

# Aura UltiLED Protector Long Life (G4)

Smartly packaged LEDs don't die young in protective environments either



- High efficacy – up to 126 lm/W
- High light output – up to 2900 lm
- Diffused glass offers soft, even light with a fluorescent look
- Colour rendering  $\geq 80$
- LED module well protected in sealed IP65 glass tube
- Excellent thermal and electrical design (SELV compliant)
- 50 000 hour lifetime guarantee
- Reduces CO<sub>2</sub> emissions and maintenance costs
- Safe lighting in industries and food processing areas
- Avoid production stop in case of lamp breakage
- Plastic protection sleeve in Kopalon PET (PTN2)

#### Ideal for:

- Food processing facility
- Industrial production plant (e.g. chemical, paper manufacturing)
- Laboratories
- Sports facilities
- Museums

Aura UltiLED Protector Long Life is a high lumen LED light source that delivers excellent energy efficiency, high quality of light, and has a lifetime of at least 50 000 hours. It is not a retrofit LED tube, but a new type of LED light source for new LED luminaires and solutions. Aura UltiLED Protector Long Life gives you all the benefits of LED lighting today, while ensuring that you can easily upgrade your lighting installation as LED technology develops, without replacing the entire LED luminaire.

Our diffused glass has a unique matted surface, making it suitable for applications where minimal glare is important. The diffusion gives it a fluorescent look while resulting in minimal light loss.

Aura UltiLED Protector Long Life is easily controlled and dimmed. It offers outstanding thermal and electrical design features making it an extremely reliable product designed for Long Life. The Aura UltiLED Protector Long Life tube is backed by a lifetime guarantee.

Aura UltiLED Protector Long Life for lasting LED lighting solutions.

## Overview

Aura UltiLED Protector Long Life is a replaceable LED light source developed by Aura Light with a rated lifetime of 50 000 hours (L80B10). Aura UltiLED Protector Long Life has an integrated heat sink and uses an external driver for optimal reliability. It is covered in a plastic protective film (PTN2) and is ideal for areas that are subject to special safety requirements to protect sensitive products and environments. Aura UltiLED Protector Long Life complies with IEC 61549 standard.

## Applications

Aura UltiLED Protector Long Life is ideal when developing LED luminaires for customers who wish to reduce energy and maintenance costs. It is intended for direct lighting anywhere where fluorescent protector lighting is currently used. It is now possible to easily design new LED luminaires which offer better energy efficiency levels than an equivalent T5 fluorescent luminaire.

It is easy to design a new LED luminaire around the Aura UltiLED Protector Long Life, as size and lumen packages have been chosen to mimic T5 (16 mm) fluorescent protector tubes. UltiLED Protector can be used with most standard socket holders. As the LED light source is as easy to replace as a regular fluorescent tube, customers can easily upgrade to even more efficient LED tubes in the future, without changing the entire luminaire.

## LED Drivers

Aura UltiLED Protector Long Life must be used together with an external LED driver providing 350mA constant current for the 8 W version and 700mA constant current for the 17 W and 23 W version. Contact Aura Light for a list of approved drivers.

## Lifetime

The rated lifetime L80B10 (i.e. 90% of light sources still have at least 80% of initial lumen output) for Aura UltiLED Protector Long Life is 50 000 hours (Ta 25°C). The PTN2 plastic is the limiting factor and can not be guaranteed for a longer time. Protector tubes should hence be changed after 50 000 hours. Calculated LED lifetime according to TM-21 as per below table.

LUMEN MAINTENANCE	CALCULATED LED LIFETIME (Ta) 25°C
L70	113 000 h
L80	74 000 h
L90	39 000 h

The calculations are based on TM-21 at ambient temperature (Ta) 25°C.

## Long Life Technology

The Aura UltiLED Protector Long Life tube is developed to provide highly efficient light output, with a reliable thermal and electrical design. The 16 mm (T5 size) tube itself is sealed (IP65), which protects the LED module from chemical contamination and moisture, two of the most common reasons behind LED system failure.

Inside the glass tube is an extremely reliable LED engine, designed for Long Life and high quality of light throughout the lifetime. Aura Light uses only Toyoda Gosei LED packages of the highest quality. All system components have undergone a one year stress test to ensure reliability and Long Life.

Phosphor temperature and LED junction temperature are well below maximum stated levels to ensure high lumen maintenance. The patented thermal design includes that the heatsink is glued to the glass tube with a thermally conductive adhesive ensuring good heat dissipation.

## Technical Information

Aura UltiLED Protector Long Life provides high efficacy, up to 126 lm/W. The quality of light is high, with colour rendering of at least 80 and with a chromaticity tolerance of maximum 3 SDCM. It is currently available in 3000K and 4000K. It comes with metal pins on one end and a plastic fin on the other.



»The soft diffused appearance of the Aura UltiLED Protector Long Life makes it ideal for applications where minimal glare is important.«



### Long Life Guarantee

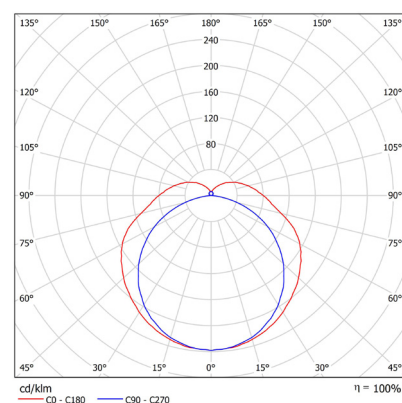
The Aura UltiLED Protector Long Life is developed and manufactured under strict quality control processes. The installations must comply with the specified max temperatures inside luminaire installations and be operated with an approved driver.

For more detailed information on our Long Life guarantees see our website or contact your Aura Light-representative.

### Cold environments recommendation

Aura UltiLED Protector Long Life, being an LED based light source, is ideal in cold environments. Unlike fluorescent light sources, LED gives more light the cooler the surrounding environment. This light source is based on surface mounting technology and Aura Light recommends dimming to low light levels in cold environments (below -10°C) instead of switching off completely. This helps ensure a long lifetime of the light source.

### Light Distribution



Aura UltiLED Long Life, 17 W, diffused.

# Aura UltiLED Protector Long Life (G4) | Technical specifications

PROGRAMME	ARTICLE NO.	POWER CONSUMPTION	TYPE (external LED driver required)	COLOUR	COLOUR TEMP. (K)	TYPICAL LUMINOUS FLUX* (WARM LED)	EFFICACY (lm/W)	LENGTH WITHOUT PINS (mm)	ENERGY CLASS	UNITS/ PACK (pcs)
Aura UltiLED Protector Long Life (G4), Ø 16 mm, Cap G5										
	565813	8 W	830 diffused	Warm White	3000	1000	118	549	A+	30
	565814	8 W	840 diffused	White	4000	1070	126	549	A++	30
	565833	17 W	830 diffused	Warm White	3000	2005	118	1149	A+	30
	565834	17 W	840 diffused	White	4000	2140	126	1149	A+	30
	565853	23 W	830 diffused	Warm White	3000	2700	117	1449	A+	30
	565854	23 W	840 diffused	White	4000	2900	126	1449	A+	30
ACCESSORIES										
	051490	Lampholder adapter T8 To T5 (sold in pairs). Adapter fits G13 lampholders. ** (Note that the lampholder adapter only fits 1149 and 1449 mm tubes)								

\*Tolerance level +/- 8%

\*\* The lampholder adapter does not include any electrical parts. It only ensures a fit to T8 luminaires and the Aura UltiLED Protector Long Life still needs to be operated by an approved LED driver.

Voltage	8 W = 24VDC@350mA 17 W = 24VDC@700mA 23 W = 33VDC@700mA
Colour rendering index	≥ 80
Initial colour accuracy	3 SDCM
Beam angle	120°
Ambient temperature	-30°C - +45°C
Max Tc temperature	+70°C
Type of protection	IP65
Protection class	III, SELV compliant
Cap base	G5
Controllability	Fully dimmable down to 1% (Dali & 1-10V)
Photobiological safety - Actinic UV - Near UV - Retinal Blue Light (500 lux method) - Retinal Blue Light (200 lux method) - Retinal Thermal - Infrared	RG 0
Approvals	CE, KEMA



Lampholder adapter T8 to T5 for Aura UltiLED Protector Long Life.  
Note that the lampholder adapter only fits 1149 and 1449 mm tubes.



Aura UltiLED Protector Long Life, diffused.

All specifications subject to change. For the latest version of this product leaflet, please visit [www.auralight.com/products](http://www.auralight.com/products).

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