

All downlights must be installed by a licensed electrical contractor or similar qualified person. Read through these instructions completely before commencing installation.

1 Installation

1. Cut-out hole in the ceiling to size out lined in the product manual.
2. Set the colour temperature (if the option is available via HPM Connect App or Switch).
2. Connect mains cable (Ensure power is disconnected from 240 V supply wiring before connecting mains cable).
3. Any protective covering must be removed.
4. Fold back spring clips and insert into cut-out.

2 Advantages of LED

- High efficiency (up to 80% energy saving)
- Instant 'ON'
- Long life when compared with traditional incandescent/halogen filament lamps.

There is a lot of incorrect information about LED lamp life in the market today. The lamp life of the LED lamp is determined by many factors: voltage, environmental conditions, etc. The most important factor that determines a LED lamp life is the **OPERATING TEMPERATURE**. It is important to know that the LED Lamp operating temperature is a factor that you as the customer have a degree of control over, by instructing the electrical contractor who is installing your fitting, about the installation type you require. (Please see diagrams below)

Operating temperature significantly determines the life of an LED lamp or LED fixture. Most LED lamps from reputable suppliers state a rated average lamp life at 25°C ambient temperature.

Therefore, at HPM we would like to give you as much information as possible when installing your LED downlight kits to get the best results.

Below, you will see an example of how different types of installation can affect the operating temperature of the LED lamp and the resultant effect this has on the rated average life of the LED Lamp.

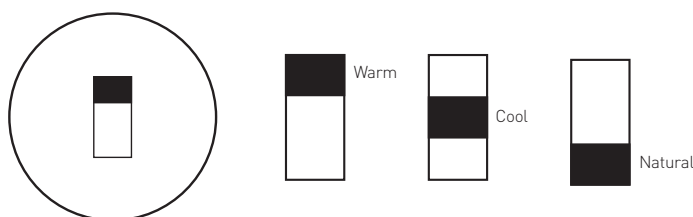
3 Some Important Facts about LED Lighting

- Due to the different qualities of LED lamps, wattage is no longer a good guide for the amount of light generated by the LED Lamp. Total Light output of a lamp is called '**LUMENS**'.
- Lumens are the quantity you should be purchasing, not Watts. When purchasing an LED lamp, you are purchasing a volume of light to meet your task required, not the power (Watts) it consumes.
- As a reference for the future:

60W Standard Globe 240V (GLS)	650 Lumens [^]
50W 240V Halogen Reflector Lamp (GU10 Base)	350 Lumens [^]
50W 12V Halogen Reflector Lamp (MR16 Base)	750 Lumens [^]
- LED Lamps come in many hues of white. This is called '**colour temperature**'.
 - 3000K Warm White: This colour is traditionally used for domestic dwellings and is similar to the colour of light from incandescent lamps.
 - 4000K Cool White: This colour is very white and it creates a very crisp clean fresh atmosphere.
 - 5000K Natural White: This colour is paper white for a very crisp clean environment.
- LED lamps comes with various levels of colour rendering. This is the measure of the lamp light to accurately reproduce colours. This is called '**Colour Rendering Index - CRI**'.
 - CRI < 70 Colour Reproduction is not very good
 - 70 < CRI < 80 Colour Reproduction is Good
 - CRI > 80 Colour Reproduction is Very Good

4 Colour temperature select (if available)

Set the selector switch in the desired colour temperature.



5 Dimmable Downlights Only

The HPM LED downlights are dimmable* with Trailing and Leading Edge dimmers. We recommend the following dimmers only.

Legrand Excel Life EM400A3P	Max. 8 per HPM EM400A3P	Dimming Range 100%-5%
Legrand Excel Life EM250T/250L	Max. 5 per Legrand EM250T	Dimming Range 100%-10%
Legrand Excel Life EM400T/400L	Max. 8 per Legrand EM400T	Dimming Range 100%-10%
Legrand Arteor AR400T/400L	Max. 8 per Legrand AR400T	Dimming Range 100%-10%
Legrand Arteor AR400A3P	Max. 8 per Legrand AR400A3P	Dimming Range 100%-5%
HPM 250T/250L	Max. 5 per HPM 250T	Dimming Range 100%-10%
HPM 400T/400L	Max. 8 per HPM 400T	Dimming Range 100%-10%
HPM 700T/700L	Max. 14 per HPM 700T	Dimming Range 100%-25%
HPM 1000T/1000L	Max. 20 per HPM 1000T	Dimming Range 100%-25%

* Dimmable only with the Trailing and Leading Edge Dimmer types listed.

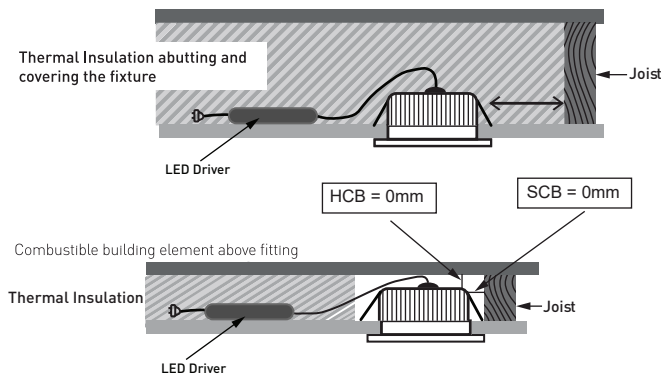
6 Insulation Rating

A type IC, IC-4 and IC-F luminaire can be installed with building insulation material that can safely be exposed continuously to temperatures up to 90°C. Such insulation can cover and abut the side of the luminaire.

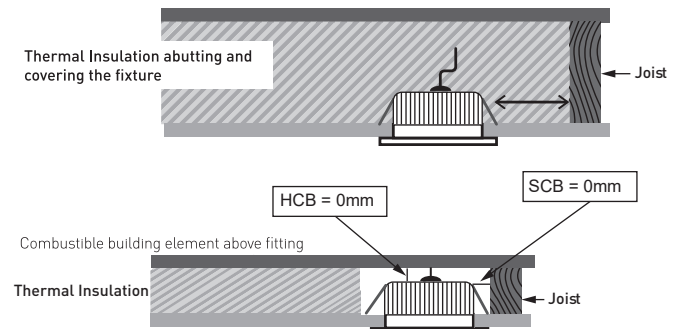


Refer to the diagram below for clarification.

(Showing Downlight with external Driver)



(Showing Downlight with Integrated Driver)



Note: Not suitable for use with loose - fill insulation.

If installed in accordance with the IC, IC-4 and IC-F rating, insulation shall have a minimum temperature rating of 90°C.

LED driver can be placed under insulation, however the driver's lifespan will be affected.

**RISK OF FIRE - Required clearance from structural members and building elements.
(SCB and HCB = 0mm)**

SCB - Side Clearance to Building element: Minimum distance between the side of the recessed luminaire and any building element.

HCB - Height Clearance to Building element: Minimum distance between the top of the recessed luminaire and any building element above it.

- Dimmable only with the Trailing Edge Dimmer types listed above in dimmer section. Using the Driver with any dimmer type not specified, will result in poor performance and reduced life.
- Lumen values quoted are typical and can vary at different colour temperatures and between manufacturers.
- Installation must be by a Registered Electrical Contractor.

7 Maintenance / Cleaning

All downlights should only be cleaned with a damp cloth. Cleaning agents and solvents should not be used.

8 LED Downlight Lamp Life

Please refer to the product manual for Rated Average Lamp LED Life @25°C when installed with the default insulation clearances specified by AS/NZS 3000 or when installed with the thermal insulation abutting and covering the fixture in accordance with the IC, IC-4 & IC-F rating specified in AS/NZS 60598.2.2.