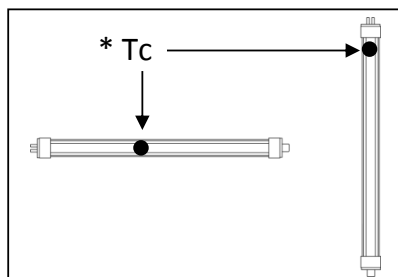
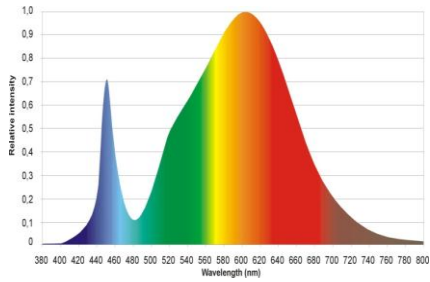
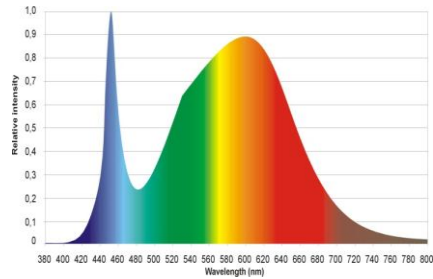


Aura UltiLED Protector Long Life (G4)

Nominal wattage (W)		8				17				23							
Nominal length (mm)		549				1149				1449							
Diameter (mm)		16				16				16							
Weight (g)		120				250				315							
Colour Rendering Index CRI		≥80				≥80				≥80							
SDCM		3				3				3							
Light Colour			830	840			830	840			830	840					
Correlated Colour Temperature CCT			3000	4000			3000	4000			3000	4000					
Nominal and rated flux ¹⁾ @ 25 °C (lm) (+/- 8% tolerance)			1040	1100			2080	2220			2800	3000					
Lamp efficacy ¹⁾ @ 25 °C (lm/W)			122	130			122	130			122	130					
Energy Class			A+	A++			A+	A+			A+	A+					
kW/1000 hrs			8,8	8,8			18,7	18,7			25,3	25,3					
Electrical Data		Rated Wattage (W)				8				17				23			
		Power Factor (Pf)				>0,9 (in combination with approved driver)											
	Input	Operating Voltage (V)				24 (23,2-26,4)				24 (23,2-26,4)				33 (31,9-36,3)			
		Operating Current (mA)				350 (500 max)				700 (1050 max)				700 (1050 max)			
	Output																
LLMF & LSF	Nominal lifetime		50 000														
	Rated lifetime		50 000														
	LLMF - Lamp Lumen Maintenance Factor end of nominal life		80%														
	LSF - Lamp Survival Factor end of nominal life		90%														
	Installation environment		Indoor and outdoor														
	Ingress Protection		IP65														
	Warm-up time to 60% light output		Instant full light														
	Starting time		0,5 seconds (max) will depend on driver used														
	Max Tc *		+70 °C														
	Ambient temperature (Ta)		-30 °C - +45 °C														
	Nominal beam angle		120°														
	Rated beam angle		120°														
	Suitable for accent lighting		No														
	Switching cycles		1 500 000 (min)														
	Dimmable		Yes (depends on driver used)														
	Cap		G5														
	Tube and cap material		Glass and PC														
	Mercury Content		0														
	Notice		When replacing flourescent lighting, light distribution and overall energy efficiency will be determined by the design of the installation														

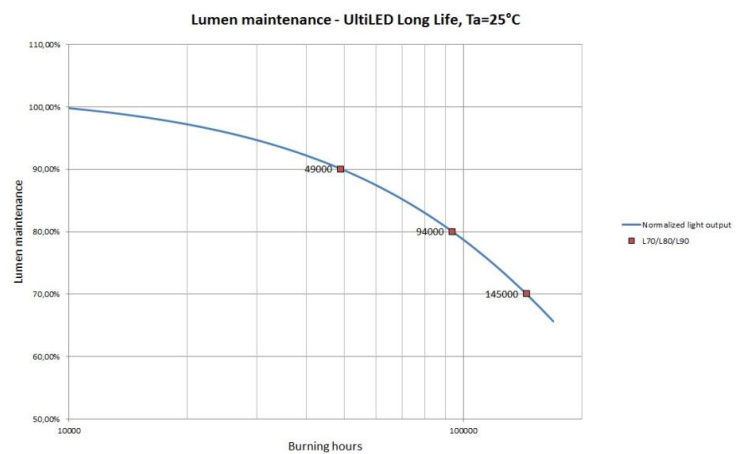
*



Spectral distribution 3000K

Spectral distribution 4000K


Calculated LED Lifetime h (TM-21)	L70	L80	L90
	113 000	74 000	39 000

Lumen maintenance follow the same lumen maintenance curve as Aura UltiLED Long Life - values as per above.
Graph for reference only



Installation guide – UltiLED Protector

This guide explains the steps necessary to install UltiLED inside a luminaire and ensure optimal performance. The guide is only for reference and is intended for qualified electricians or lighting technicians.

Installation 6 steps:

1) Make sure that the right type of driver is within the luminaire. (A SELV driver is recommended. Should a non-SELV driver be used that still meets the requirements of the tube, power to the luminaire should be disconnected prior to installing or changing the UltiLED tube if the U_{outMax} (no load voltage) is equal to or greater than 400V.)

- a) 8W tube needs 350mA and 24VDC
- b) 17W tube needs 700mA and 24VDC
- c) 23W tube needs 700mA and 33VDC

2) Unpack the UltiLED tube.

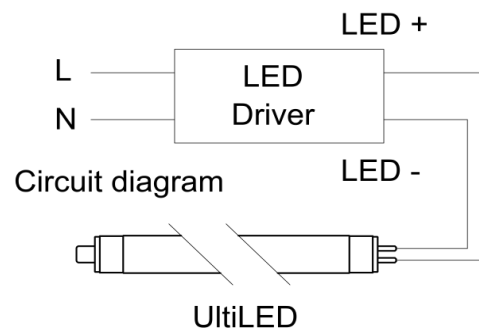
- a) Carefully examine the product
- b) Do not use the product if it's damaged

3) Make sure that the active side (metal pin side) is connected to the active side within the luminaire.

See picture below.

- a) The UltiLED tube is bipolar so the LED+ and LED- side doesn't matter.

UltiLED is not a retrofit LED lamp for T8 or T5 replacement application. An external LED driver complying for European safety & performance norms should be used. All light fitting manufacturers should conform to the international standards IEC 60598-luminaires



4) Make sure that the UltiLED is turned into the luminaire so that the light output is directed the desired way.

5) Reconnect power to the luminaire and turn it on.

Additional information

- because of external power supply, tubes can only be used in therefore suitable luminaires.
- installation instructions and warnings are provided with the products
- to avoid dangerous situation for end user, the tube is double/re-inforced insulated from live parts.
- LED tube is recommended to be used with certified SELV LED driver

Limitation of use

Due to dimension of the and cap, the LED tubes can only be used with lampholders which are provided with rotor in the middle.