum there are some other lights, which are invisible to a naked eye. UV light, for instance, is considered a non-visible light due to its short wavelength, from 100 to 400nm (nanometers).

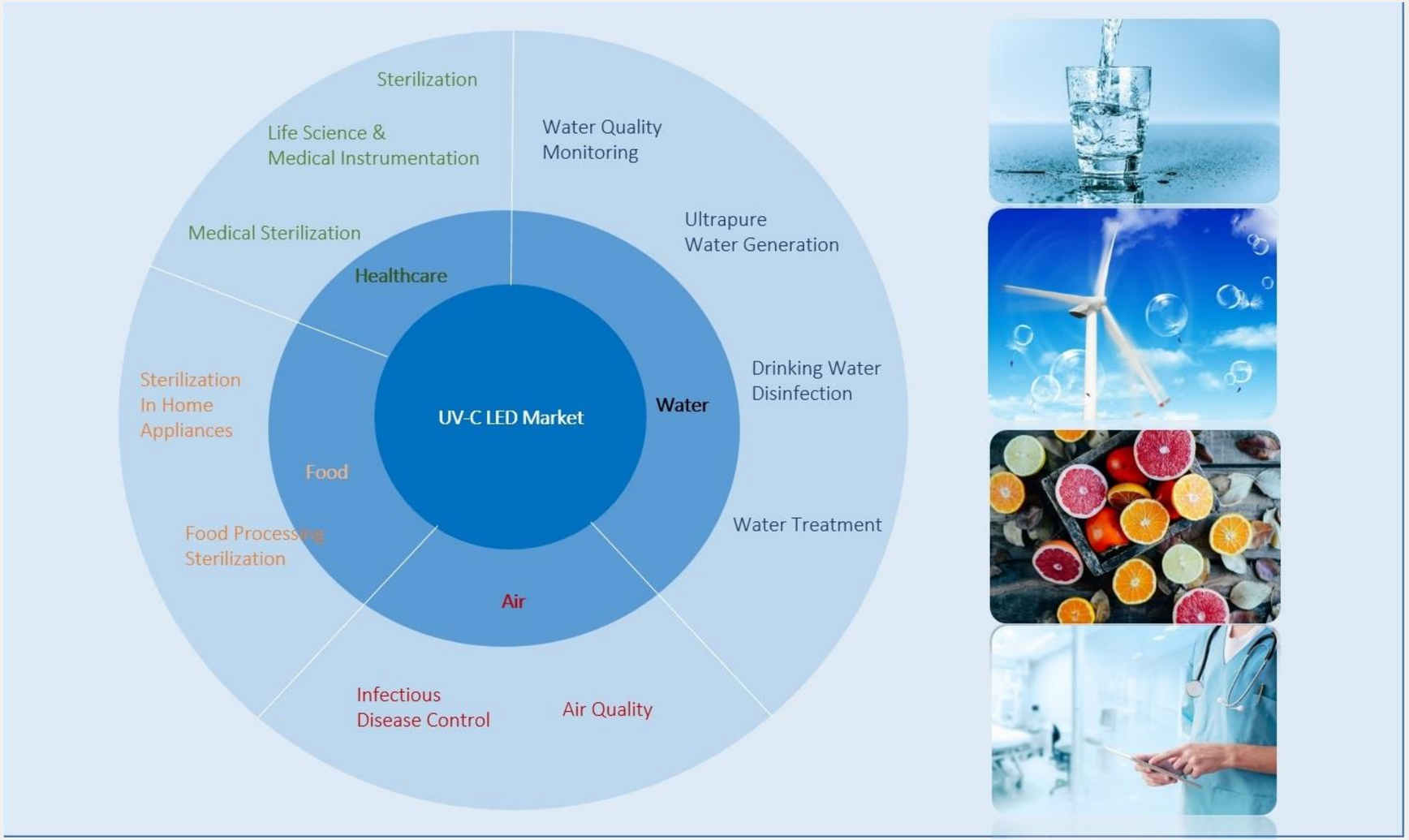
Although we may not see them, UV lights play an important role in our routines, from medical treatments to disinfection and even horticulture.



ULTRAVIOLET LIGHT APPLICATIONS

UV Class Designation	UV Applications Wavelength Range (nm)	Common Applications
UV-A	Spectrum [315 - 400]	UV Curing Security, Banknote Tanning Lithography
UV-B	Spectrum [280-315]	Medical Phototherapy Protein Analysis Drug Discovery Forensic Analysis
UV-C	Spectrum [200-280]	Sterilization of Water, Air DNA, Biological Sensing Barcodes, ID Verification Disinfection of Surfaces
Far UV	Spectrum [100-200]	Vacuum UV Propagation

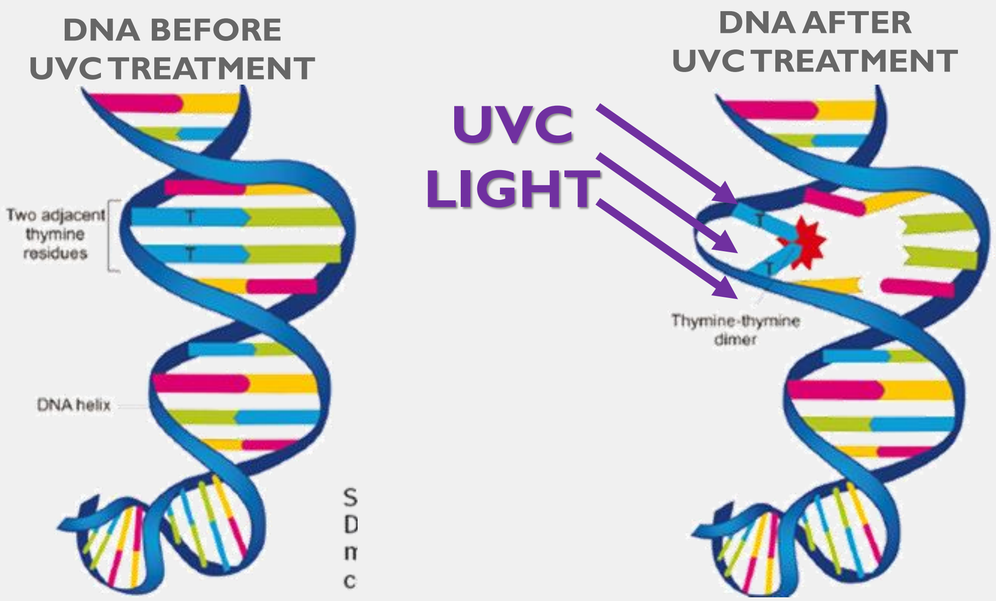
UVC DETAILED APPLICATIONS



HOW DOES DISINFECTION WORK?

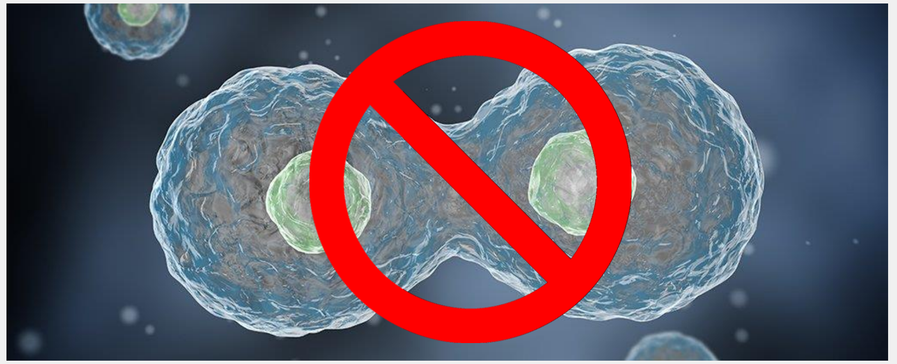
As evident by multiple research studies and reports, when biological organisms are exposed to deep UV light in the range of 200 nm to 300 nm it is absorbed by DNA, RNA, and proteins.

Absorption by proteins can lead to rupture of cell walls and death of the organism. Absorption by DNA or RNA (specifically by thymine bases) is known to cause inactivation of the DNA or RNA double helix strands through the formation of thymine dimers. If enough of these dimers are created in DNA, the DNA replication process is disrupted, and the cell cannot replicate.



CELLS THAT CANNOT REPLICATE, CANNOT INFECT.

It is widely accepted that it is not necessary to kill pathogens with UV light, but rather apply enough UV light to prevent the organism from replicating. The UV doses required to prevent replication are orders of magnitude lower than required to kill, making the cost of UV treatment to prevent infection commercially viable.



RESPONSE TO UV EXPOSURE

The effects of acute exposure to UV radiation are usually not severe and many symptoms are delayed. In the event of UV exposure, the following actions are recommended.

See an ophthalmologist if eye damage is suspected.
Treat skin lesions immediately.
Follow your organization's EHS incident reporting procedure. These often require documentation of the date and time of the incident, persons involved, equipment involved and type of injury.

UVC EFFECT ON SKIN

Acute (short-term) effects include redness or ulceration of the skin. At high levels of exposure, these burns can be serious. For chronic (long-term) exposures, there is also a cumulative risk, which depends on the amount of exposure during your lifetime. The long-term risk for large cumulative exposure includes premature aging of the skin and skin cancer.

PORTFOLIO SUMMARY


KLARAN
by Crystal IS
High quality UVC LEDs can be the greatest allies to destroy dangerous pathogens.
And Crystal IS can count on a world-class partner to provide effective disinfection.
Meet our brand new series of light engines, powered by AUDAX Electronics.
AUDAX ELECTRONICS
www.audaxled.com
KLARAN
CONFIDENT
Crystal IS
+
AUDAX ELECTRONICS
Sparking Innovation
FOR MORE INFORMATION GO TO cdiweb.com
COMPONENT DISTRIBUTORS, INC.
LED Lighting Solutions

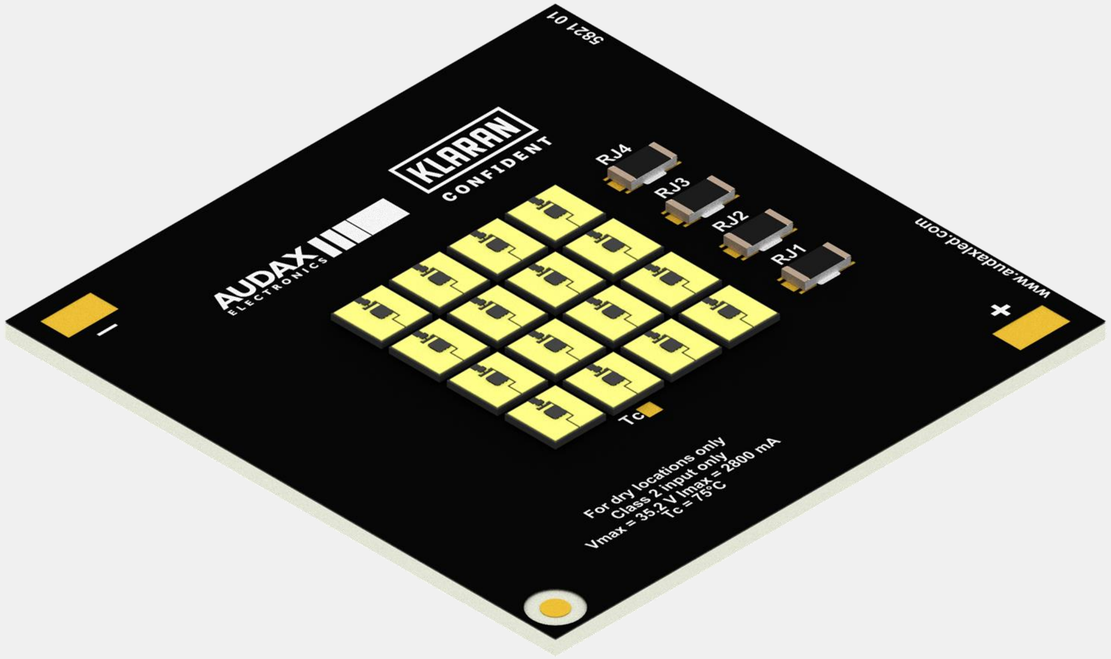
COB 19x16mm	Rad. Power	Power
	70mW	4.0W

COB 24x19mm	Rad. Power	Power
	280mW	16.0W

COB 38x38mm	Rad. Power	Power
	630 – 1,120mW	36.0 – 64.0W

LINEAR	Rad. Power	Power
	393.1 – 840.0mW	19.6 – 48.0W

MODULAR (2x6)	Rad. Power	Power
	420.0 – 840.0mW	33.0 – 48.0W



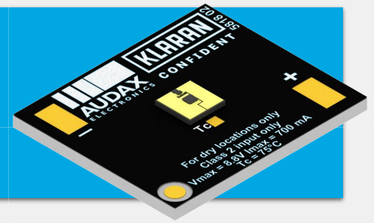
Example COB 38x38mm 1,120mW

KLARAN CONFIDENT

UV-C STERILIZING LIGHT ENGINES

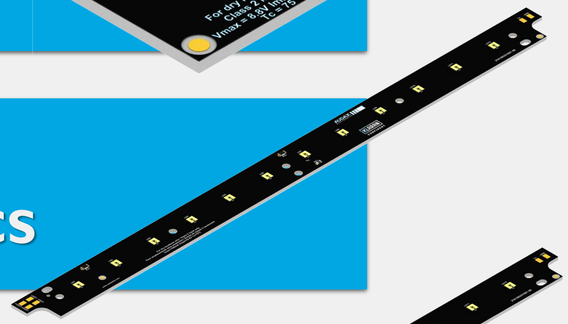
STERILIZING CABINET

CLUSTERS COBs



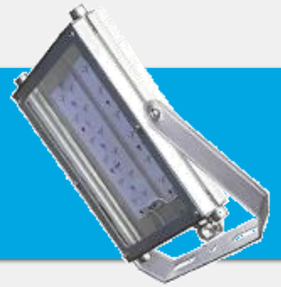
TROFFER ROBOTS

FOR UV OPTICS



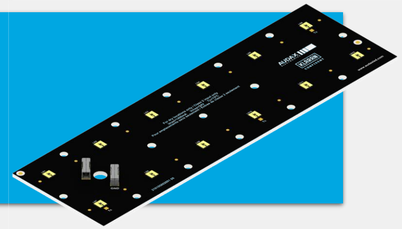
FOR GLASS

PROJECTOR



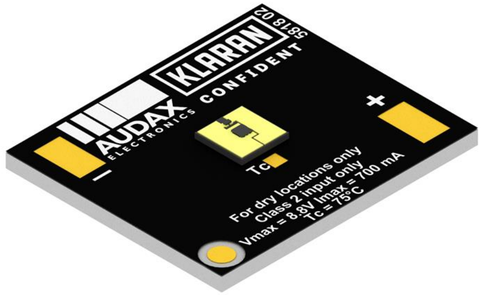
FOR UV OPTICS

NO OPTICS



COB 19x16mm

LIGHT ENGINE COB UVC 19mm x 16mm 70mW



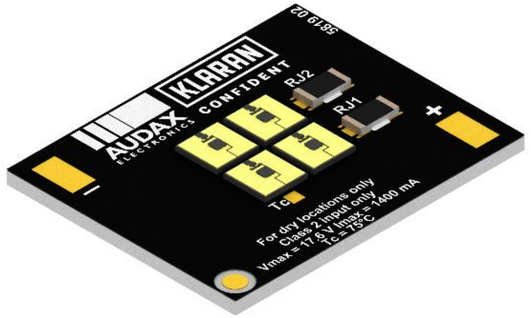
PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338000100	UVC	70	260-270	4,00	8	1,8%	500	1

**Values calculated under Ts=40°C*

Schem: 1p1s

COB 24x19mm

LIGHT ENGINE COB UVC 24mm x 19mm 280mW



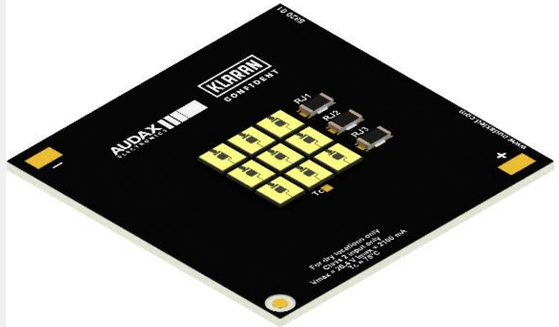
PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338100100	UVC	260-270	260-270	16,00	16	1,8%	1000	4

**Values calculated under Ts=40°C*

Schem: 2p2s

COB 38x38mm

LIGHT ENGINE COB UVC 38mm x 38mm 630mW

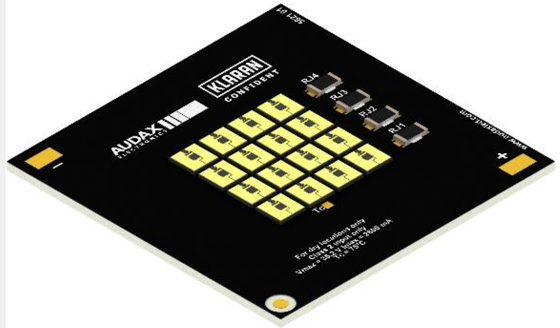


PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338200100	UVC	630	260-270	36,00	24	1,8%	1500	9

**Values calculated under Ts=40°C*

Schem: 3p3s

LIGHT ENGINE COB UVC 38mm x 38mm 1,120mW



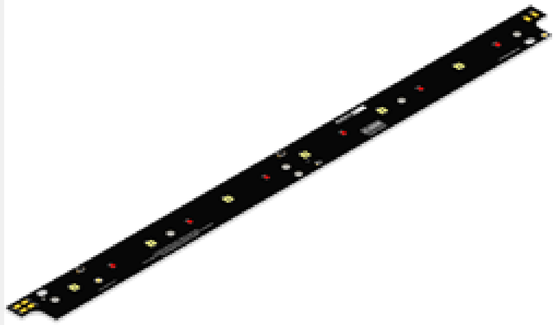
PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338300100	UVC	1120	260-270	64,00	32	1,8%	2000	16

**Values calculated under Ts=40°C*

Schem: 4p4s

LINEAR

LIGHT ENGINE VIOLET UVC 281mm x 19.2mm 420mW + Alert Light

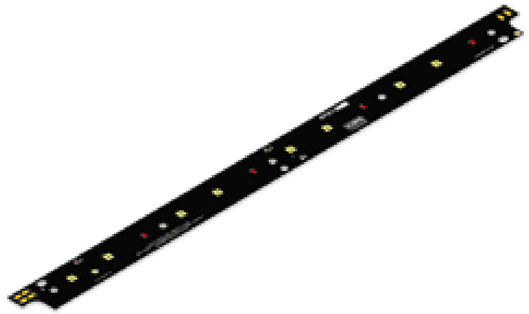


PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338400100	UVC	420	260-270	33,00	33	1,3%	1000	12

**Values calculated under Ts=40°C*

Schem: 2p6s

LIGHT ENGINE VIOLET UVC 281mm x 19.2mm 560mW + Alert Light



PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338500100	UVC	560	260-270	38,00	38	1,5%	1000	12

**Values calculated under Ts=40°C*

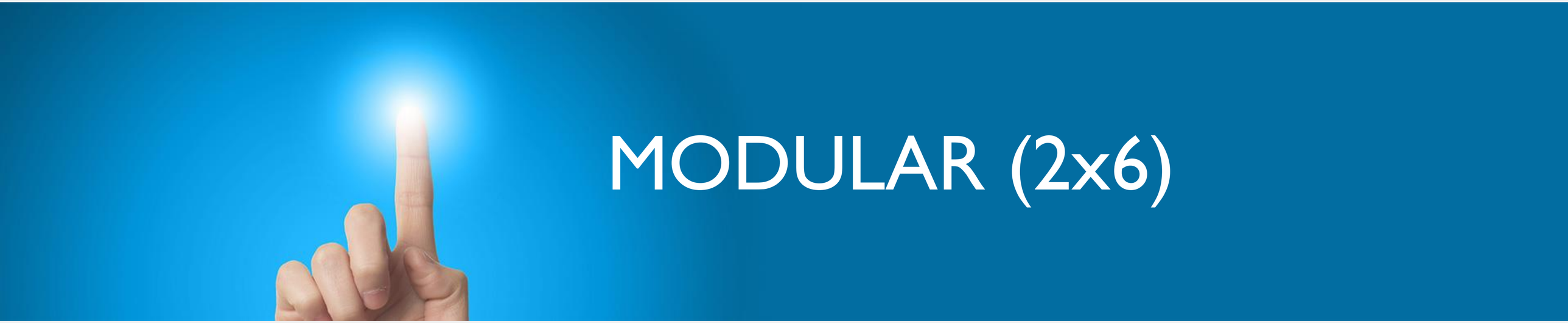
Schem: 2p6s

LIGHT ENGINE VIOLET UVC 281mm x 19.2mm 840mW

PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338600100	UVC	840	260-270	48,00	48	1,8%	1000	12

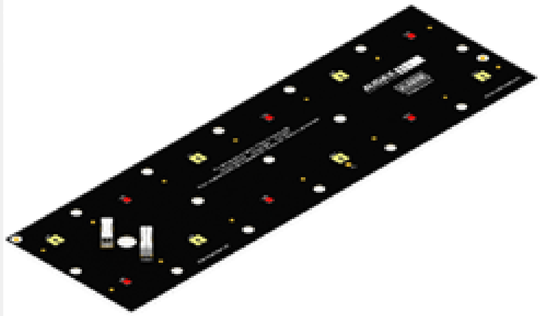
**Values calculated under Ts=40°C*

Schem: 2p6s



MODULAR (2x6)

LIGHT ENGINE 2x6 UVC 420mW + Alert Light

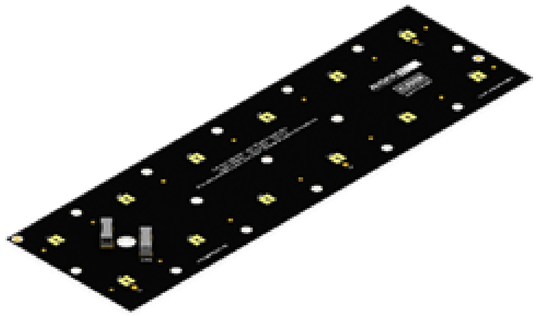


PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338700100	UVC	420	260-270	33,00	33	1,3%	1000	12

**Values calculated under Ts=40°C*

Schem: 2p6s

LIGHT ENGINE 2x6 UVC 840mW



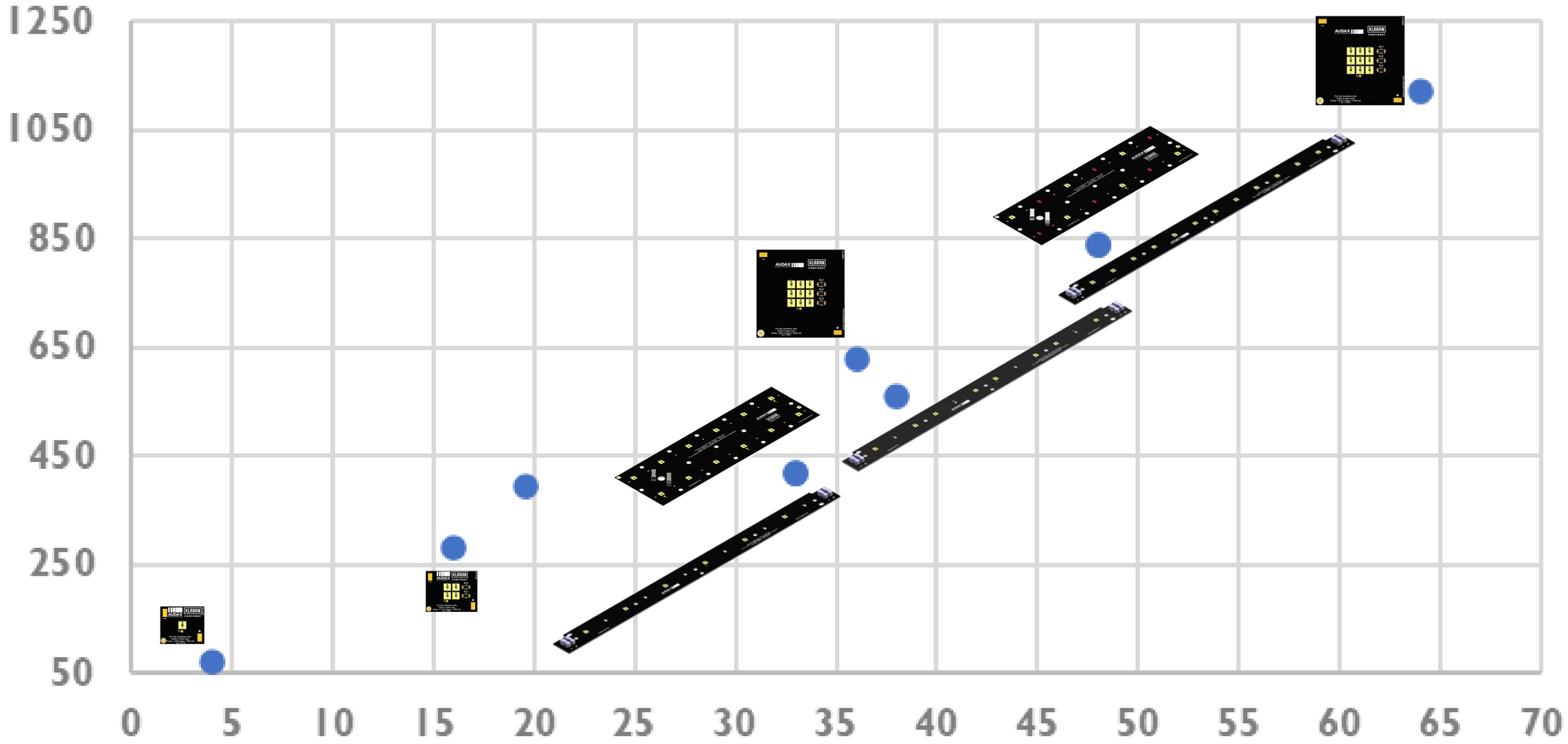
PART NUMBER	UV TYPE	RAD. POWER (mW)	WAVELENGTH (nm)	POWER (W)	Vf (V)	EFF. (%)	If Nom (mA)	#LEDs
80338800100	UVC	840	260-270	48,00	48	1,8%	1000	12

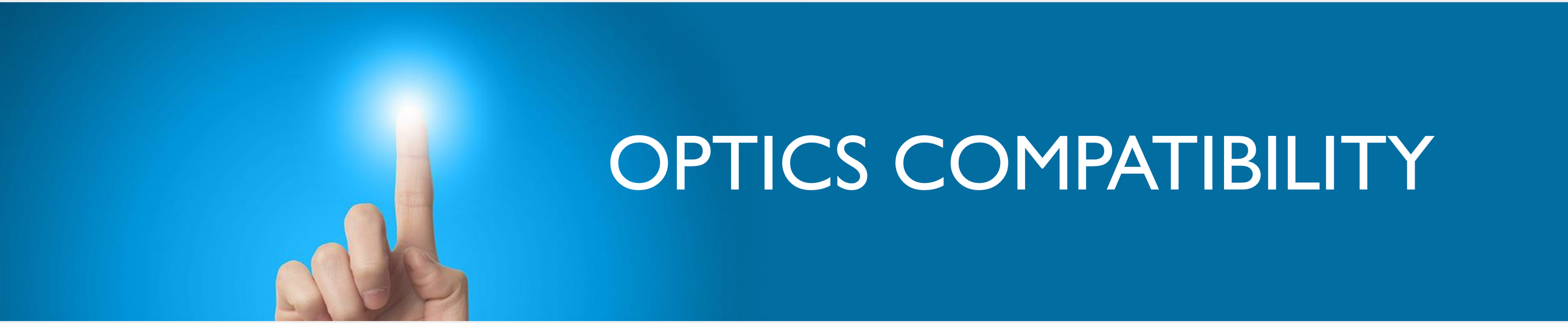
**Values calculated under Ts=40°C*

Schem: 2p6s

EFFICACY SUMMARY

Rad. Power (mW) x Power (W)





OPTICS COMPATIBILITY

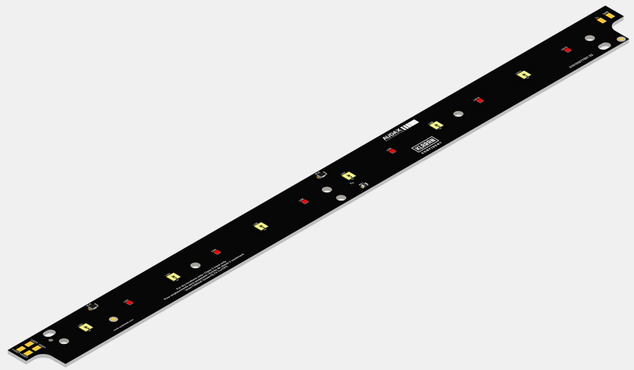
VIOLET

LEDiL®

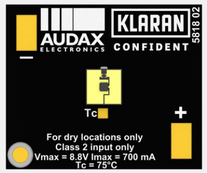
LIGHT ENGINE VIOLET UVC
281mm x 19.2mm 840mW

LIGHT ENGINE VIOLET UVC
281mm x 19.2mm 560mW +
Alert Light

LIGHT ENGINE VIOLET UVC
281mm x 19.2mm 420mW +
Alert Light

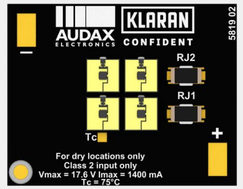


COB 19x16mm



70mW

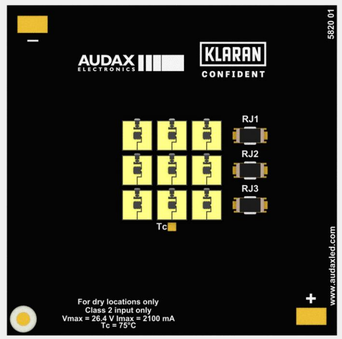
COB 24x19mm



280mW

COB 38x38mm

630mW

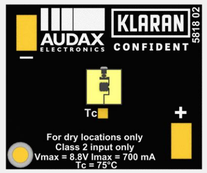


1,120mW

STELLA-FRESNEL

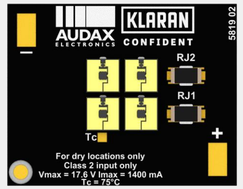
LEDiL®

COB 19x16mm



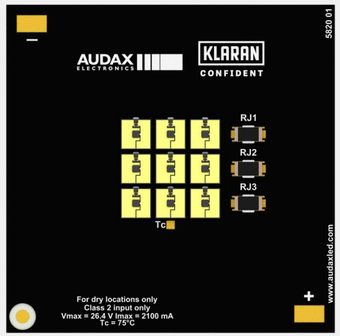
70mW

COB 24x19mm

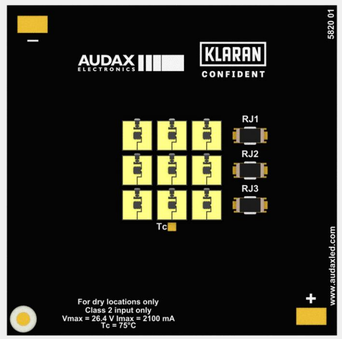


280mW

COB 38x38mm

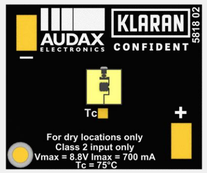


630mW



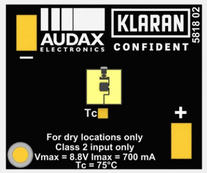
1,120mW

COB 19x16mm



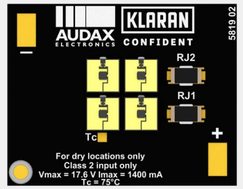
70mW

COB 19x16mm



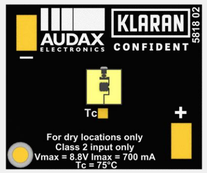
70mW

COB 24x19mm



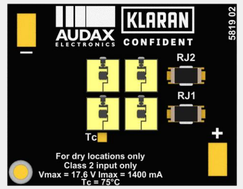
280mW

COB 19x16mm



70mW

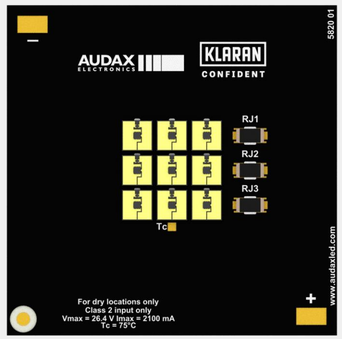
COB 24x19mm



280mW

COB 38x38mm

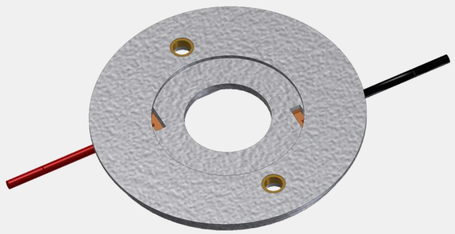
630mW

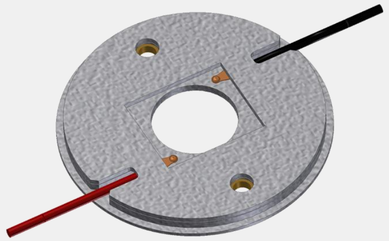


1,120mW

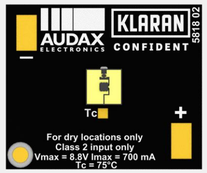
HOLDERS COMPATIBILITY

LED Holder 480 TypL7



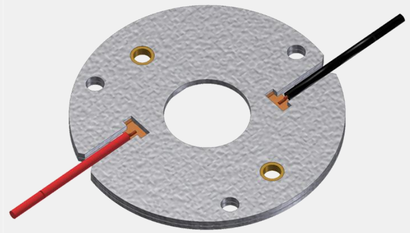


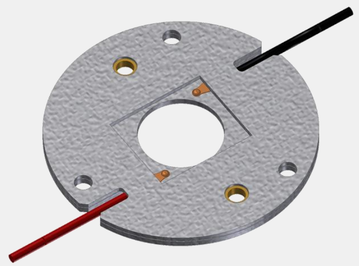
COB 19x16mm



70mW

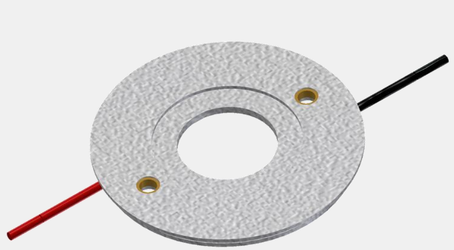
LED Holder 480 TypZ1

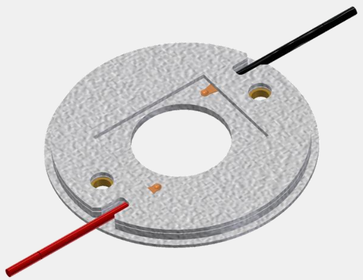




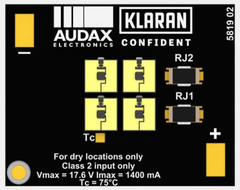
BENDER +WIRTH

LED Holder 463 TypL7



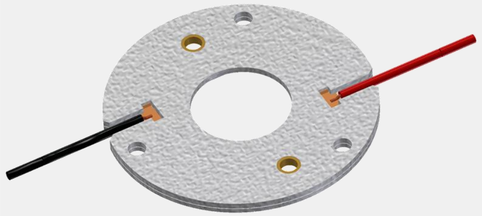


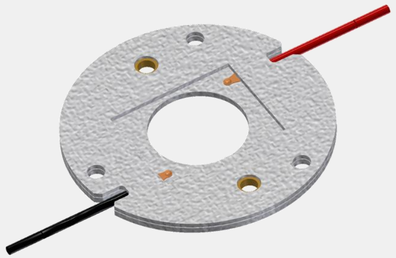
COB 24x19mm



280mW

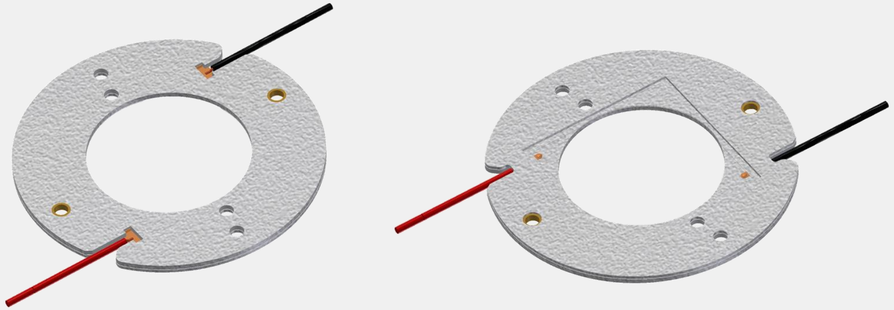
LED Holder 463 TypZ1



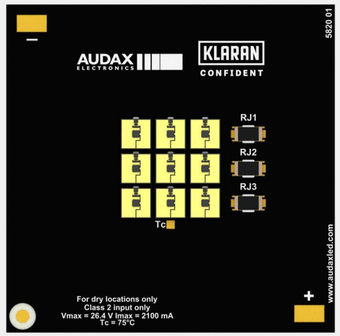


BENDER +WIRTH

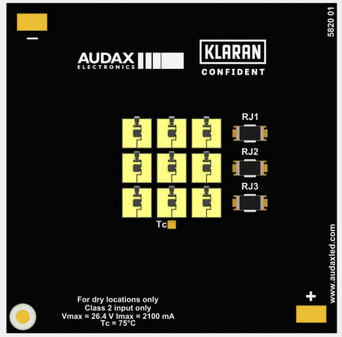
LED Holder 458 TypM1HV



COB 38x38mm

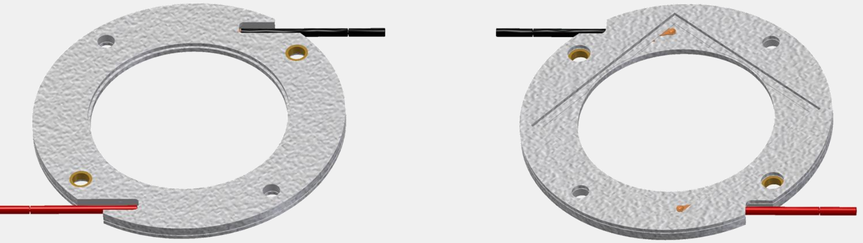


630mW



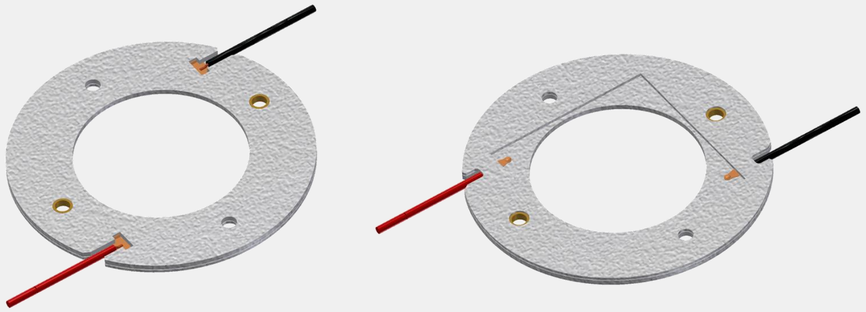
1,120mW

LED Holder 458 TypL4-1

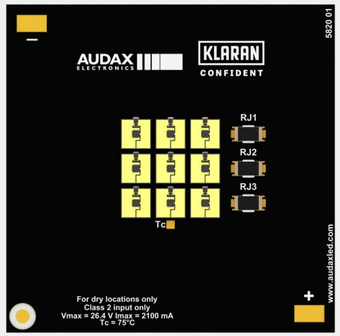


BENDER +WIRTH

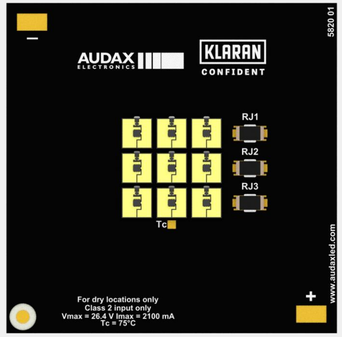
LED Holder 458 Typ I



COB 38x38mm



630mW



1,120mW

BENDER +WIRTH

ECOSYSTEM

P/N Audax Electronics	Descritpion	LEDiL		Bender+Wirth	
		Optics	Fixing Method	Holder	Fixing Method
80338000100	LIGHT ENGINE COB UVC 19mm x 16mm 70mW	no optics	N/A	480 Typ Z1	35mm 2x
		ZORYA	BW holder 4xx TypL7	480 Typ L7	35mm 2x
		STELLA-FRESNEL	75mm 4 screws	480 Typ Z1	35mm 2x
		ALISE-50	by fixture housing	480 Typ Z1	35mm 2x
		ALISE-70	by fixture housing	480 Typ Z1	35mm 2x
		ALISE-110	by fixture housing	480 Typ Z1	35mm 2x
80338100100	LIGHT ENGINE COB UVC 24mm x 19mm 280mW	no optics	N/A	463 Typ Z1	35mm 2x
		ZORYA	BW holder 4xx TypL7	463 Typ L7	35mm 2x
		STELLA-FRESNEL	75mm 4 screws	463 Typ Z1	35mm 2x
		ALISE-110	by fixture housing	463 Typ Z1	35mm 2x
80338200100	LIGHT ENGINE COB UVC 38mm x 38mm 630mW	no optics	N/A	458 Typ 1	50mm 4x
		no optics	N/A	458 Typ M1HV	42,5x40mm 4x
		ZORYA	BW holder 4xx TypL7	N/A	N/A
		STELLA-FRESNEL	75mm 4 screws	458 Typ L4-1	51mm 4x
		ALISE-110	in fixture housing	458 Typ 1	50mm 4x
80338300100	LIGHT ENGINE COB UVC 38mm x 38mm 1120mW	no optics	N/A	458 Typ 1	50mm 4x
		no optics	N/A	458 Typ M1HV	42,5x40mm 4x
		ZORYA	BW holder 4xx TypL7	N/A	N/A
		STELLA-FRESNEL	75mm 4 screws	458 Typ L4-1	51mm 4x
		ALISE-110	by fixture housing	458 Typ 1	50mm 4x
80338400100	LIGHT ENGINE VIOLET UVC 281mm x 19.2mm 420mW + Blue Alert Light	FN17294_VIOLET-12X1-S	M3x10 12 screws	N/A	N/A
		FN17810_VIOLET-12X1-RS	M3x10 12 screws	N/A	N/A
		FN17818_VIOLET-12X1-W	M3x10 12 screws	N/A	N/A
80338500100	LIGHT ENGINE VIOLET UVC 281mm x 19.2mm 560mW + Blue Alert Light	FN17294_VIOLET-12X1-S	M3x10 12 screws	N/A	N/A
		FN17810_VIOLET-12X1-RS	M3x10 12 screws	N/A	N/A
		FN17818_VIOLET-12X1-W	M3x10 12 screws	N/A	N/A
80338600100	LIGHT ENGINE VIOLET UVC 281mm x 19.2mm 840mW	FN17294_VIOLET-12X1-S	M3x10 12 screws	N/A	N/A
		FN17810_VIOLET-12X1-RS	M3x10 12 screws	N/A	N/A
		FN17818_VIOLET-12X1-W	M3x10 12 screws	N/A	N/A
80338700100	LIGHT ENGINE 2x6 UVC 420mW + Blue Alert Light	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A
80338800100	LIGHT ENGINE 2x6 UVC 840mW	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A


THANK YOU
BUY OUR PRODUCTS @ endrich
www.endrich.com
components of life
www.audaxled.com