

LED Driven Technology

Intelligent and Innovative



LED Lighting

Overview

Established in 1920, Clipsal by Schneider Electric is Australia's number one brand of electrical products, accessories and solutions for the residential, commercial, industrial, data, home control and energy management markets. Clipsal has evolved and grown from its Adelaide base with great success by supporting the local economy and providing products manufactured at multiple sites across Australia. Clipsal is an electrical industry leader, dedicated to supplying you with the most innovative and sustainable solutions available. As part of Schneider Electric, the global specialist in energy management, Clipsal provides a total electrical solution for any project or application.

Clipsal Lighting

The Clipsal lighting range continues to grow with the simple mandate to provide energy-efficient light fittings that use intelligent design and innovative technologies. Through our desire to be an industry leader, we are focused on developing options that challenge conventional thinking. We understand that in today's modern installations, lighting can no longer be considered in isolation. It must form part of a system and be able to work seamlessly and respond to the many input commands it receives from energy management, lighting control and dimming products.

With the boundaries between lighting and control converging, Clipsal is in a unique position to not only deliver the market with the products it will require, but to actively lead it. Our rich history in designing cutting edge dimming products, means we find ourselves as the only lighting supplier in Australia with the ability to provide light fittings that have been designed and tested to be truly compatible.

As the lighting industry continues to experience consistent and rapid change, it is important to put your trust in a supplier who will not only move with this change, but will pioneer new technologies and solutions. Clipsal has been doing this for over 90 years.

Dimming Compatibility

Clipsal is the only lighting supplier in Australia with the ability to provide light fittings that have been designed and tested to be truly compatible. Look for these symbols on products to confirm compatibility with Clipsal dimmers including C-Bus.



Contents

■ Page 4

Product Information

LED Driven Technology, The Most Advanced LED Lighting Technology, Heat Management, Colour Quality, Efficiency, Efficient Optical Systems, Future-Proof Performance.

■ Page 10

Light Modules

8W Downlight Kit, 12W Downlight Kit, 15W, LED module and driver, 28W LED module and driver, 37W LED module and driver, 37W Shop Lighter.

■ Page 24

Fixtures

Round fixed downlight fixture - traditional, Round gimbal downlight fixture - traditional, Square fixed downlight fixture - traditional, Square gimbal downlight fixture - traditional, Round recessed downlight fixture - no lens, IP54 round recessed downlight fixture - with lens, Round cavity downlight fixture - recessed lamp, Round trimless downlight fixture - reduced glare, Round architectural downlight fixture - reduced glare, Square baffle downlight fixture - single, Square baffle downlight fixture - double, Square baffle downlight fixture - triple, Square baffle downlight fixture - quad, Round shoplighter medium fixture - gimbal, Round shoplighter large fixture - gimbal, Round IP54 fixed downlight fixture, Round commercial medium fixture - recessed, Round commercial large fixture - recessed.

■ Page 36

LED Drivers

Phase Dimmable LED Driver for 8W and 12W, Phase Dimmable LED Driver for 15W, 28W and 37W, DALI Dimmable LED Driver for 8W and 12W, DALI Dimmable LED Driver for 15W, 28W and 37W light modules.



LED Lighting

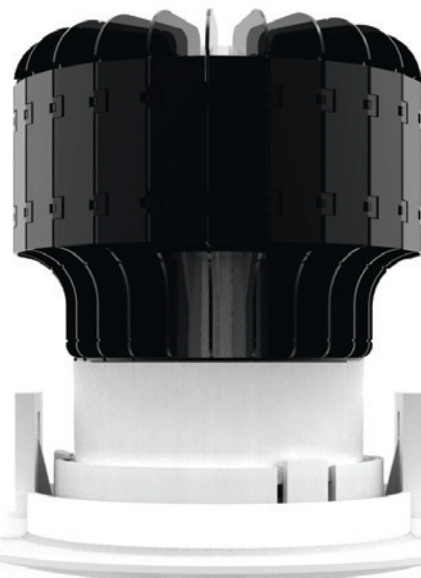
Product Information

LED Driven Technology

Many LED manufacturers struggle to deliver matching performance and colour quality of existing traditional light sources. Clipsal by Schneider Electric has developed LED modules with innovative and patented technologies ensuring seamless transition to energy efficient alternatives.

All Clipsal light modules feature the following advantages:

- surpass all brightness, colour, dispersion, lifespan and safety benchmarks
- retain at least 70% of their performance after 50,000 hours
- easily retro-fitted into most existing light fittings
- compatible with Clipsal's conventional phase dimmers or DALI digital dimming systems
- advanced thermal protection system: keeping products cool even under demanding and harsh environments
- compliant with Australian and International standards.



The Most Advanced LED Lighting Technology

Affordable & Flexible

Clipsal understand today's demands for professional LED lighting. Clients around the world are aware of the benefits of LED-based alternative lighting. The investment cost of this technology is now within most budgets, and the return on investment period is much faster and more sensible than ever before.

Meets International Standards

Clipsal has developed each product to address the challenge of proposing and installing new LED lighting, for both you and your clients. That is why Clipsal products come packaged with an unprecedented amount of R&D, testing, certifications and warranty. Clipsal products give you the latest in LED technology, and our technical team of engineers and designers are using that technology to bring to you the best that money can buy.

Intelligent Automated Soldering System

The weakness for many LED systems lies in the assembly of the solder joints. LED printed circuit boards usually use highly thermal efficient materials, therefore achieving the required heat build-up for good soldering results is difficult and inconsistent. Clipsal eliminate this via an intelligent automated soldering system.

Premium Led Chips

Clipsal uses only premium quality LED chips offering the highest luminous efficacy, CRI and lumen maintenance. The LED chip packages used in all Clipsal products are tested in accordance with IES LM-80.



Superior Colour Consistency

Our systematic LED selection process ensures the most consistent and warmest colours available in the industry.

Thermal Management

Clipsal's award winning, patented aluminium heating technology offers a lightweight yet highly efficient heat sink coupled with autonomous electronic thermal management. Even in challenging environments, safe operating temperatures, prolonged life and maximum light output is achieved.

Deep-Dimming Experience

Users now can experience the same dimming feel as halogen or incandescent lighting, with smooth, flicker free dimming down to 1%*.

Dimming Compatibility

Clipsal is the only lighting supplier in Australia with the ability to provide light fittings that have been designed and tested to be truly compatible.

*Refer to clipsal.com/load for compatible phase dimmers.

LED Lighting

Product Information

Heat Management

Heat Sink Structure

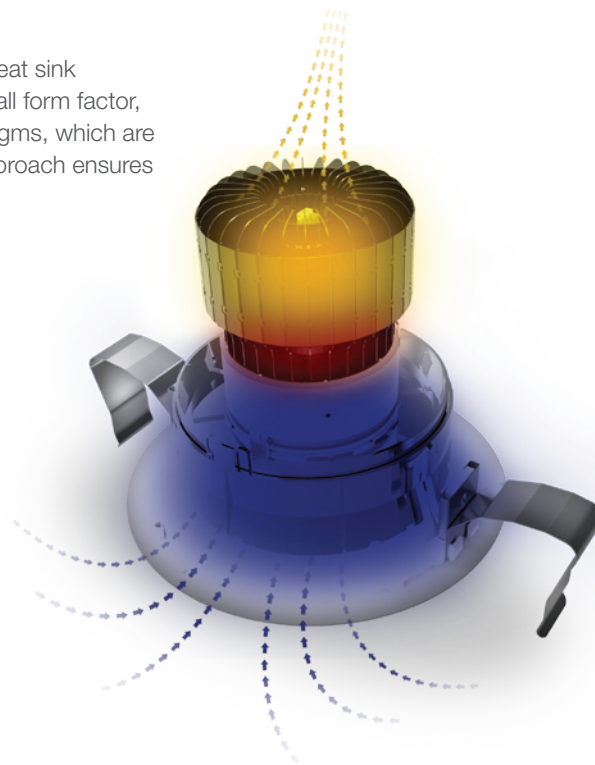
All Clipsal LED modules feature a sophisticated and ultra-efficient heat sink structure. The patented design requires 50% less material than competitors, making the overall LED module lighter and more efficient. Each heat sink fin is manufactured from pure aluminium to maximise heat-conductivity without compromise. Our unique heat sink manufacturing method does not require casting or extruding of the aluminium, resulting in no thermal coefficient losses.

Passive Cooling

The shape and layout of Clipsal's innovative heat sink promotes passive, natural convection in a small form factor, eliminating the need for active fans or diaphragms, which are prone to wear and noise. This minimalistic approach ensures long-lasting performance and reliability.

Automated Thermal Protection System

This is an intelligent combination of superior LED engine materials, electronics and heat management firmware; the heart of Clipsal's proprietary thermal feedback system. In the event of abnormally high ambient temperature conditions, the system actively regulates the LED engine temperature through algorithmic fine tuning without any user intervention, maintaining maximum possible light output without sacrificing the service life of the LED engine.



Colour Quality

Colour Options

Clipsal LED modules are available in two standard colour temperatures: warm white with a CCT of 3000K and cool white with a CCT of 4500K.

Colour Rendering Index

Colour rendition is important to ensure faithful representation of colours. All Clipsal LED modules offer an excellent colour rendering index (CRI) of $R_a > 80$ for the Classic models, further increasing to $R_a > 85$ for the larger wattage models.

White Colour Binning Recipes

Clipsal utilises customised LED binning techniques to ensure a tighter white colour balance between LED modules. Typical LED package binning features 4-step MacAdam ellipse techniques which significantly reduce different colour tints between lamps of the same colour temperature. Clipsal's systematic approach, based on ANSI C78.377-2008 conventions, provides 2-step and 3-step MacAdam ellipse binning techniques for consistent whites and aesthetically pleasing installations.

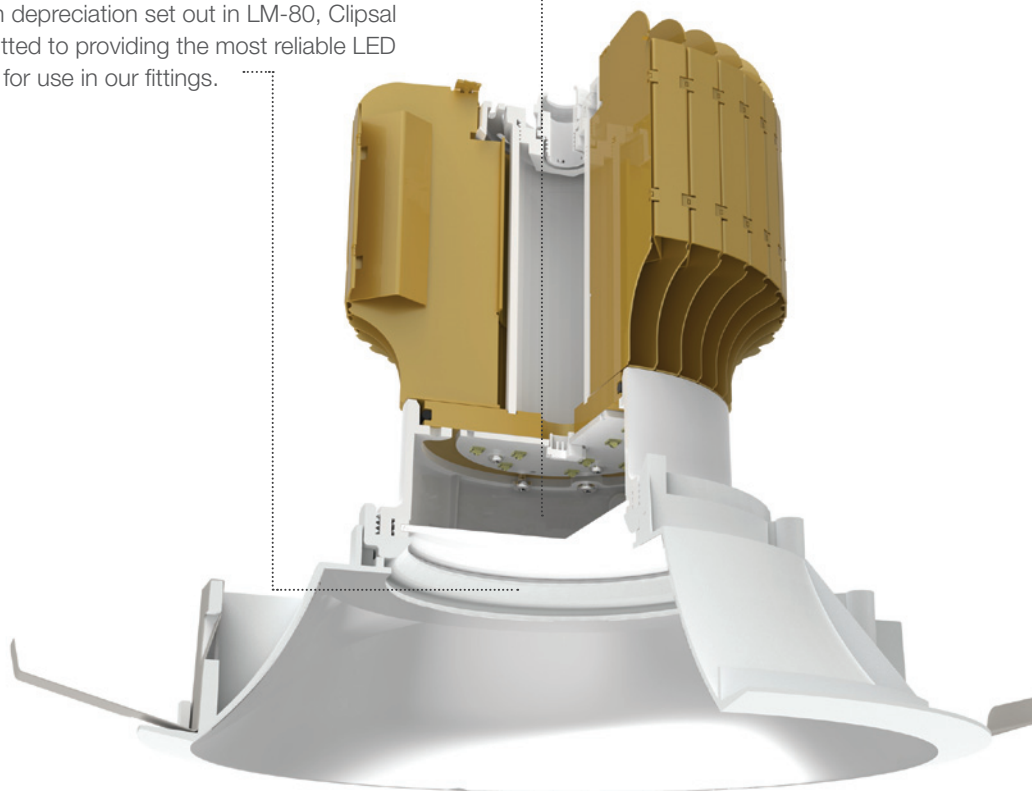
Efficiency

Lumen Maintenance

Clipsal LED modules and fittings are manufactured using only the best LED packages. All LED packages selected for use in Clipsal LED modules are tested in accordance with IES LM-80-2008 ("LM-80") from accredited testing laboratories. The procedure for LM-80 involves continual measurement of the lumen maintenance for a minimum of 6000 hours. By only utilising LED packages that satisfy the requirements for lumen depreciation set out in LM-80, Clipsal is committed to providing the most reliable LED modules for use in our fittings.

Class Leading Efficiency

With a system efficiency of up to 87 lumens/watt including electronic driver, Clipsal fittings are significantly more efficient than conventional CFL/PLC luminaires; up to 70% when compared to a 2x26W equivalent. This excellent efficiency is achieved through precision design, high-grade materials and innovative technologies that are combined within the optical and thermal management system of all Clipsal fittings.



Efficient Optical Systems

Optics

High quality optical systems are essential in providing accurate light distribution, chromatic correction performance and maximising luminous efficacy. Optics used in all Clipsal LED modules are manufactured from premium grade PMMA or polycarbonate polymers, offering exceptional performance without degradation over the life of the component.

Covering All Angles

A range of beam angles are available for Clipsal LED modules, providing the correct illumination for a wide variety of applications. Clipsal's range feature rotationally symmetrical light distribution to achieve excellent uniformity.

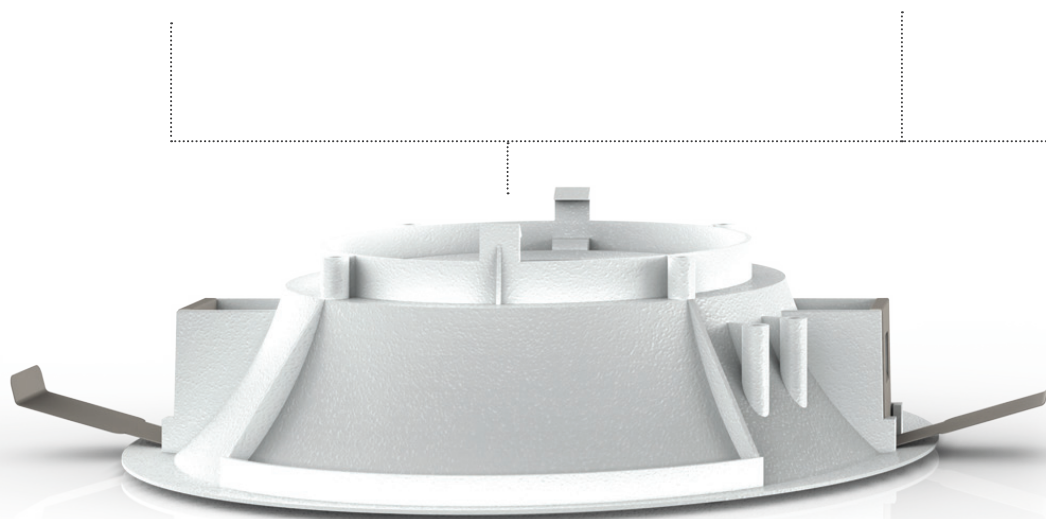
LED Lighting

Product Information

Future-Proof Performance

Upgradeable LED Modules

A modular construction of LED engines, drivers and add on accessories, ensure the future upgradability of our range of fixtures. The LED module itself is the combination of LED, optical control, thermal management and smart electronics, allowing the whole unit to be changed as one simple upgrade in the future. The efficient driver is easily integrated through a simple Plug-and-Play connector system.

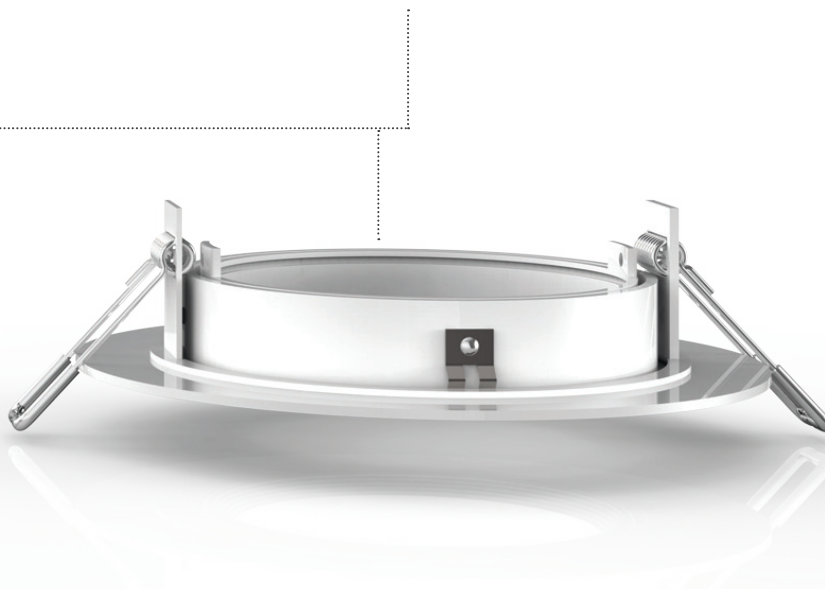


Future-Proofed

Technology changes, but your light fittings don't have to. Clipsal recognises that what might be the latest technology now, won't be in years to come. With our interchangeable LED modules you can keep up with the times, without the need to replace your fittings.

Flexible Fittings

Clipsal understands that sometimes lighting requirements change. Our range of downlight fittings offers the unique feature of interchangeable LED modules. Much like changing a light bulb, the LED module can be changed to provide a different LED power, colour temperature or beam angle.



LED Lighting

Light Modules



Clipsal is focused on producing premium LED products that are tailored for the specific needs of commercial, retail and residential applications. LED technology has flooded the market in recent years, but our products continue to stand out from the rest, surpassing the competition.

Our design teams are focused on providing LED Light Modules that are energy efficient, easy to install, deliver matching performance and colour quality to that of traditional light sources, and are safe for the lifespan of the product.

A proactive system of built-in sensors and smart electronics constantly monitors heat build up during operation. Should there be excessive heat due to the environment or poor installation, the system automatically regulates the lamp's temperature through algorithmic fine tuning of output power, without any user intervention.

Technology Benefits

- Superior light rendering quality that offers balanced white with embedded green and red tone.
- Huge cost savings achieved with the reduction of power consumption allows a quicker return on investment.
- Quick installation achieved and no costly modification required, due to the form factor of the product range complementing existing light fittings and installations.
- Maintenance of the fitting is almost removed once installation is complete.
- Automated thermal management to product lifespan and surroundings.
- Provides safety and comfort with the removal of the glass that is found in traditional light sources.

Application

- General lighting for residential installations
- New and retrofit options for hotels and galleries
- Offices
- Retail, fashion stores and showrooms

LED Lighting

Light Modules

8W Downlight Kit

Features

- Feather weight construction, ~40 grams
- Class 2 LED module
- 62 lm/W (circuit watts)
- Heat management system, making product superior and reliable
- Smarter thermal dimming to protect LED lifetime and safeguard your properties
- Compact, stylish
- Equivalent to 18W PLC/CFL, 35W halogen, 60W incandescent

Note: this range is supplied with fitting.



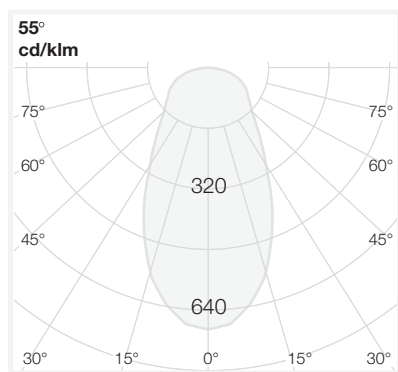
Details Specification

Family type	L900 Series
Light source	LED
Light colour	Warm white—3000K, cool white—4500K
Power consumption	LED engine—8W, system total (including driver)—11W
Mains voltage	220 - 240V / 50 Hz
Driver	Supplied with LED12V90CC external dimmable driver
Fixture colour options	White, Brushed Chrome
Installation	Compatible with most MR16 type open fittings
Lifetime	35,000 hours (70% lumen maintenance at Ta = 25C)
Beam angle	Wide—55°
Dimming	Clipsal Universal and C-Bus Dimmers
Intensity (cd)	Warm white-376, cool white-429
Luminous flux (lm)	Warm white-575, cool white-660
CRI	Warm white-86, cool white-85
Mains connection	Tool-free, push-down connectors with strain relief cover. Loop terminals for convenient connection (recommended cable length 1m, subject to local installation requirements).
Materials	Aluminium, plastic
Fire safety	Glow wire test 850 C, UL94V-0, VW-1
Flammability mark	F
IP code	IP 20
Safety class	Class 2
Standards	IEC 60598-1, IEC 61347-2-13
Regulatory markings	CE, CB, C-Tick, SIRIM

Ordering Matrix

Cat. No.	Description
L995W/8WH	55°, warm white, 3000K, white gimbal fitting, 92mm cut-out
L995W/8BC	55°, warm white, 3000K, brushed chrome gimbal fitting, 92mm cut-out
L955C/8WH	55°, cool white, 4500K, white gimbal fitting, 92mm cut-out
L955C/8BC	55°, cool white, 4500K brushed chrome gimbal fitting, 92mm cut-out
L955WF/8WH	55°, warm white, 3000K, white fixed fitting, 70mm cut-out
L955WF/8BC	55°, warm white, 3000K, brushed chrome fixed fitting, 70mm cut-out
L955CF/8WH	55°, cool white, 4500K, white fixed fitting, 70mm cut-out
L955CF/8BC	55°, cool white, 4500K, brushed chrome fixed fitting, 70mm cut-out

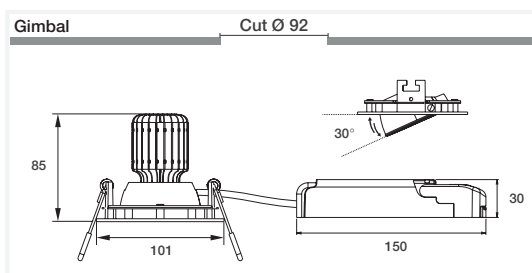
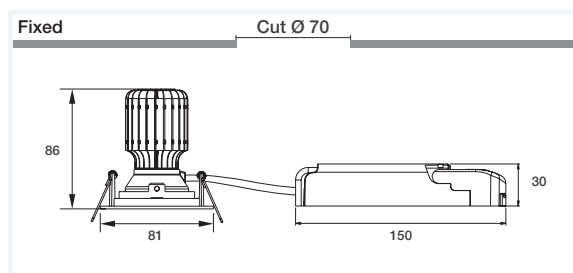
Light Dispersion Chart



55°, 4500k		E(0°)	E(C0)
0.5	0.53	1717	591
1.0	1.06	429	148
1.5	1.60	191	66
2.0	2.13	107	37
2.5	2.66	69	24
3.0	3.19	48	16

Distance [m] Cone Diameter [m] Illuminance [lx]
 — C0 - C180 (Half-value Angle: 56.0°)

Dimensions (mm)



LED Lighting

Light Modules

12W Downlight Kit

Features

- Feather weight construction, ~80 grams
- Class 2 LED module
- 62 lm/W (circuit watts)
- Heat management system, making product superior and reliable
- Smarter thermal windback to protect LED lifetime and safeguard your properties
- Compact, stylish
- Equivalent to 32W PLC/CFL, 20W MH 75W halogen, 150W incandescent

Note: this range is supplied with fitting.



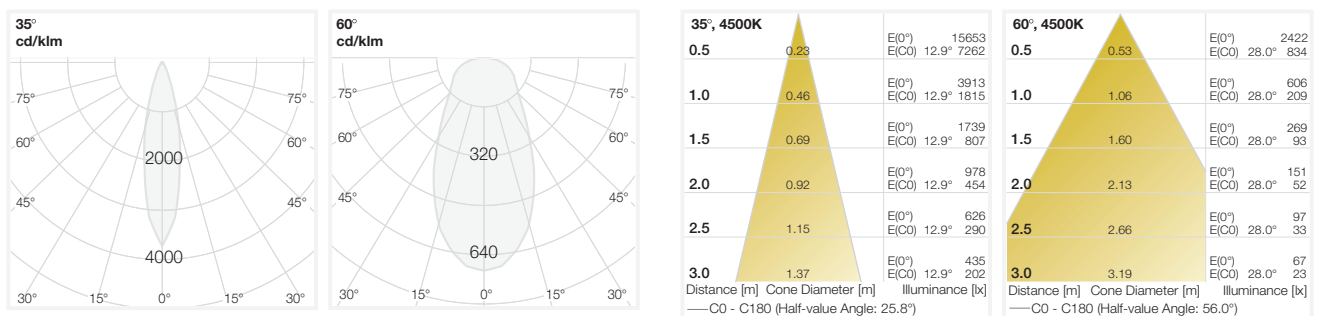
Details Specification

Family type	L900 Series
Light source	LED
Light colour	Warm white—3000K, cool white—4500K
Power consumption	LED engine—12W, system total (including driver)—15W
Mains voltage	220 - 240V / 50 Hz
Driver	Supplied with LED24V70CC external dimmable driver
Fixture colour options	White, Brushed Chrome
Installation	Compatible with most MR16 type open fittings.
Lifetime	50,000 hours (70% lumen maintenance at Ta = 25C)
Beam angle	Medium—35°, Wide—60°
Dimming	Clipsal Universal and C-Bus Dimmers.
Intensity (cd)	Warm white-532, cool white-606 (60°), warm white - 3101, cool white - 3539 (35°)
Luminous flux (lm)	Warm white-815, cool white-930
CRI	Warm white-83, cool white-81
Mains connection	Tool-free, push-down connectors with strain relief cover. Loop terminals for convenient connection (recommended cable length 1m, subject to local installation requirements).
Materials	Aluminium, plastic
Fire safety	Glow wire test 850 C, UL94V-0, VW-1
Flammability mark	F
IP code	IP 20
Safety class	Class 2
Standards	IEC 60598-1, IEC 61347-2-13
Regulatory markings	CE, CB, C-Tick, SIRIM

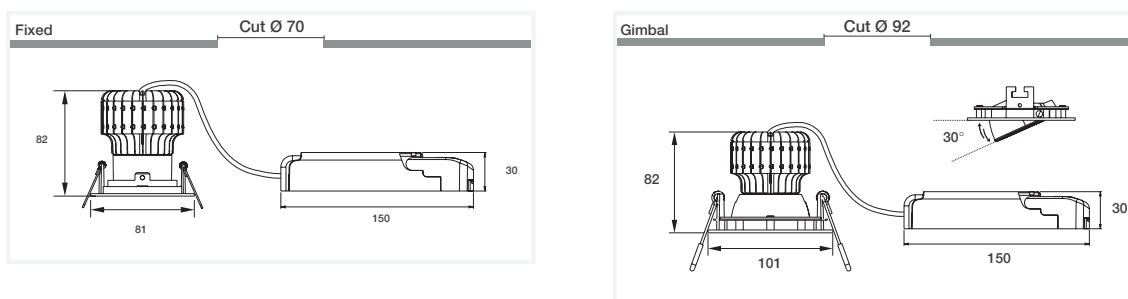
Ordering Matrix

Cat. No.	Description
L935W/12WH	35°, warm white, 3000K, white gimbal fitting, 92mm cut-out
L935W/12BC	35°, warm white, 3000K, brushed chrome gimbal fitting, 92mm cut-out
L935C/12WH	35°, cool white, 4500K, white gimbal fitting, 92mm cut-out
L935C/12BC	35°, cool white, 4500K, brushed chrome gimbal fitting, 92mm cut-out
L935WF/12WH	35°, warm white, 3000K, white fixed fitting, 70mm cut-out
L935WF/12BC	35°, Warm white, 3000K, Brushed chrome fixed fitting, 70mm cut-out
L935CF/12WH	35°, cool white, 4500K, white fixed fitting, 70mm cut-out
L935CF/12BC	35°, cool white, 4500K, brushed chrome fixed fitting, 70mm cut-out
L960W/12WH	60°, warm white, 3000K, white gimbal fitting, 92mm cut-out
L960W/12BC	60°, warm white, 3000K, brushed chrome gimbal fitting, 92mm cut-out
L960C/12WH	60°, cool white, 4500K, white gimbal fitting, 92mm cut-out
L960C/12BC	60°, cool white, 4500K, brushed chrome gimbal fitting, 92mm cut-out
L960WF/12WH	60°, warm white, 3000K, white fixed fitting, 70mm cut-out
L960WF/12BC	60°, warm white, 3000K, brushed chrome fixed fitting, 70mm cut-out
L960CF/12WH	60°, cool white, 4500K, white fixed fitting, 70mm cut-out
L960CF/12BC	60°, cool white, 4500K, brushed chrome fixed fitting, 70mm cut-out

Light Dispersion Chart



Dimensions (mm)



LED Lighting

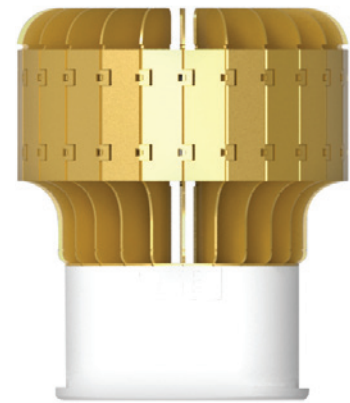
Light Modules

15W LED module and driver

Features

- Feather weight construction, ~80 grams
- Class 2 LED module
- 70 lm/W (circuit watts)
- Heat management system, making product superior and reliable
- Smarter thermal windback to protect LED lifetime and safeguard your properties
- Compact, stylish
- Equivalent to 32W PLC/CFL, 20W MH, 75W halogen, 150W incandescent

Note: this range is not supplied with a fixture. For a complete range of fixture options please refer to Fixture section later in this book.



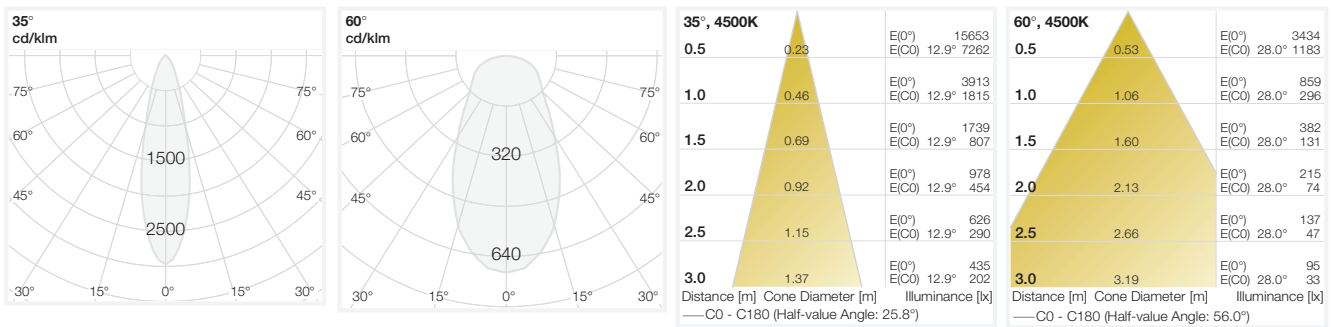
Details Specification

Family type	LP900 Series
Light source	LED
Light colour	Warm white—3000K, cool white—4500K
Power consumption	LED engine—15W, system total (including driver)—18W
Mains voltage	220 - 240V / 50 Hz
Driver	Supplied with LED24V90CC external dimmable driver or DALI dimming driver.
Colour options	Fixture not supplied. See fixture section.
Installation	Compatible with most MR16 type open fittings.
Lifetime	50,000 hours (70% lumen maintenance at Ta = 25C)
Beam angle	Medium—35°, Wide—60°
Dimming	Clipsal Universal and C-Bus Dimmers - DALI dimming version
Intensity (cd)	Warm white-753, cool white-859 (60°), warm white -3432, cool white - 3913 (35°)
Luminous flux (lm)	Warm white-1055, cool white-1205
CRI	Warm white-86, cool white-85
Mains connection	Tool-free, push-down connectors with strain relief cover. Loop terminals for convenient connection (recommended cable length 1m, subject to local installation requirements).
Materials	Aluminium, plastic
Fire safety	Glow wire test 850 C, UL94V-0, VW-1
Flammability mark	F
IP code	IP 20
Safety class	Class 2
Standards	IEC 60598-1, IEC 61347-2-13
Regulatory markings	CE, CB, C-Tick, SIRIM

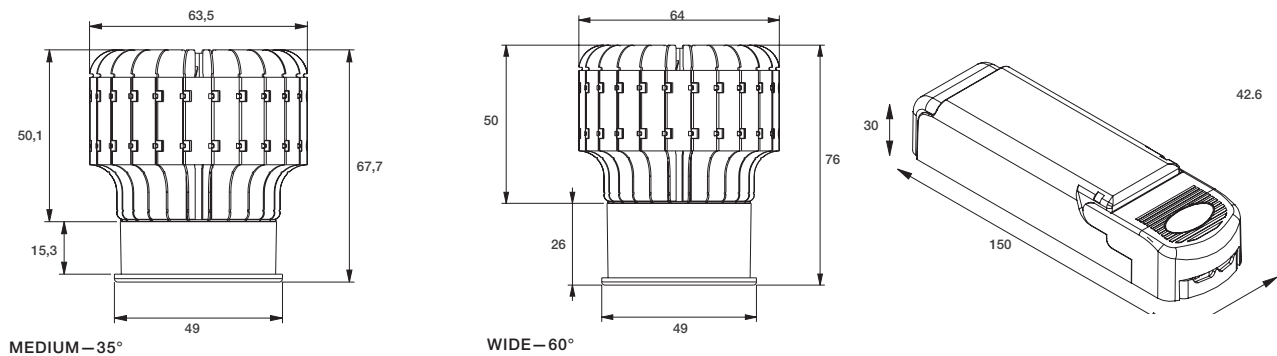
Ordering Matrix

Cat. No.	Description
LP960W15	15W Engine Kit - warm white (3000K) lamp with a 60° beam angle
LP960C15	15W Engine Kit - cool white (4500K) lamp with a 60° beam angle
LP935W15	15W Engine Kit - warm white (3000K) lamp with a 35° beam angle
LP935C15	15W Engine Kit - cool white (4500K) lamp with a 35° beam angle
LP960W15DALI	15W Engine Kit - warm white (3000K) lamp with a 60° beam angle - DALI control
LP960C15DALI	15W Engine Kit - cool white (4500K) lamp with a 60° beam angle - DALI control
LP935W15DALI	15W Engine Kit - warm white (3000K) lamp with a 35° beam angle - DALI control
LP935C15DALI	15W Engine Kit - cool white (4500K) lamp with a 35° beam angle - DALI control

Light Dispersion Chart



Dimensions (mm)



LED Lighting

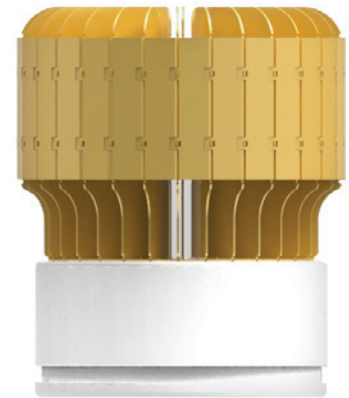
Light Modules

28W LED module and driver

Features

- Feather weight construction, ~100 grams
- Class 2 LED module
- 70 lm/W (circuit watts)
- Heat management system, making product superior and reliable
- Smarter thermal dimming to protect LED lifetime and safeguard your properties
- Compact, stylish
- Equivalent to 52W PLC/CFL, 35W MH, 100W halogen, 200W incandescent

Note: this range is not supplied with a fixture. For a complete range of fixture options please refer to Fixture section later in this book.



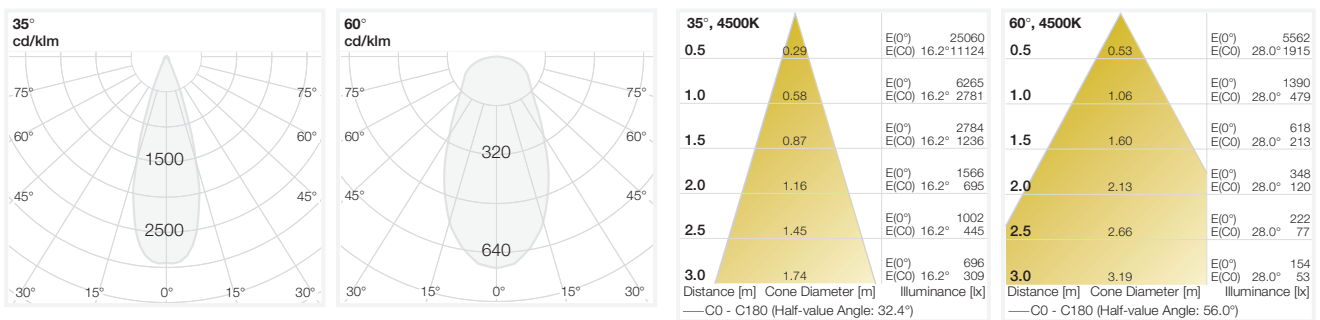
Details Specification

Family type	LP900 Series
Light source	LED
Light colour	Warm white—3000K, cool white—4500K
Power consumption	LED engine—28W, system total (including driver)—32W
Mains voltage	220 - 240V / 50 Hz
Driver	Supplied with LED36V100CC external dimmable driver or DALI dimming driver
Colour options	Fixture not supplied, see fixture section
Lifetime	50,000 hours (70% lumen maintenance at Ta = 25C)
Beam angle	Medium—35°, Wide—60°
Dimming	Clipsal universal and C-Bus Dimmers. DALI dimming version
Intensity (cd)	Warm white - 1220, cool white - 1390 (60°), warm white - 5495, cool white - 6265 (35°)
Luminous flux (lm)	Warm white - 1870, cool white - 2130 (60°)
CRI	Warm white - 86, cool white - 85
Mains connection	Tool-free, push-down connectors with strain relief cover. Loop terminals for convenient connection (recommended cable length 1m, subject to local installation requirements).
Materials	Aluminium, plastic
Fire safety	Glow wire test 850 C, UL94V-0, VW-1
Flammability mark	F
IP code	IP 20
Safety class	Class 2
Standards	IEC 60598-1, IEC 61347-2-13
Regulatory markings	CE, CB, C-Tick, SIRIM

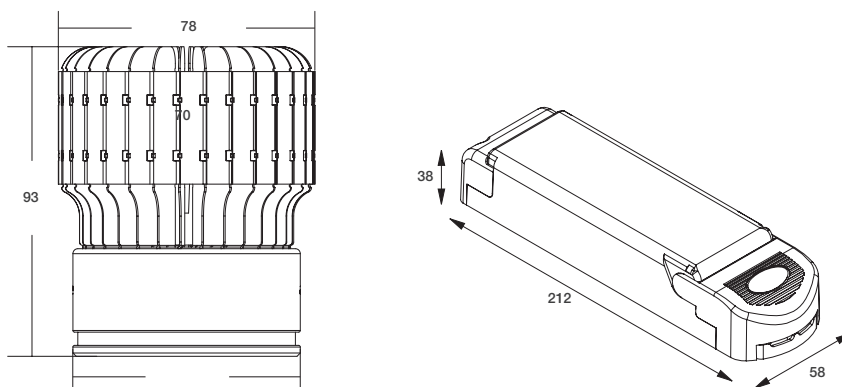
Ordering Matrix

Cat. No	Description
LP960W28	28W LED Engine Kit - warm white (3000K) lamp with a 60° beam angle
LP960C28	28W LED Engine Kit - cool white (4500K) lamp with a 60° beam angle
LP935W28	28W LED Engine Kit - warm white (3000K) lamp with a 35° beam angle
LP935C28	28W LED Engine Kit - cool white (4500K) lamp with a 35° beam angle
LP960W28DALI	28W LED Engine Kit - warm white (3000K) lamp with a 60° beam angle – DALI control
LP960C28DALI	28W LED Engine Kit - cool white (4500K) lamp with a 60° beam angle – DALI control
LP935W28DALI	28W LED Engine Kit - warm white (3000K) lamp with a 35° beam angle – DALI control
LP935C28DALI	28W LED Engine Kit - cool white (4500K) lamp with a 35° beam angle – DALI control

Light Dispersion Chart



Dimensions (mm)



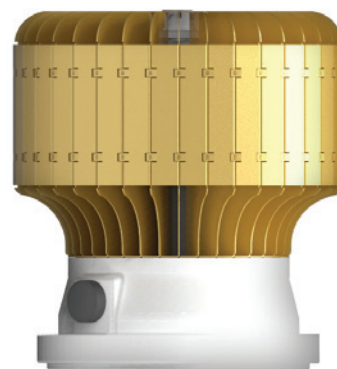
LED Lighting

Light Modules

37W LED module and driver

Features

- Featherweight construction - only 550 grams
- Class 2 LED module
- 70 lm/W (circuit watts)
- Heat management system, making product superior and reliable
- Smarter thermal dimming to protect LED lifetime and safeguard your property
- Compact, stylish
- Equivalent to 70/150W MH, 250W halogen, 500W incandescent



Note: this range is not supplied with a fixture. For a complete range of fixture options please refer to Fixture section later in this book.

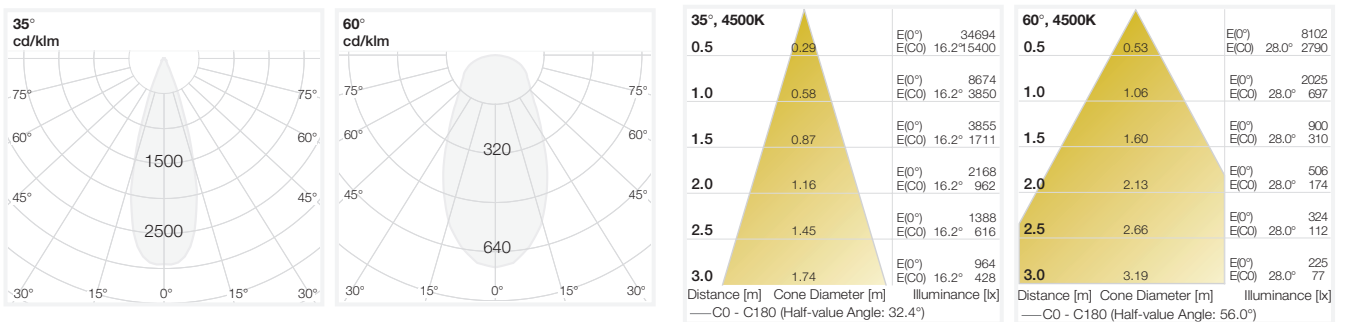
Details Specification

Family type	LP900 Series
Light source	LED
Light colour	Warm white—3000K, cool white—4500K
Power consumption	LED engine—37W, system total (including driver)—43W
Mains voltage	220 - 265V / 50 Hz
Driver	Supplied with LED48V100CC external dimmable driver or DALI dimming driver
Colour options	Fixture not supplied, see fixture page
Lifetime	50,000 hours (70% lumen maintenance at Ta = 25C)
Beam angle	Medium—35°, Wide—60°
Dimming	Clipsal Universal and C-Bus Dimmers. DALI dimming version
Intensity (cd)	Warm white - 1471, cool white - 1677 (60°), warm white - 7607, cool white - 8674
Luminous flux (lm)	Warm white - 2590, cool white - 2950 (60°)
CRI	Warm white - 86, cool white - 85
Mains connection	Tool-free, push-down connectors with strain relief cover. Loop terminals for convenient connection (recommended cable length 1m, subject to local installation requirements).
Materials	Aluminium, plastic
Fire safety	Glow wire test 850 C, UL94V-0, VW-1
Flammability mark	F
IP code	IP 20
Safety class	Class 2
Standards	IEC 60598-1, IEC 61347-2-13
Regulatory markings	CE, CB, C-Tick, SIRIM

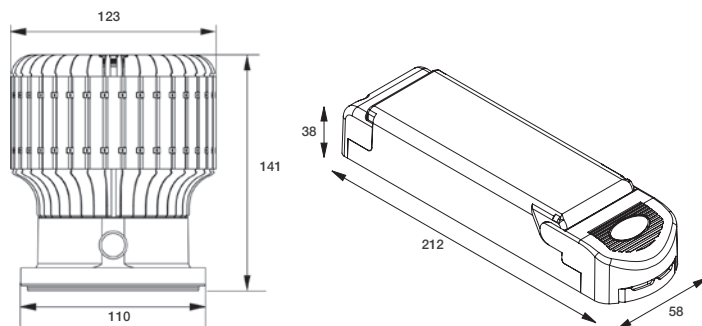
Ordering Matrix

Cat .No.	Description
LP960W37	37W Engine Kit - warm white (3000K) lamp with a 60° beam angle
LP960C37	37W Engine Kit - cool white (4500K) lamp with a 60° beam angle
LP935W37	37W Engine Kit - warm white (3000K) lamp with a 35° beam angle
LP35C37	37W Engine Kit - cool white (4500K) lamp with a 35° beam angle
LP960W37DALI	37W Engine Kit - warm white (3000K) lamp with a 60° beam angle - DALI control
LP960C37DALI	37W Engine Kit - cool white (4500K) lamp with a 60° beam angle - DALI control
LP935W37DALI	37W Engine Kit - warm white (3000K) lamp with a 35° beam angle - DALI control
LP35C37DALI	37W Engine Kit - cool white (4500K) lamp with a 35° beam angle - DALI control

Light Dispersion Chart



Dimensions (mm)



LED Lighting

Light Modules

37W Shop Lighter

Features

- Extremely powerful LED module with super light and compact construction
- Featherweight construction - only 550 grams
- Class 2 LED module
- 70 lm/W (circuit watts)
- Heat Management System, making products superior and reliable
- Smarter Thermal Dimming to protect LED lifetime and safeguard property
- Equivalent to 70/150W MH, 250W halogen, 500W incandescent

Note: fixture is part of LED lamp design.



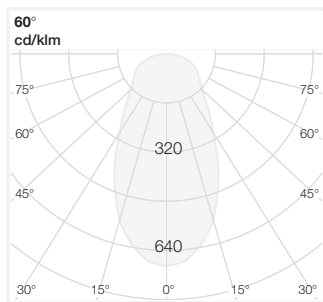
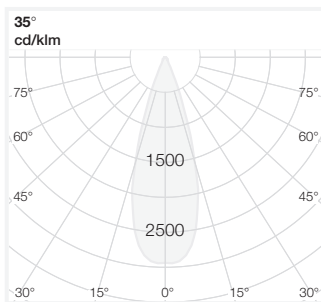
Details Specification

Family type	LSLR Series
Light source	LED
Light colour	Warm white—3000K, cool white—4500K
Power consumption	LED engine—37W, System total (LED module)—43W
Mains voltage	220 - 265V / 50 Hz
Driver	Supplied with LED48V100CC external driver, phase dimmable.
Colour options	White (fixture part of lamp design)
Lifetime	50,000 hours (70% lumen maintenance at Ta = 25C)
Dimming	Clipsal Universal and C-Bus Dimmers.
Intensity (cd)	Warm white - 7607, cool white - 8674
Luminous flux (lm)	Warm white - 2590, cool white - 2950
CRI	Warm white - 86, cool white - 85
Beam angle	Medium—35°
Materials	Aluminium, plastic
Fire safety	Glow wire test 850 C, UL94V-0, VW-1
Flammability mark	F
IP code	IP 20
Safety class	Class 2
Standards	IEC 60598-1, IEC 61347-2-13
Regulatory markings	CE, CB, C-Tick, SIRIM

Ordering Matrix

Cat. No.	Description
LSLRC37WH	37W Rectangle Shop Lighter - cool white lamp in white fitting
LSLRW37WH	37W Rectangle Shop Lighter - warm white lamp in white fitting

Light Dispersion Chart



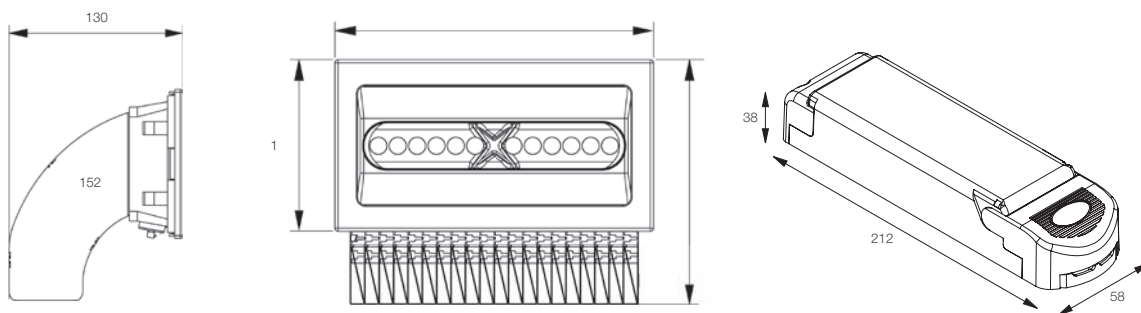
35°, 4500K		
0.5	0.29	E(0°) 34694 E(C0) 16.2° 15400
1.0	0.58	E(0°) 8674 E(C0) 16.2° 3850
1.5	0.87	E(0°) 3855 E(C0) 16.2° 1711
2.0	1.16	E(0°) 2168 E(C0) 16.2° 962
2.5	1.45	E(0°) 1388 E(C0) 16.2° 616
3.0	1.74	E(0°) 964 E(C0) 16.2° 428

Distance [m] Cone Diameter [m] Illuminance [lx]
—C0 - C180 (Half-value Angle: 32.4°)

60°, 4500K		
0.5	0.53	E(0°) 8102 E(C0) 28.0° 2790
1.0	1.06	E(0°) 2025 E(C0) 28.0° 697
1.5	1.60	E(0°) 900 E(C0) 28.0° 310
2.0	2.13	E(0°) 506 E(C0) 28.0° 174
2.5	2.66	E(0°) 324 E(C0) 28.0° 112
3.0	3.19	E(0°) 225 E(C0) 28.0° 77

Distance [m] Cone Diameter [m] Illuminance [lx]
—C0 - C180 (Half-value Angle: 56.0°)

Dimensions (mm)



LED Lighting

Fixtures



Clipsal's range of LED fittings are compatible with both the L900 and LP900 series LED light modules. Whether you are retrofitting or installing new, these fixtures are compatible with most existing industry standard cut-outs and have been specifically purpose-designed, tested and produced to provide the best possible marriage between Clipsal LED light modules and their environment.

Choose from our range of contemporary fittings that have been architecturally designed to suit today's modern building interiors. Now the appearance of your light fittings can be as advanced as the technology of your light source.

Features

- These fittings are specifically designed for the Clipsal L900 and LP900 series products
- The round and square gimbal fittings are designed with a thermal seal. This reduces the air in the room escaping into the ceiling and stops what is in the ceiling entering the room
- Architecturally designed with low glare options
- Designed to replace existing fittings with quick installation and no costly modifications required

Module Compatibility



Cat. No.	8W	12W	15W	28W	37W
L900F1	✓	✓			
L900F2	✓	✓	✓		
L900F3	✓	✓	✓		
L900F4	✓	✓	✓		
L900F5	✓	✓	✓		
L900F6	✓	✓	✓		
L900F7	✓	✓	✓		
L900F8	✓	✓	✓		
L900F9	✓	✓	✓		
L900F10	✓	✓	✓		
L900F11	✓	✓	✓		
L900F12	✓	✓	✓		
L900F13	✓	✓	✓		
L900F14				✓	
L900F15			✓	✓	✓
L900F16	✓	✓			
L900F17			✓	✓	✓
L900F18			✓	✓	✓

Example

To ensure that you get your desired combination, simply select the light module of your choice and match it with the fixture of your choice.



LP960W28
28W Light Module



L900F18
Light Fixture



LED Lighting

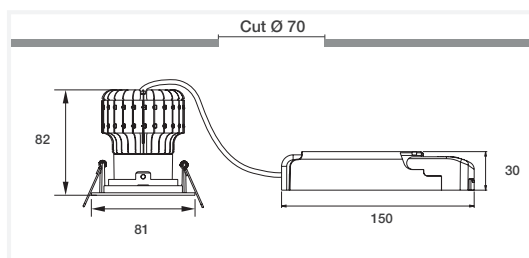
Fixtures

Round fixed downlight fixture - traditional

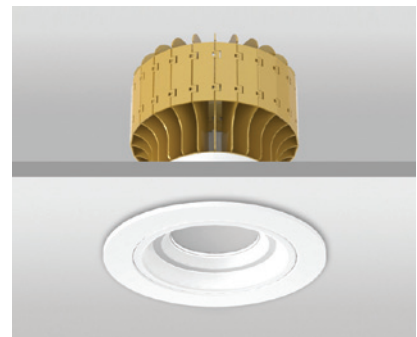
Features

- 70mm cutout
- Cast aluminium construction, gloss white (RAL9003) or brushed chrome finish
- Symmetrical light beam distribution

Dimensions (mm)



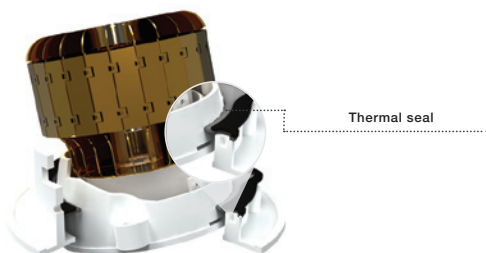
L900F1



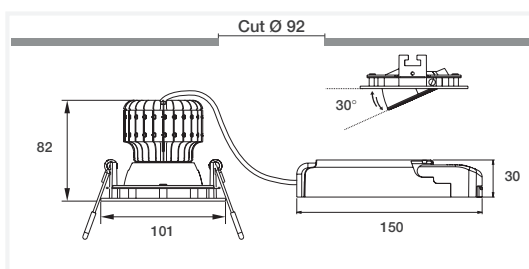
Round gimbal downlight fixture - traditional

Features

- 92mm cutout
- Cast aluminium construction, gloss white (RAL9003) or brushed chrome finish
- Symmetrical light beam distribution



Dimensions (mm)



L900F2

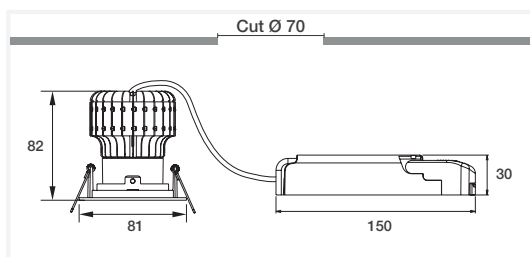


Square fixed downlight fixture - traditional

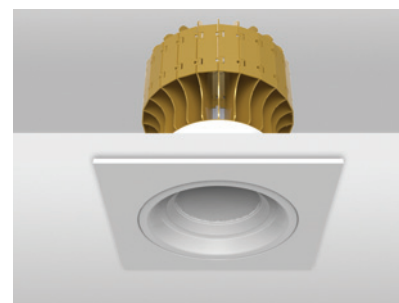
Features

- 70mm cutout
- Cast aluminium construction, gloss white (RAL9003) or brushed chrome finish
- Symmetrical light beam distribution

Dimensions (mm)



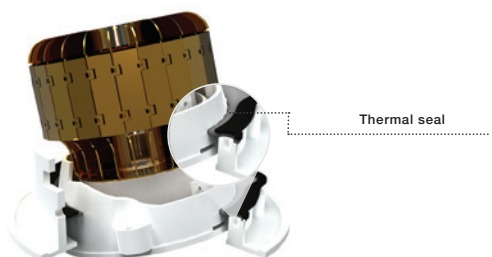
L900F3



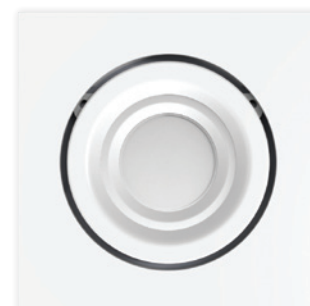
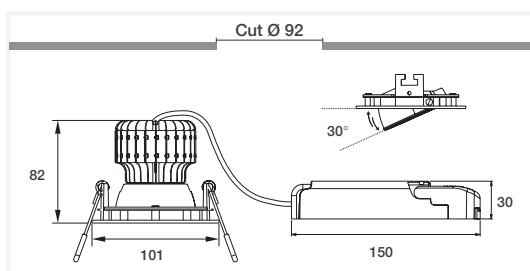
Square gimbal downlight fixture - traditional

Features

- 92mm cutout
- Cast aluminium construction, gloss white (RAL9003) or brushed chrome finish
- Symmetrical light beam distribution



Dimensions (mm)



L900F4



LED Lighting

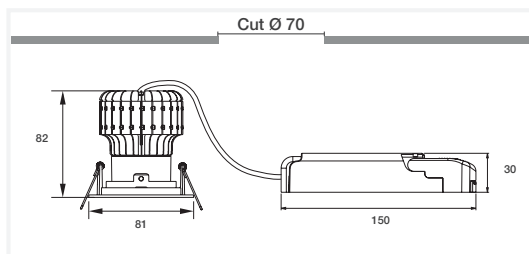
Fixtures

Round recessed downlight fixture - no lens

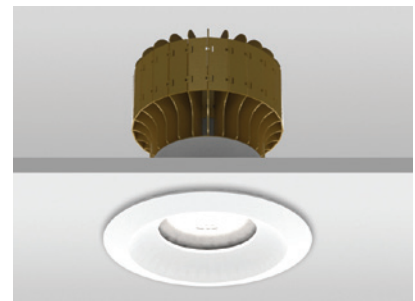
Features

- 70mm cutout
- PBT construction, matte white or matte silver finish
- Symmetrical light beam distribution

Dimensions (mm)



L900F5

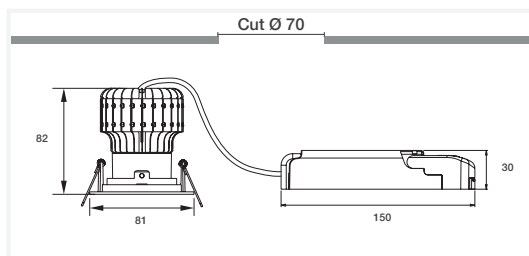


IP54 round recessed downlight fixture - with lens

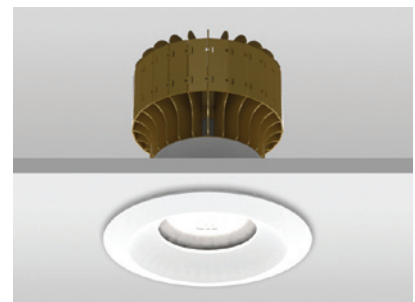
Features

- 70mm cutout
- PBT construction, matte white or matte silver finish
- IP54 glass face
- Symmetrical light beam distribution

Dimensions (mm)



L900F6

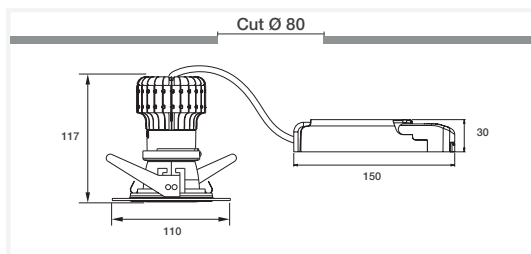


Round cavity downlight fixture - recessed lamp

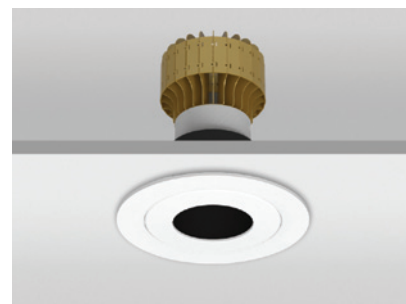
Features

- 80mm cutout
- Cast aluminium construction, gloss white (RAL9003) or brushed chrome finish
- Symmetrical light beam distribution

Dimensions (mm)



L900F7

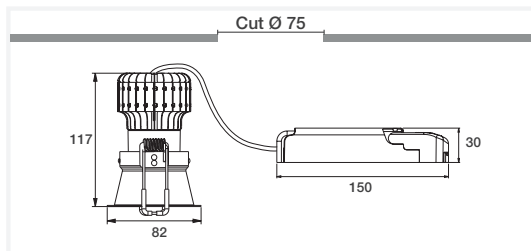


Round trimless downlight fixture - reduced glare

Features

- 75mm cutout
- Cast aluminium construction, gloss white (RAL9003)
- Symmetrical light beam distribution

Dimensions (mm)



L900F8



LED Lighting

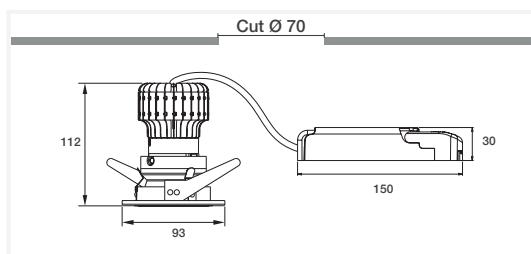
Fixtures

Round architectural downlight fixture - reduced glare

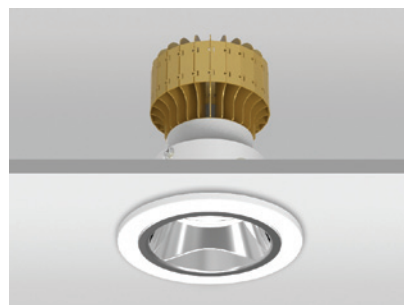
Features

- 70mm cutout
- Anti-glare fixture
- Symmetrical light beam distribution

Dimensions (mm)



L900F9

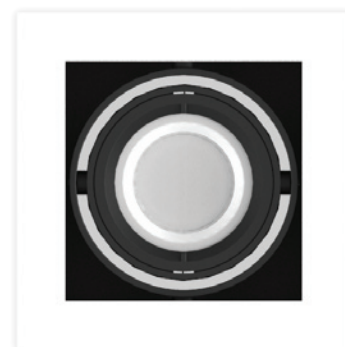
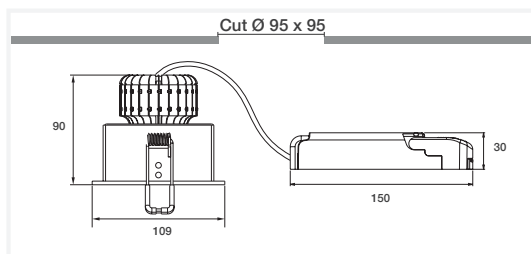


Square baffle downlight fixture - single

Features

- 95 x 95mm cutout
- Lightweight design
- Symmetrical light beam distribution

Dimensions (mm)



L900F10

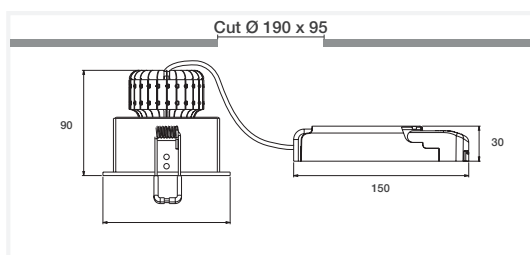


Square baffle downlight fixture - double

Features

- 190 x 95mm cutout
- Lightweight design
- Symmetrical light beam distribution

Dimensions (mm)



L900F11

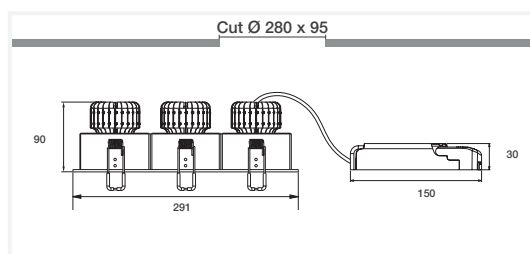


Square baffle downlight fixture - triple

Features

- 280 x 95mm cutout
- Lightweight design
- Symmetrical light beam distribution

Dimensions (mm)



L900F12



LED Lighting

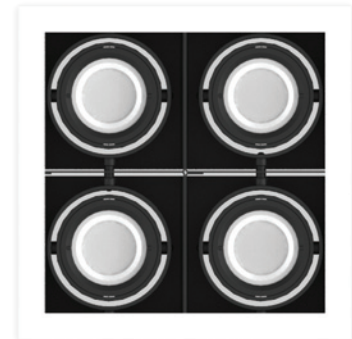
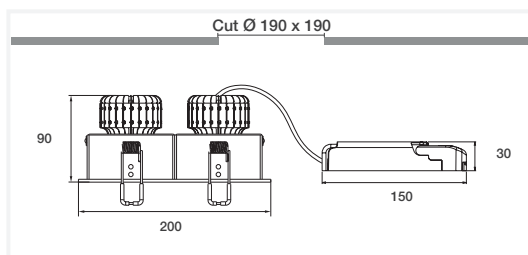
Fixtures

Square baffle downlight fixture - quad

Features

- 190x190mm cutout
- Lightweight design
- Symmetrical light beam distribution

Dimensions (mm)



L900F13

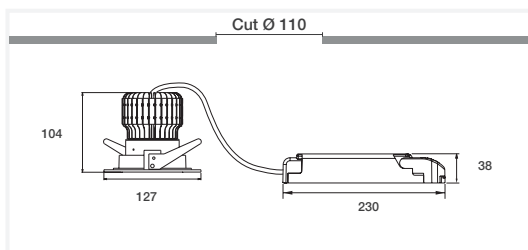


Round shoplighter medium fixture - gimbal

Features

- 90mm cutout
- Cast aluminium construction, gloss white (RAL9003)
- Symmetrical light beam distribution

Dimensions (mm)



L900F14

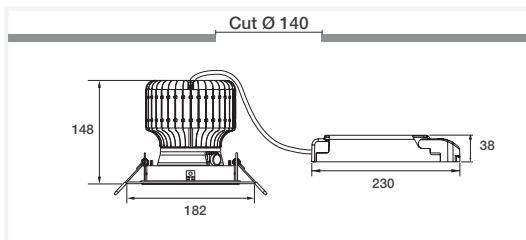


Round shoplighter large fixture - gimbal

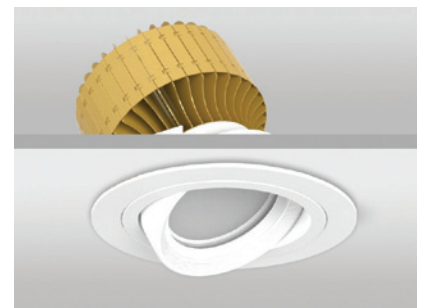
Features

- 140mm cutout
- Cast aluminium construction, gloss white (RAL9003) or brushed chrome finish
- Symmetrical light beam distribution
- Adjustable gimbal luminaire

Dimensions (mm)



L900F15

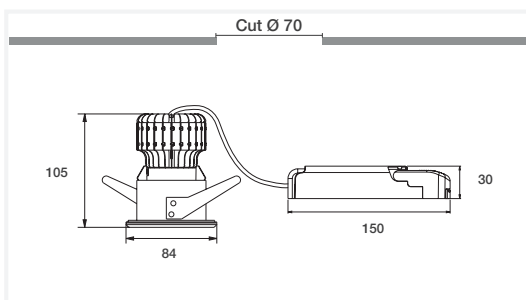


Round IP54 fixed downlight fixture

Features

- 68mm cutout
- Cast aluminium construction, white or brushed chrome finish
- Symmetrical light beam distribution
- Anti-glare fixture
- IP rating 54

Dimensions (mm)



L900F16



LED Lighting

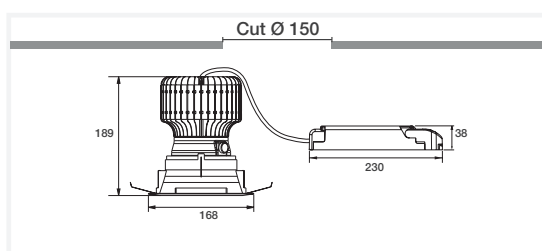
Fixtures

Round commercial medium fixture - recessed

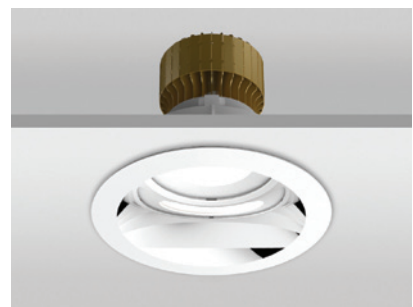
Features

- 150mm cutout
- Symmetrical light beam distribution
- Aesthetically pleasing 0.9mm thin white trim

Dimensions (mm)



L900F17

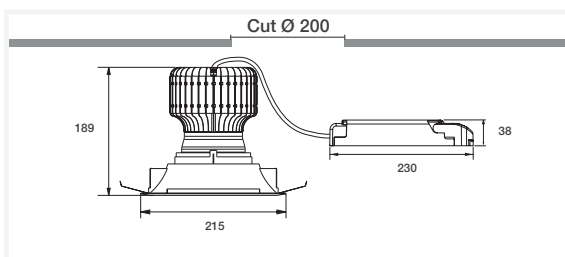


Round commercial large fixture - recessed

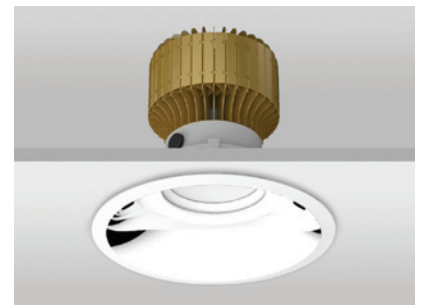
Features

- 200mm cutout
- Symmetrical light beam distribution
- Aesthetically pleasing 0.9mm thin white trim

Dimensions (mm)



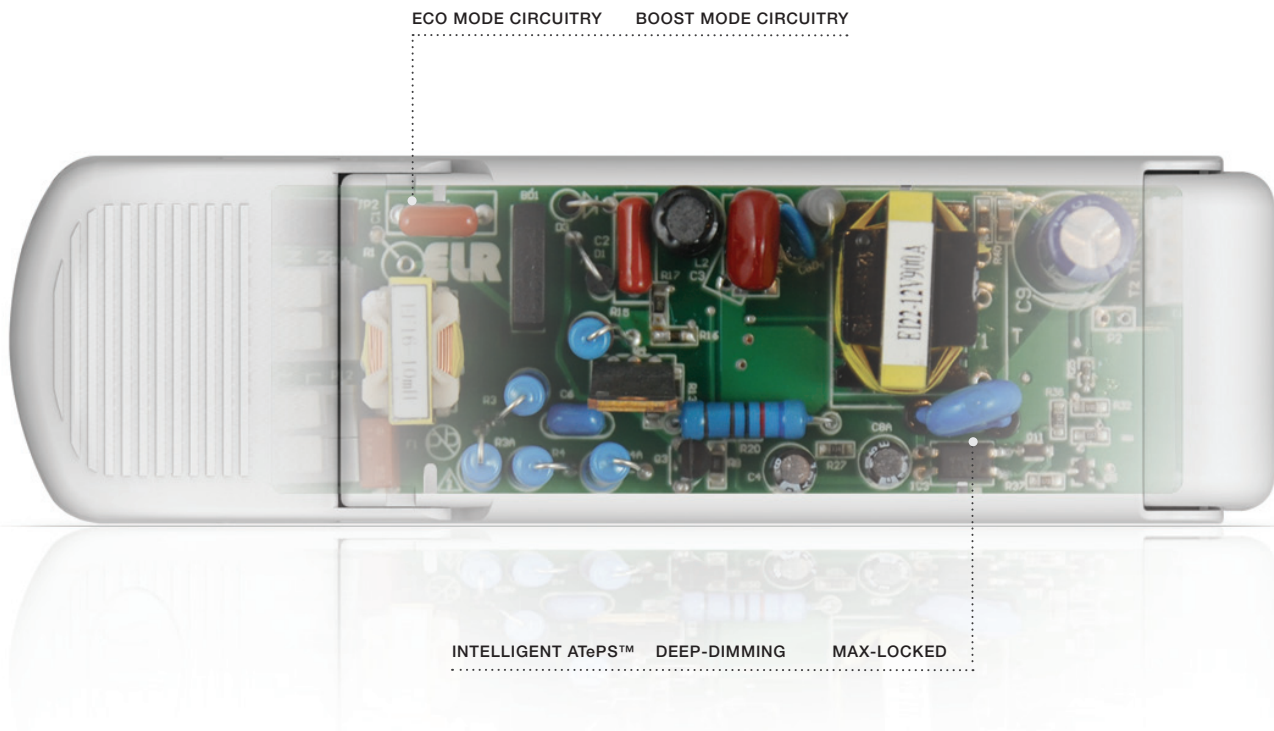
L900F18



LED Lighting

LED Drivers

LED Driver



Greater Phase Dimming Compatibility

Some LED drivers have a single focus on efficiency. As a result they may become incompatible with modern dimming technology. Clipsal's approach is to not only develop class leading efficiency, but to ensure consistent and accurate, flicker-free dimming across its dimmer range.

Automated Thermal Protection System

This is an intelligent combination of superior materials, electronics and heat management firmware. The heart of this system is Clipsal's proprietary smart electronics and feedback system, that controls the optimum performance of Clipsal's advanced aluminium heat sink, for the best possible heat conductivity even in challenging environments.

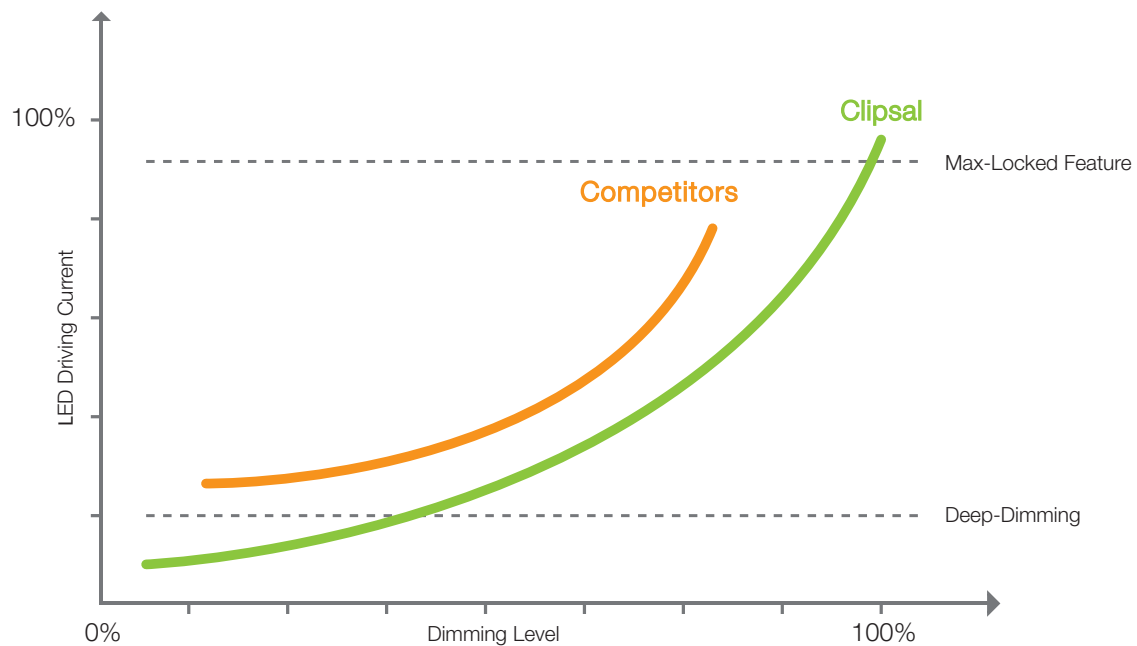
The system proactively monitors the temperature of the LED engine during operation. Should the temperature exceed safe working thresholds due to environmental or poor installation conditions, the system automatically regulates the LED engine's temperature through algorithmic fine tuning of output power, without any user intervention.

Dual Mode LED Driver

With a vast variety of phase dimmers available on the market today, Clipsal implemented a unique dual-mode feature into the LED driver. This dual-mode feature provides greater compatibility with a wider range of phase dimmers.

DALI Dimmable

Clipsal offers optional LED drivers suitable for DALI digital dimming, providing further flexibility and encompassing all installation applications. Unlike conventional DALI dimming drivers, our drivers are designed specifically around our LED modules, in accordance with EN 62386 and offer additional monitoring parameters, such as voltage, current, operating hours, LED engine temperature and energy consumption.



Eco Mode | FN1

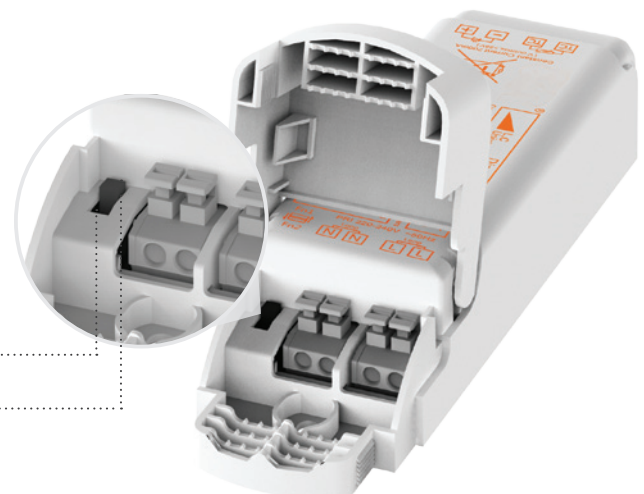
- Highest efficiency
- Compatible with high-end dimmers featuring good EMI suppression.
- Ideal for universal and trailing edge type phase dimmers

Compatibility Mode | FN2

- Increased phase dimmer compatibility
- Ideal for leading edge type phase dimmers

COMPATIBILITY MODE | FN2

ECO MODE | FN1



LED Lighting

LED Drivers

Phase Dimmable LED Driver for 8W and 12W

Phase Dimmable, Deep Dimming, Thermal Dimming and Max Locked

- Superior constant current over wide input voltage range
- Max-locked—superior constant current over wide selection of dimmers
- Linear output signal with no flickering
- Open-circuit protection
- Short-circuit protection with automatic restart
- Strain relief for both mains and LED engine wiring
- Loop-in, loop-out a.c. connector for quick wiring
- Quick connect, push-down terminal blocks suitable for 0.5-2.5mm² mains wiring
- Smart connector ensures polarity for LED module
- Dual-mode deep-dimming—wide dimmer switch compatibility covering leading edge, trailing edge, and universal with deep dimming down to 0.1%
- Built-in active Automatic Thermal Protection System for LED modules to ensure best LED lifetime guaranteed, and fire hazard safety



Cat. No.	■ 8W	■ 12W
	LED12V90CC	LED24V70CC
Efficiency	~75%	~83%
Output current	900 mA	700 mA
Output current tolerance	+/- 3%	+/- 3%
Rated supply voltage	220 - 240V	220 - 240V
Rated current (at 230V 50Hz)	48 mA	77 mA
Input voltage, d.c.	170 - 320V	170 - 320V
Mains frequency	0 / 50 / 60 Hz	0 / 50 / 60 Hz
PF at 230V / 50 Hz	> 0.9	> 0.9
THD	18%	18%
Dimming range	5% ~ 100% with smooth operation	
PWM frequency	Linear	Linear
Turn on time at full current	< 0.5 s	< 0.5 s
Turn on time at dimmest current	< 1 s	< 1 s
Turn off time at full current	< 0.5 s	< 0.5 s
Turn off time at dimmest current	< 0.5 s	< 0.5 s
Ta operating (at lifetime 50,000 h)	-25 ... +40C	-25 ... +40C
Max. casing temperature	+75 C	+75 C
Storage temperature	-25 ... +60C	-25 ... +60C
Weight	88g	88g
Dimensions L x W x H	151 x 43.5 x 32mm	151 x 43.5 x 32mm
Fixing hole diameter	4.3mm	4.3mm
Automatic Thermal Protection System	Yes - linearly dim down according to close loop thermal feedback control link with LED module	
Dimming control	Phase RLC	Phase RLC

For the latest specifications please refer to the website.

Phase Dimmable LED Driver for 15W, 28W and 37W

Phase Dimmable, Deep Dimming, Thermal Dimming and Max Locked

- Superior constant current over wide input voltage range
- Max-locked—superior constant current over wide selection of dimmers
- Linear output signal with no flickering
- Open-circuit protection
- Short-circuit protection with automatic restart
- Strain relief for both mains and LED engine wiring
- Loop-in, loop-out a.c. connector for quick wiring
- Quick connect, push-down terminal blocks suitable for 0.5-2.5mm 2 mains wiring
- Smart connector ensures polarity for LED module
- Dual-mode deep-dimming—wide dimmer switch compatibility covering leading edge, trailing edge, and universal with deep dimming down to 0.1%
- Built-in active Automatic Thermal Protection System for LED modules to ensure best LED lifetime guaranteed, and fire hazard safety



Cat. No.	■ 15W	■ 28W	■ 37W
	LED24V90CC	LED36V100CC	LED48V100CC
Efficiency	~85%	~85%	~86%
Output current	1 A	1 A	1 A
Output current tolerance	+/- 3%	+/- 3%	+/- 3%
Rated supply voltage	220 - 240V	220 - 240V	220 - 240V
Rated current (at 230V 50Hz)	98 mA	147 mA	194 mA
Input voltage, d.c.	170 - 320V	170 - 320V	170 - 320V
Mains frequency	0 / 50 / 60 Hz	0 / 50 / 60 Hz	0 / 50 / 60 Hz
PF at 230V / 50 Hz	> 0.9	> 0.9	> 0.9
THD	< 20%	20%	20%
Dimming range	5% ~ 100% with smooth operation		
PWM frequency	Linear	Linear	Linear
Turn on time at full current	< 0.5 s	< 0.5 s	< 0.5 s
Turn on time at dimmest current	< 1 s	< 1 s	< 1 s
Turn off time at full current	< 0.5 s	< 0.5 s	< 0.5 s
Turn off time at dimmest current	< 0.5 s	< 0.5 s	< 0.5 s
Ta operating (at lifetime 50,000 h)	-25 ... +40C	-25 ... +45C	-25 ... +45C
Max. casing temperature	+75 C	+75 C	+75 C
Storage temperature	-25 ... +60C	-25 ... +60C	-25 ... +60C
Weight	260g		
Dimensions L x W x H	212 x 58 x 38mm	212 x 58.5 x 38mm	212 x 58.5 x 38mm
Fixing hole diameter	4.3mm x 2	4.3mm x 2	4.3mm x 2
Automatic Thermal Protection System	Yes - linearly dim down according to close loop thermal feedback control link with LED module		
Dimming control	Phase RLC	Phase RLC	Phase RLC

For the latest specifications please refer to the website.

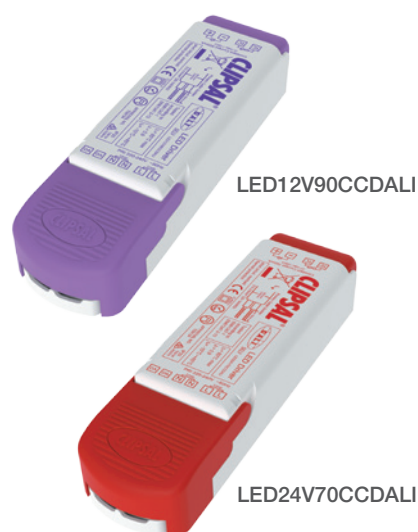
LED Lighting

LED Drivers

DALI Dimmable LED Driver for 8W and 12W

DALI Dimmable, Advanced monitoring and Thermal Dimming

- Superior constant current over wide input voltage range
- Programmable dimming range
- Linear output signal with no flickering
- Open-circuit protection
- Short-circuit protection with automatic restart
- Strain relief for both mains and LED engine wiring
- Loop-in, loop-out a.c. connector for quick wiring
- Quick connect, push-down terminal blocks suitable for 0.5-2.5mm 2 mains wiring
- Smart connector ensures polarity for LED module
- Built-in active Automatic Thermal Protection System for LED modules to ensure best LED lifetime guarantee, and fire hazard safety
- Designed in accordance with EN62386
- Additional advanced monitoring parameters including voltage, current, LED engine temperature, operating hours and energy consumption



Cat. No.	■ 8W Driver	■ 12W Driver
	LED12V90CCDALI	LED24V70CCDALI
Efficiency	~75%	~83%
Output current	900 mA	700 mA
Output current tolerance	+/- 3%	+/- 3%
Rated supply voltage	220 - 240V	220 - 240V
Rated current (at 230V 50Hz)	48 mA	77 mA
Input voltage, d.c.	170 - 320V	170 - 320V
Mains frequency	0 / 50 / 60 Hz	0 / 50 / 60 Hz
PF at 230V / 50 Hz	> 0.9	> 0.9
THD	18%	18%
Dimming range	0.1% ~ 100%	0.1% ~ 100%
PWM frequency	Linear	Linear
Turn on time at full current	< 0.5 s	< 0.5 s
Turn on time at dimmest current	< 1 s	< 1 s
Turn off time at full current	< 0.5 s	< 0.5 s
Turn off time at dimmest current	< 0.5 s	< 0.5 s
Ta operating (at lifetime 50,000 h)	-25 ... +40C	-25 ... +40C
Max. casing temperature	+75 C	+75 C
Storage temperature	-25 ... +60C	-25 ... +60C
Weight	88g	88g
Dimensions L x W x H	151 x 43.5 x 32mm	151 x 43.5 x 32mm
Fixing hole diameter	4.3mm	4.3mm
Automatic Thermal Protection System	Yes - linearly dim down according to close loop thermal feedback control link with LED module	
Dimming control	DALI	DALI

For the latest specifications please refer to the website.

DALI Dimmable LED Driver for 15W, 28W and 37W light modules

DALI Dimmable, Advanced monitoring and Thermal Dimming

- Superior constant current over wide input voltage range
- Programmable dimming range
- Linear output signal with no flickering
- Open-circuit protection
- Short-circuit protection with automatic restart
- Strain relief for both mains and LED engine wiring
- Loop-in, loop-out a.c. connector for quick wiring
- Quick connect, push-down terminal blocks suitable for 0.5-2.5mm 2 mains wiring
- Smart connector ensures polarity for LED module
- Built-in active Automatic Thermal Protection System for LED modules to ensure best LED lifetime guarantee, and fire hazard safety
- Designed in accordance with EN62386
- Additional advanced monitoring parameters including voltage, current, LED engine temperature, operating hours and energy consumption



	■ 15W Driver	■ 28W Driver	■ 37W Driver
Cat. No.	LED24V90CCDALI	LED36V70CCDALI	LED48V100CCDALI
Efficiency	~85%	~85%	~86%
Output current	1 A	700 mA	1 A
Output current tolerance	+/- 3%	+/- 3%	+/- 3%
Rated supply voltage	220 - 240V	220 - 240V	220 - 240V
Rated current (at 230V 50Hz)	98 mA	96 mA	194 mA
Input voltage, d.c.	170 - 320V	170 - 320V	170 - 320V
Mains frequency	0 / 50 / 60 Hz	0 / 50 / 60 Hz	0 / 50 / 60 Hz
PF at 230V / 50 Hz	> 0.9	> 0.9	> 0.9
THD	< 20%	< 20%	< 20%
Dimming range	0.1% ~ 100%	0.1% ~ 100%	0.1% ~ 100%
PWM frequency	Linear	Linear	Linear
Turn on time at full current	< 0.5 s	< 0.5 s	< 0.5 s
Turn on time at dimmest current	< 1 s	< 1 s	< 1 s
Turn off time at full current	< 0.5 s	< 0.5 s	< 0.5 s
Turn off time at dimmest current	< 0.5 s	< 0.5 s	< 0.5 s
Ta operating (at lifetime 50,000 h)	-25 ... +40C	-25 ... +45 C	-25 ... +45 C
Max. casing temperature	+75 C	+75 C	+75 C
Storage temperature	-25 ... +60C	-25 ... +60 C	-25 ... +60 C
Weight	260g		
Dimensions L x W x H	212 x 58 x 38mm	212 x 58.5 x 38mm	212 x 58.5 x 38mm
Fixing hole diameter	4.3mm x 2	4.3mm x 2	4.3mm x 2
Automatic Thermal Protection System	Yes - linearly dim down according to close loop thermal feedback control link with LED module		
Dimming control	DALI	DALI	DALI

For the latest specifications please refer to the website.

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