

# isollux™

Intelligent Lighting Solutions



The Ultimate Cleanroom Luminaire | **Soffito™ SLP**



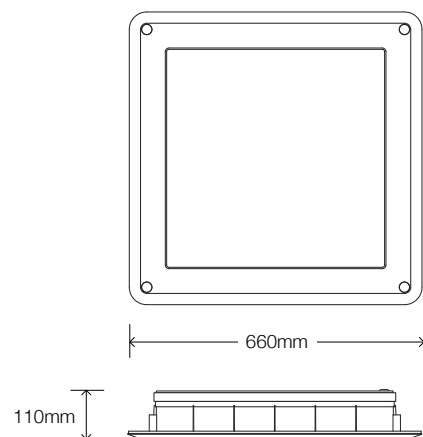


## The specifiers choice.

**Soffito SLP** is the specifiers choice for recessed applications in clean room manufacturing, food processing, hospitals, laboratories, pharmaceuticals and virology.

The perfect luminaire for low to mid-power clean room applications. It delivers outstanding optical performance in a hygienic, easy-clean, hermetically sealed, chemically resistant enclosure. From 40~100W and with multiple control options.

**Soffito SLP** has the power and flexibility, to deliver highly uniform, glare free lighting at heights between 2.4~6.0m.





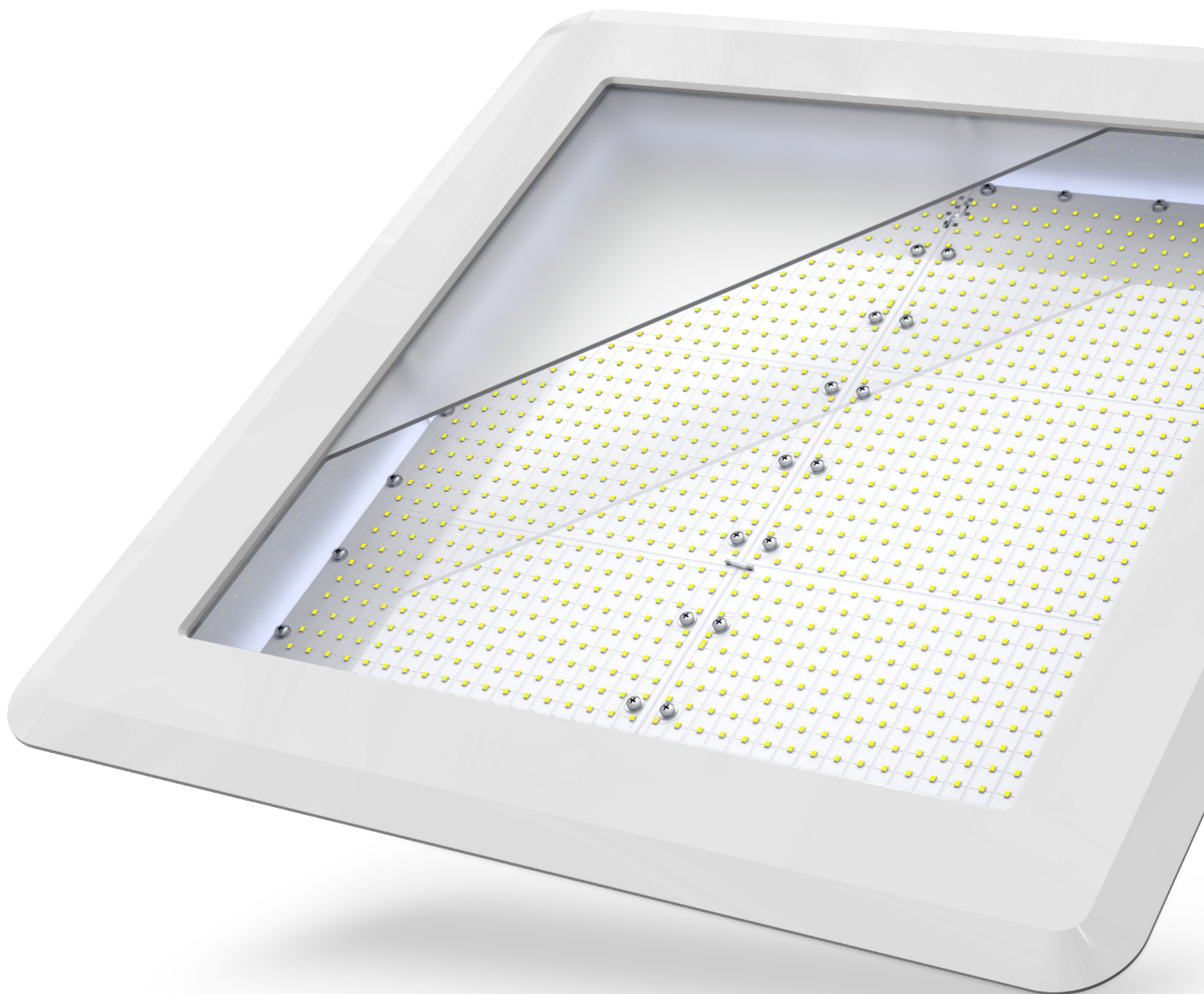
Hygienic, germ-free  
and easy to clean.

Soffito's unique, seamless design actively prevents the accumulation of contaminants and microbes in clean room environments.

The main frame and assembly are moulded from a special blend of polymers, that offers superior resistance to hospital grade cleaners, bases and sanitisers. The seamless design, provides an hermetic seal to flat surfaces for dry and wet applications and rated IP66 / IK10.

Resistant to:





## Soft box lighting at its best.

**Soffito SLP** delivers outstanding glare free visual acuity for task critical applications with class leading uniformity. Reducing environmental stress for those working long hours around fast moving precision machinery, undertaking detailed quality control inspections or providing essential services such as post operative patient care.

The high density LED arrays deliver a clean and uniform aesthetic which is guaranteed to maintain both optical performance and physical appearance for the life of the fixture.

140lm/W  
Lumen Output  
100,000hr  
L90

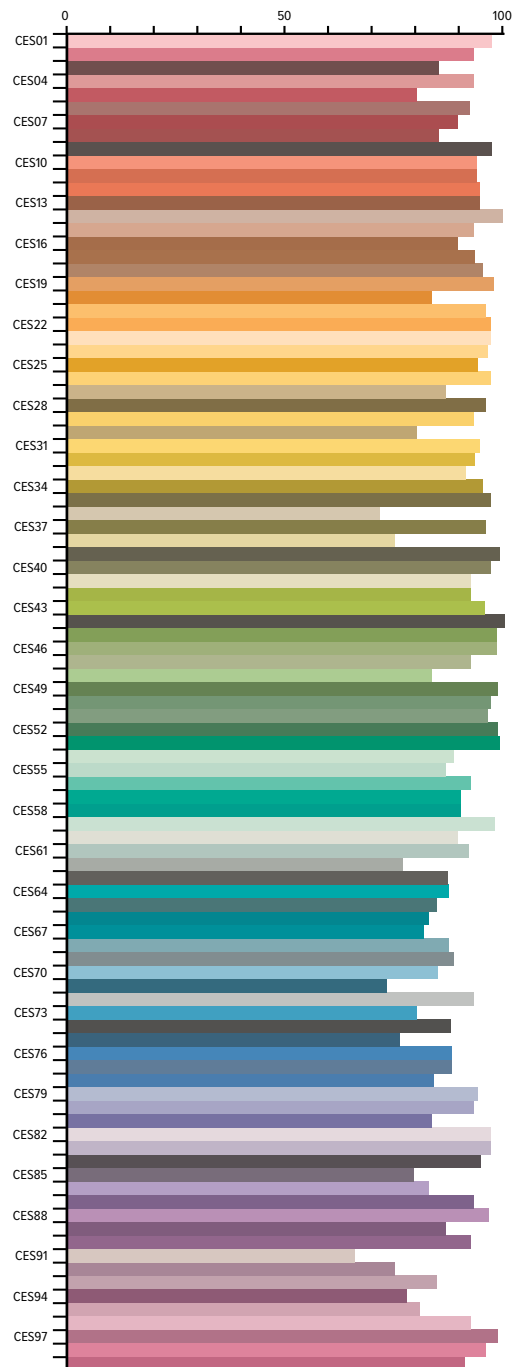
# Ra95 for colour critical applications

Available in four standard colour temperatures, from 2,700~6,000°K  
with superb colour rendering at both Ra85 and Ra95.

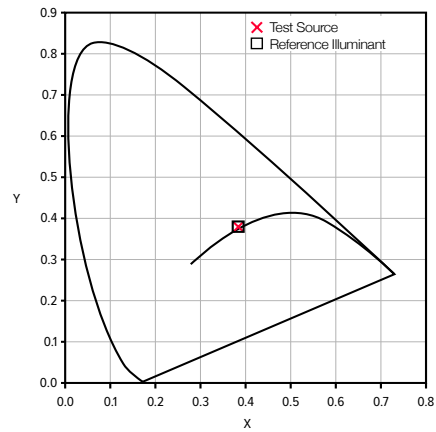
## Soffito SLP-HE-495-100W (IES LM79 TM30-18)

≥120lm/W @ Nominal Ra95 /4,000k (CRI 94.2)

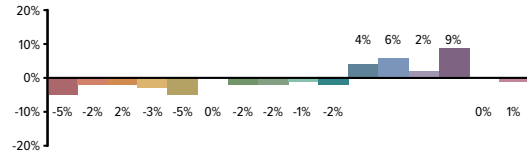
Colour Sample Fidelity ( $R_{f, CESi}$ )



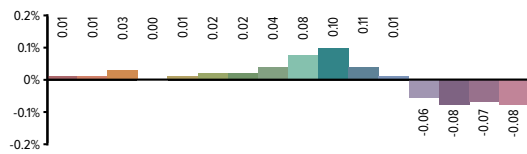
CIE1931 X Y Chromaticity



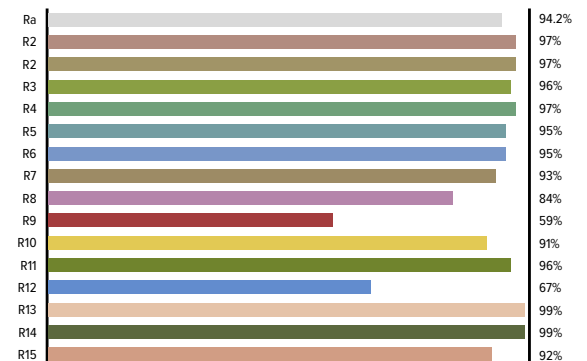
Local Chroma Shift ( $R_{cs, hj}$ )



Local HueShift ( $R_{hs, hj}$ )



Colour Rendering Index



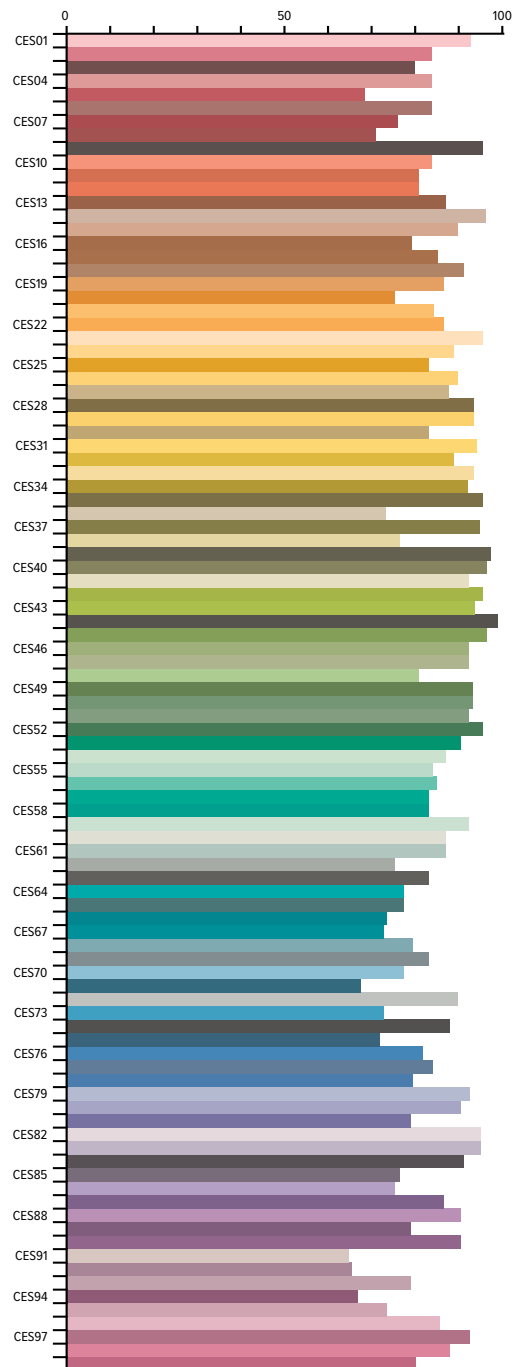
# Ra85 boosts efficacy

Specifying Ra85 increases lumen output whilst maintaining full colour rendering, high R9 with neutral bias, perfect for general industrial commercial and retail applications.

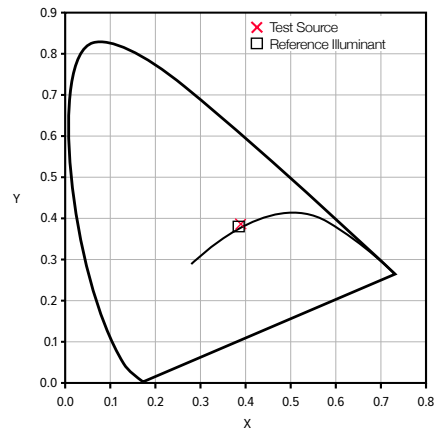
## Soffito SLP-HE-485-100W-DA (IES LM79 TM30-18)

≥140lm/W @ Nominal Ra95 /4,000k (CRI 85.9)

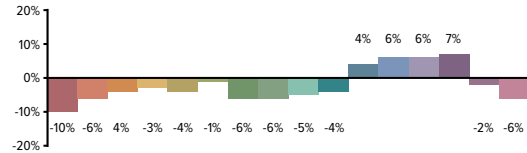
Colour Sample Fidelity ( $R_{f, CES}$ )



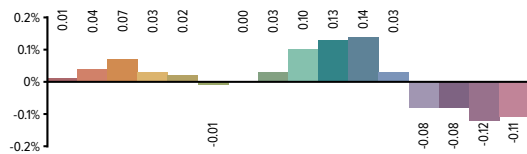
CIE1931 X Y Chromaticity



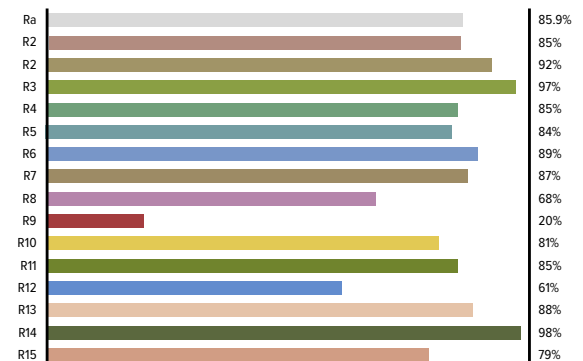
Local Chroma Shift ( $R_{cs,h}$ )



Local HueShift ( $R_{hs,h}$ )



Colour Rendering Index



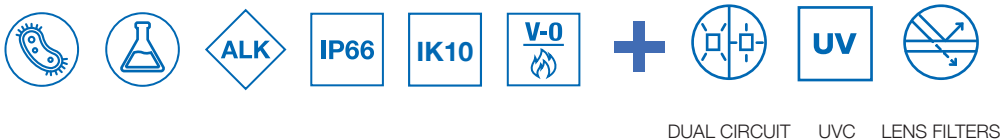


## Specialist applications and customisation.

Whilst meeting the stringent performance requirements of multiple industries, the Soffito product suite is easily adapted for custom applications.

Custom lens material and colour filters can be added to control specific wavelengths. Isollux Ambrite™ chipsets support photo sensitive applications such as brewing or photo-lithography. With further custom\* options that include the addition of specialist LEDs such as UVC, for sterilisation or dual circuits for additional functionality. Including custom UPS, emergency support or switched spectral environments in a single convenient luminaire.

Only the Soffito range provides a platform flexible enough to deliver such a broad range of standard and custom functions in a single luminaire across a range of power options from 40W~185W† from 5,000~25,500lm†.



\*Maybe subject to MOQ - † For high power options see Soffito SFO with options from 120W~185W.

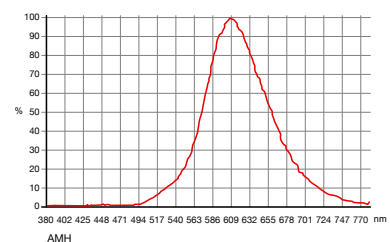
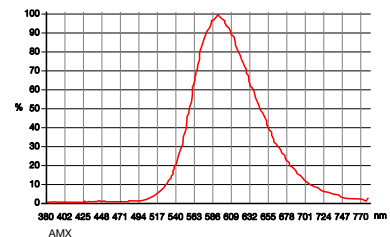


## Photo-Sensitive Applications

Isollux **Ambrite™** LED offers two distinct environmental colour tones for photo-sensitive applications such as high performance 3D printing, photo-lithography and pharmaceuticals. Both options eliminate wavelengths below 500nm with only moderate differences in spectral performance.

Customers can choose the most appropriate colour for staff by specifying either **Ambrite™ AMX** (Pictured above) or the warmer **Ambrite™ AMH** (below).

Soffito SLP is easily customised to provide dual chip options to a single luminaire, making total control of the lighting environment available at the flick of a switch, ideal for dark rooms or small laboratories.



AMH provides similar spectral performance in a warmer tone.

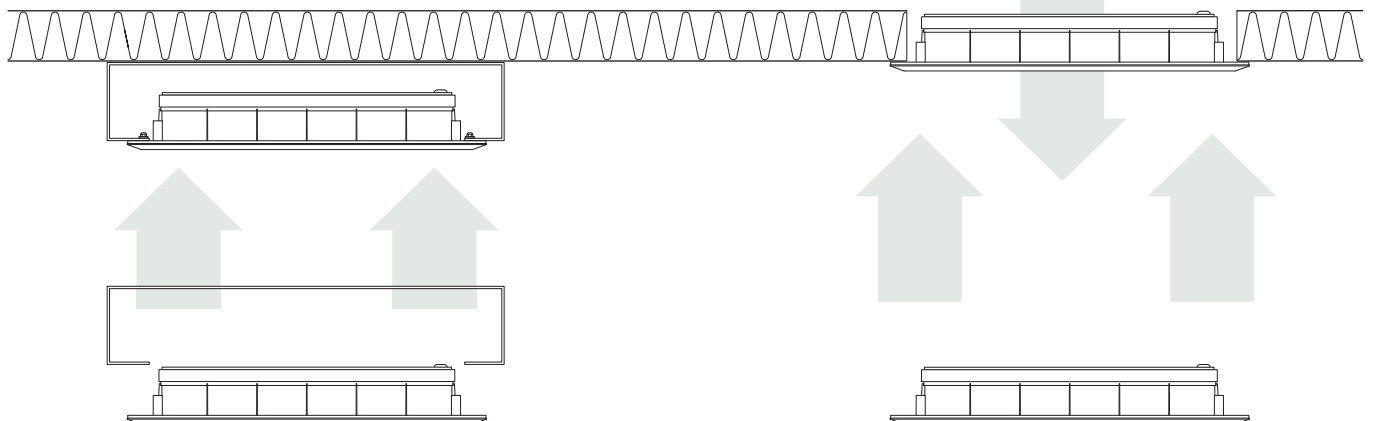
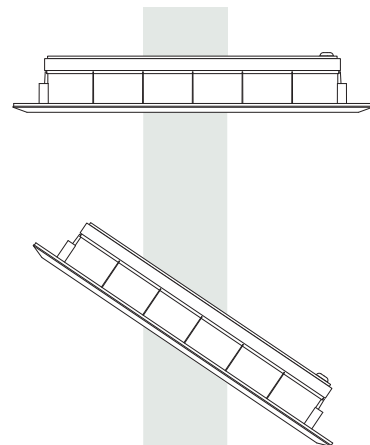


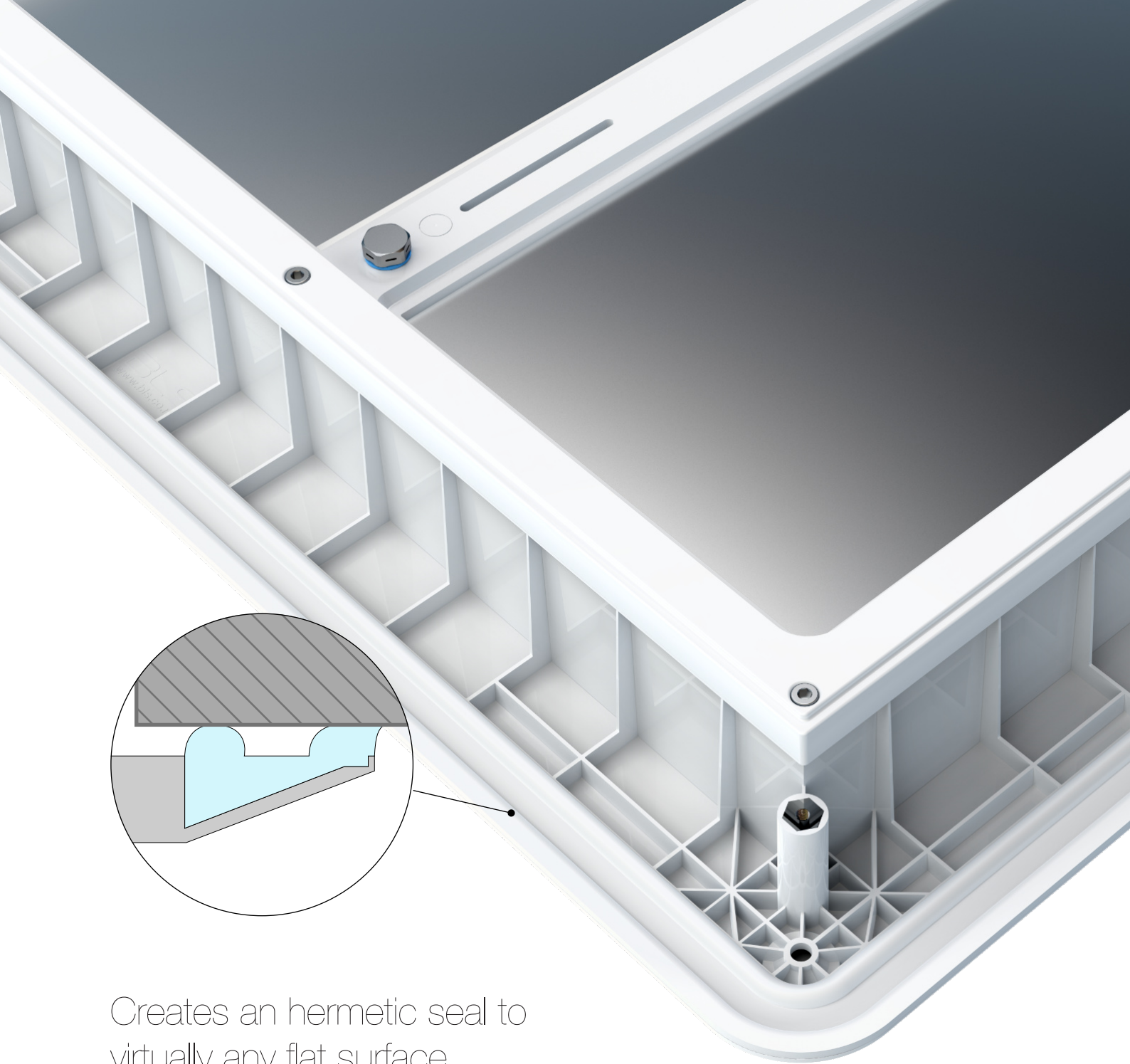


## Multiple installation options

**Soffito SLP** mounts flush from above or below, even passing through its own footprint, where access beneath the fitting is restricted. Where access allows, once installed Soffito can be maintained from above without breaking the seal on the room below.

Our range of kits simplify installation and include options to fire-flash openings, with 'walk on' options and surface-mount kits where substrates or applications are unsuited to penetration.





Creates an hermetic seal to virtually any flat surface

**Soffito SLP** creates an hermetic seal to virtually any smooth, flat surface; including PIR *insulated panels*, *plaster* or *fibre-board* ceilings and is suitable for both wet and dry applications.

The one-piece seamless design of the main seal provides IP66 protection for suitable substrates; and is proven to maintain atmospheric integrity to both positive and negative pressure environments in large single room applications with 700+ individual fixtures.

It introduces two new additional seals, to the PCB and frame, providing an additional layer of protection between sterile and non sterile environments.

The leading edge of the main Soffito seal has been updated to increase protection and prevent accumulation of contaminants, dust and microbes. Whilst the valley, between ridges, facilitates hidden-application of wet-cure sealants, where it is necessary to bridge gaps or joints in the substrate.

## Designed for the life of your building

One of Soffito's most important design features is the ability to upgrade or replace all electrical components without breaking the seal to the room below. Eliminating disruption to sensitive and critical environments during both scheduled or unscheduled maintenance.

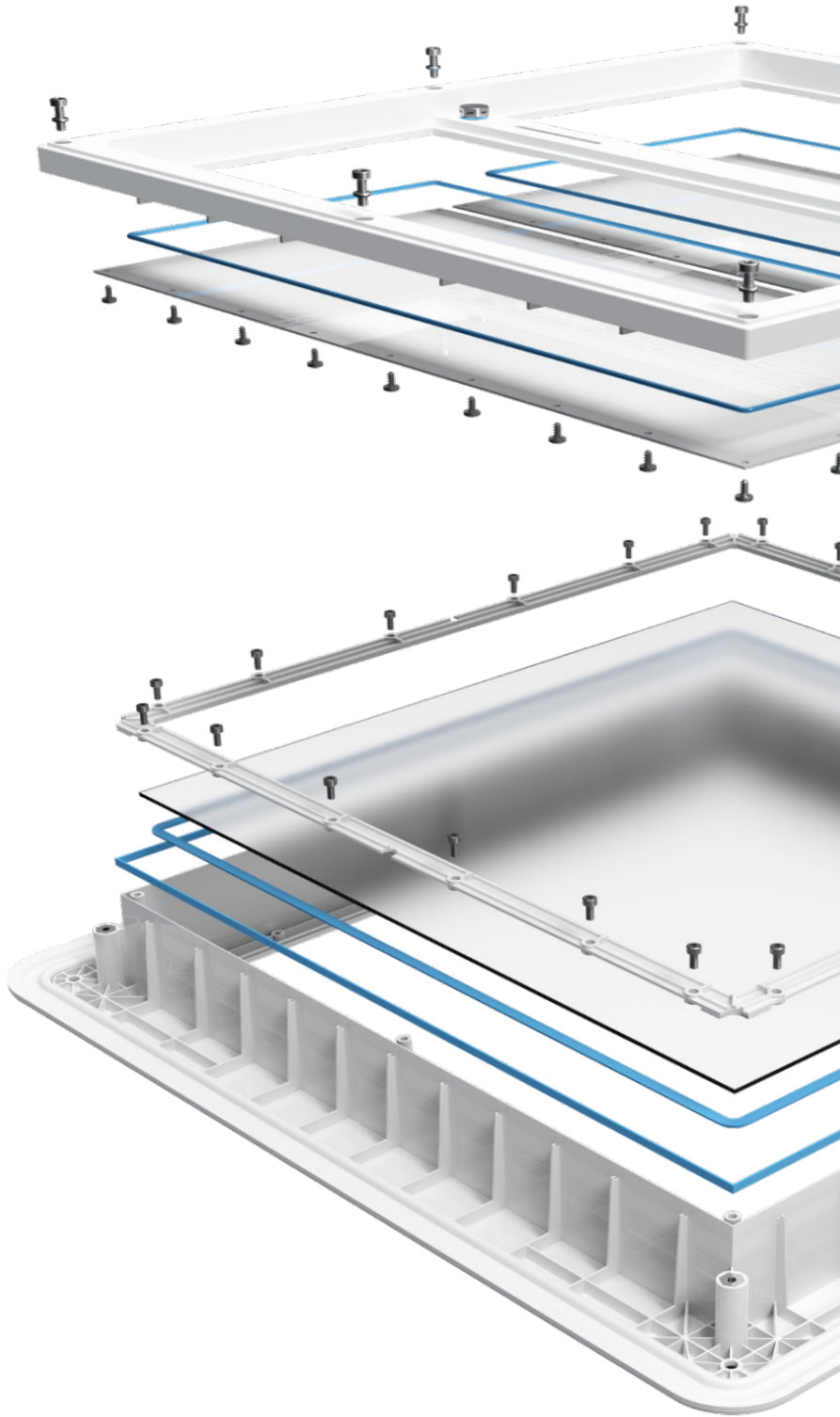
Soffito features a flat, frosted, impact resistant polycarbonate lens, that is easily replaced if damaged or customised for special applications.

## We're committed to your "right to maintain"

Isollux products offer an exceptionally long service life; and **Soffito SLP** is no exception, delivering up to 100,000 Hrs continuous service between maintenance events. Eventually however light losses accumulate and the light engine and LED driver will require replacement.

As customers who purchased the first release of **Soffito\*** can attest, the upgrade pathway is simple and cost effective. It includes the light engine and driver for a fraction of the cost of a new fitting and installs in minutes and as noted above is fitted without breaking the seal on the room below.

When the time is right, upgrades are guaranteed to deliver the latest performance benefits and re-set the product warranty. So specifiers can be confident that their customers will remain fully supported for the long term with minimal disruption to complex clean room applications.



# How and why we de-stress key components to achieve maximum service life and optimum value

Isollux HE Chipsets are backed by independent photometry reports including, LM79 for colour rendering and IES files; and LM80 (10,000Hrs) predictive endurance tests. The LM80 reports allow engineers to accurately predict the expected performance of individual LEDs across a given range of thermal and electrical conditions. Typically manufacturers use this data to run the LEDs in circuit at or near peak loads to minimise cost to market by reducing component count.

Our engineers use the test data, as a bench mark from which to de-rate components, increasing the number of LED in circuit to optimise performance. Increasing LED count allows us to reducing drive current lowering the thermal load on all critical components, including the LED die, driver, PCB and electrical connections. This approach delivers significant gains in, efficiency, performance and reliability, in particular maximising the service life of each of the key components.

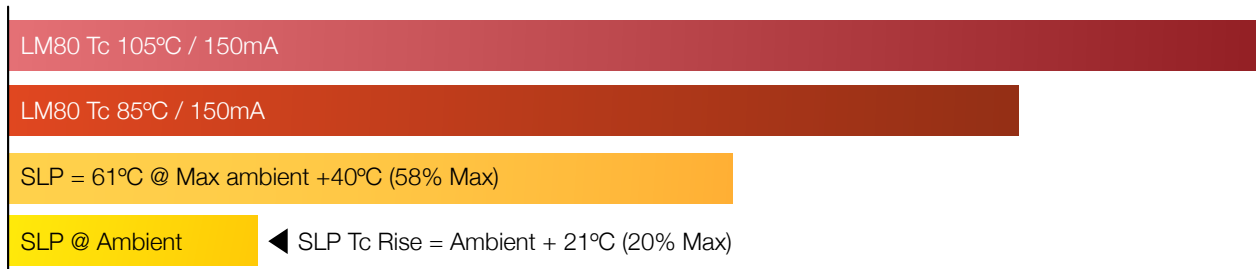
## SLP-HE Drive current $I_f$

The illustration below scales the maximum allowable forward current for the Isollux HE chipset and the drive current used in the independent LM80 reports compared to the actual drive current used to power Soffito SLP (1,440 LED HE High Density Array)



## SLP-HE Case Temperature $T_c$

The illustration below scales the case temperatures used in the LM80 reports tested at 150mA, compared to the actual case temperature of production models driven at 25mA. The combination of reduced  $I_f$  and  $T_c$  significantly increases performance and reliability.



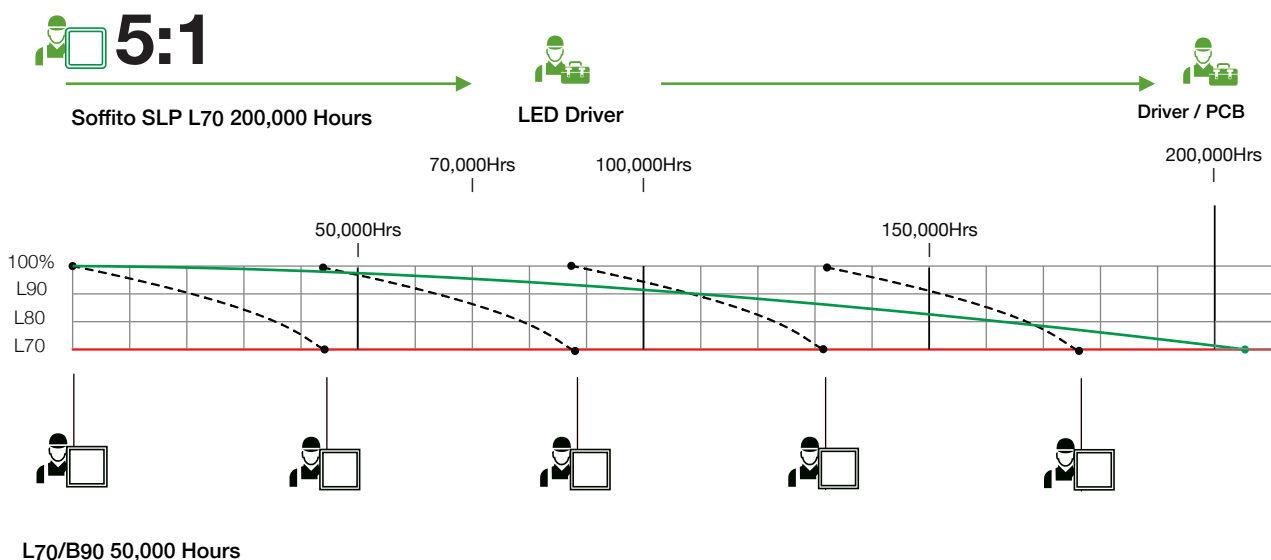
# Customer benefits of de-rating components

De-rating components reduces the Total Cost of Ownership (TCO) ie it reduces the long term cost of both **operating** and **maintaining** a lighting solution. Rather than focusing on headline price. TCO includes the capital cost of the luminaire and the cost of installing and maintaining the fixture.

The cost related to regular replacement of LED fittings is often overlooked. In the case of clean rooms it also generally results in significant business interruption to complex and sensitive production facilities. Adding the additional risk of performance caveats such as B'ratings and the costs quickly spiral. (See illustration below)

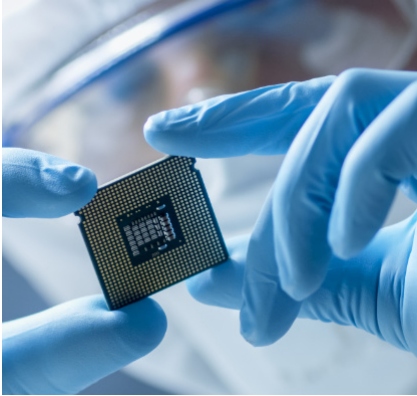
Isollux products are designed to surpass warranty without caveats, even when installed in challenging environments at high ambient temperatures. It provides specifiers with the option to compare operational savings over extended periods. Up to 200,000 Hours L<sub>70</sub> when using lighting controls or a lower light loss factor, with the option to increase driver output retrospectively at the mid point in the product life cycle where controls are not an option.

## Performance life cycle comparison



\*HE Chipset L90 Lifetime calculated using Independent LM80 photometry report, using the Energy Star TM-21 06/18/21, protocol and adjusting for reduced thermal load and drive current. Two LM80 test reports are used with a duration of 10,000Hrs 150mA, 9,000 Hrs 100mA citing zero failures on multiple samples..

# Applications



High-Tech Manufacturing



Industrial Chemicals



Pharmaceuticals



Food Packaging & Printing



Photo Lithography



Medical & Pathology



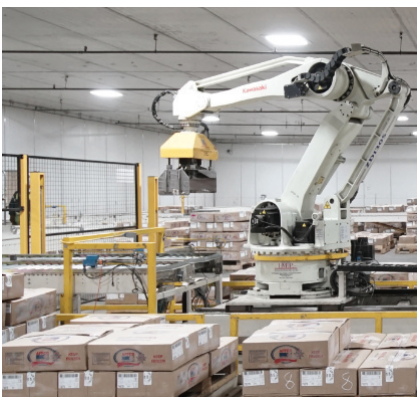
Bottling & Labelling



Bakeries & sweets



Fresh Produce



Coolstores & Distribution

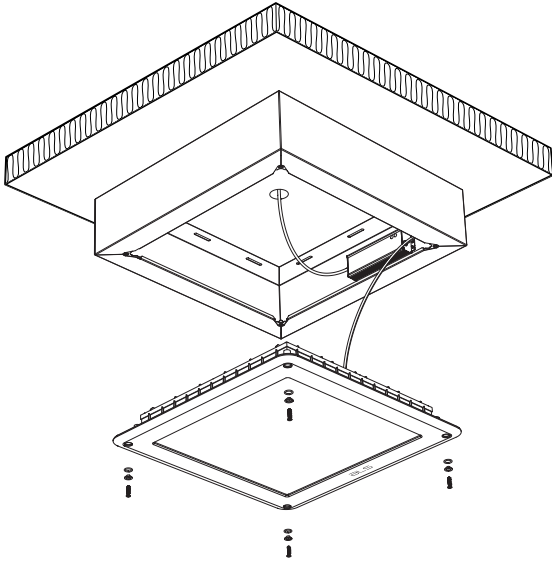


Aqua Culture Smolt & Production

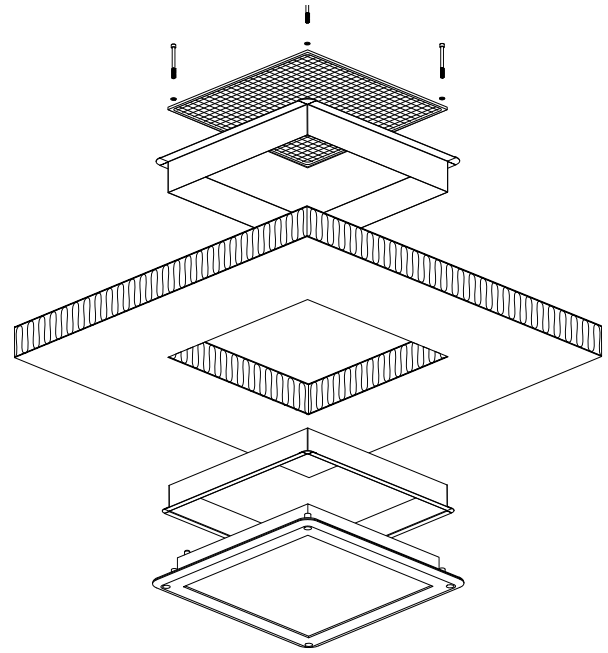


Dairy Production & Storage

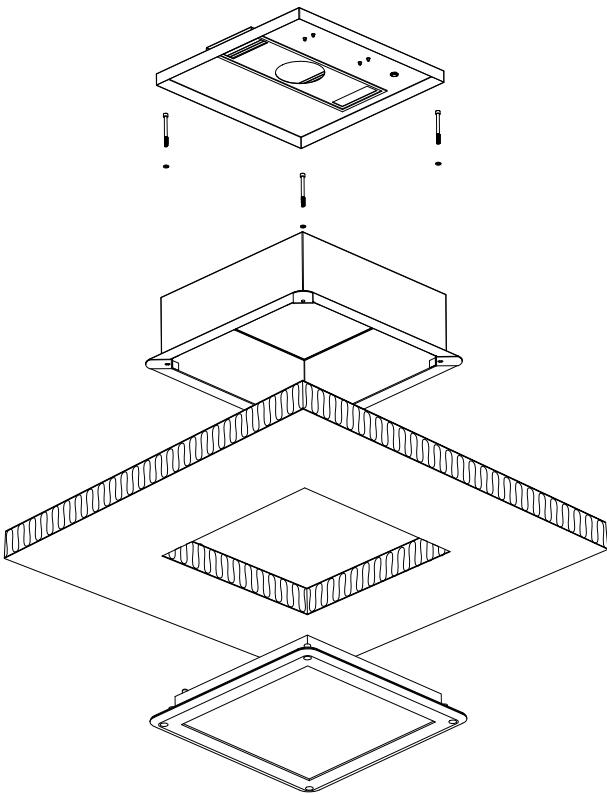
# Approved Isollux Installation Kits



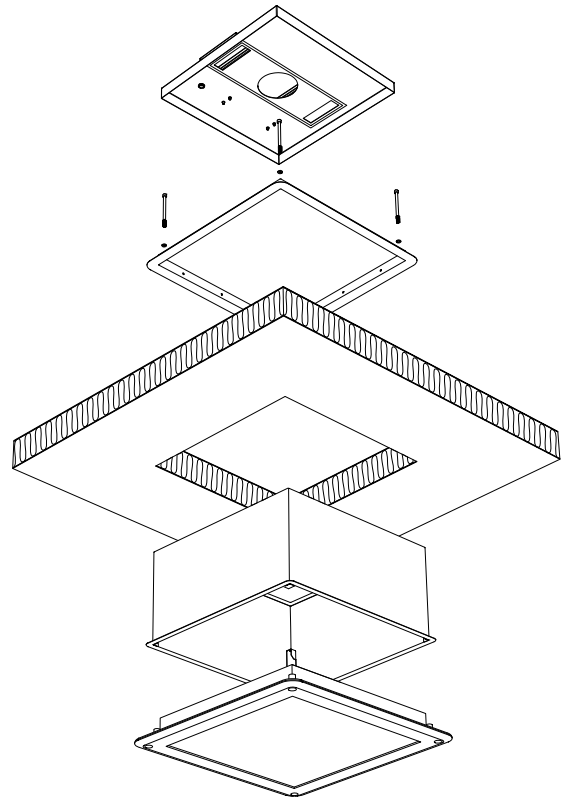
Surface Mount Box | SFO-MB



Telescopic Flashing Kit | SFO-FK  
(Shown with optional walk on cover)



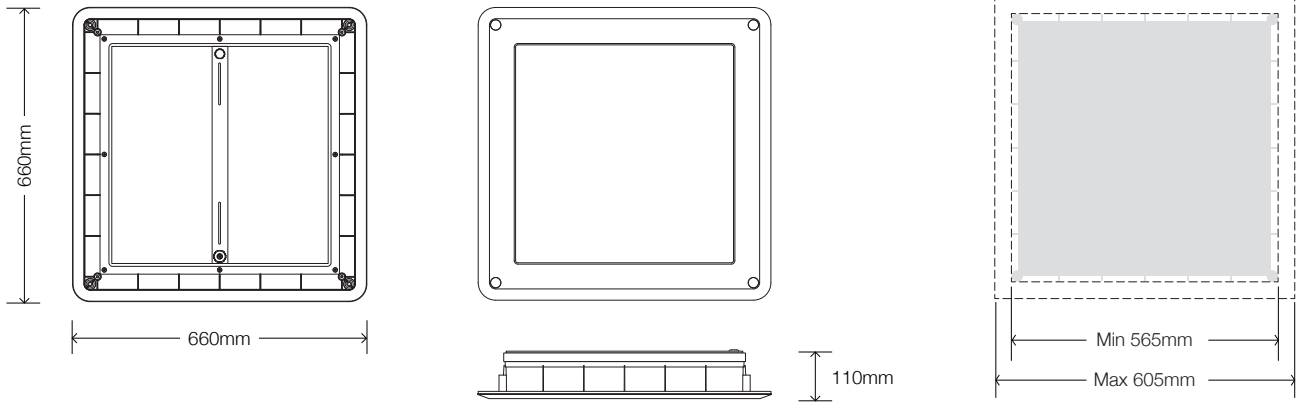
Top Mount Box with Vented Lid  
SFO-TB w/lt safety cover



Vented Enclosure | SFO-VB  
With safety cover

# Soffito SLP - HE Chipset Product Codes

L90-100,000Hrs | 142lm/W



PRODUCT	PERFORMANCE			AMBIENT		DRIVER	INRUSH	MAX PSU 16A*	WARRANTY
Model Number	Output	Power	Efficiency	Min	Max	Function	Amps	Type C Breaker	24/7 @ max (Ta)
<b>Soffito SLP HE Chipset @ Ta 25°C (Ra85 CCT 4,000°K) within 100mm PIR ceiling and SLP-VB-SS installation kit.</b>									
SLP-HE-XYX-40W-ND	5,600lm	40W	140lm/W	-40°C	40°C	Non Dim	50A	8 @ 230 Vac	5 YRS
SLP-HE-XYX-40W-DM	5,600lm	40W	140lm/W	-40°C	40°C	0-10V	50A	8 @ 230 Vac	5 YRS
SLP-HE-XYX-40W-DA	5,600lm	40W	140lm/W	-40°C	40°C	DALI	50A	8 @ 230 Vac	5 YRS
SLP-HE-XYX-40W-D4i	5,600lm	40W	140lm/W	-40°C	40°C	DALI	50A	8 @ 230 Vac	7 YRS
SLP-HE-XYX-60W-ND	8,400lm	60W	140lm/W	-40°C	40°C	Non Dim	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-60W-DM	8,400lm	60W	140lm/W	-40°C	40°C	0-10V	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-60W-DA	8,400lm	60W	140lm/W	-40°C	40°C	DALI	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-60W-D4i	8,400lm	60W	140lm/W	-40°C	40°C	DALI	50A	14 @ 230 Vac	7 YRS
SLP-HE-XYX-80W-ND	11,360lm	80W	142lm/W	-40°C	40°C	Non Dim	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-80W-DM	11,360lm	80W	142lm/W	-40°C	40°C	0-10V	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-80W-DA	11,360lm	80W	142lm/W	-40°C	40°C	DALI	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-80W-D4i	11,360lm	80W	142lm/W	-40°C	40°C	DALI	50A	14 @ 230 Vac	7 YRS
SLP-HE-XYX-100W-ND	14,200lm	100W	142lm/W	-40°C	40°C	Non Dim	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-100W-DM	14,200lm	100W	142lm/W	-40°C	40°C	0-10V	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-100W-DA	14,200lm	100W	142lm/W	-40°C	40°C	DALI	50A	14 @ 230 Vac	5 YRS
SLP-HE-XYX-100W-D4i	14,200lm	100W	142lm/W	-40°C	40°C	DALI	50A	14 @ 230 Vac	7 YRS

(X) Correlated Colour Temperature options include: 4000°K (4) | 5000°K (5) | 6000°K (6)

(YY) Ra (CRI) Options include Ra85 (85), Ra95. (95) Example: 5,000k Ra85,

XYX = 585 ND Non dimming (Vo to reduce output) | DM 1-10V Dimming | DA DALI | D4i DALI D4i

**Ambrite™** can be specified by replacing the (XYX) options with: Ambrite light (AMX) Ambrite warm (AMH)

\*In-rush current limits can be mitigated with rack mount In-rush Current Limiter (ICL)



\*High radiant temperatures or unexpected heat sources can potentially damage or significantly impair the performance of the luminaire. Use of third party non-approved enclosures will void warranty. Only suitable for use with Isolux approved and manufactured installation kits. Please contact Isolux prior to installation if further information is required.



# isollux

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