

## AT9012 FR

12W LED Fire Rated Downlight With Dimmable

### Driver

- Ideal for residential, retail, showroom and decorative lighting applications
- Acoustic rating according to AS/NZS ISO 717.1:2004
- Fire rating FRL<sub>120/120</sub> in accordance with AS 1530.4:2014.
- Simulated ceiling fire resistance test of Horizontal separating elements - Section 4 - 4.1.2 Part (e) Ceiling system.
- Assessment of site installation suitability recommended by accredited person (Fire Assessor) prior to purchase.
- Supplied with a dimmable LED driver
- Long life and durability
- Suitable for 24 hour use

### ORDERING INFORMATION

<b>Order code</b>	11434
<b>Description</b>	12W LED Fire rated Downlight w/Dimm Driver - 120o beam - Warm White - IP65
<b>Driver Power</b>	12 W
<b>Driver Type</b>	Dimmable ( Phase cut)
<b>Item Code</b>	AT9012/WH/FR/WW

### EFFICIENCIES

**Total System Efficiency** 81 lm/W

The performance of each component of a luminaire is demonstrated through its efficiencies, which together determine the total system efficiency of the product. The output of the LED chip is first multiplied by the optical and thermal efficiencies to calculate the Luminaire efficiency. However, this calculation does not consider the driver efficiency. To determine the overall efficiency of the system, the Luminaire efficiency must be multiplied by the driver efficiency, which accounts for all losses in the system.

### MECHANICAL

<b>Adjustability</b>	Fixed
<b>Body Material</b>	Aluminium
<b>Product Finish</b>	Powder coated
<b>Fitting Colour</b>	White
<b>IC Rating</b>	IC-4

IC-4 rating has been conducted at the products maximum working Temperature Range (C) in line with Australian standards. This provides the required safety when covered with insulation and used in Australian Environments.



<b>Installation Type</b>	Recessed
<b>IP Rating</b>	IP65 Front Face Only

### ELECTRICAL

<b>Electrical Rating</b>	Class II
<b>Input Frequency</b>	50 Hz
<b>Input voltage</b>	230Vac

In Australia the Input voltage is defined as 230Vac -6%/+10%. This effectively means that the voltage range of these products are 216Vac - 253Vac or 240V +6%

<b>Maximum Wattage</b>	12 W
<b>Power Factor</b>	0.9
<b>Switch Type</b>	Inline
<b>System Max Wattage</b>	12 W
<b>Working Temp Range</b>	0 to 40 °C

### LAMP

<b>Macadam Steps (SDCM)</b>	5-step MacAdam Ellipse
<b>Beam Angle</b>	120 °
<b>CCT Configuration</b>	Single
<b>Colour Rendering Index (CRI)</b>	>80
<b>Lamp/LED Current</b>	350 mA
<b>LED Type</b>	Diffused
<b>Number of Lamps</b>	1

## LED LIFETIME

<b>LED Lifetime</b>	102000 hrs
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This is the Reported LED Lifetime in Hours based on TM-21. Atom does not list the projected or calculated LED lifetime, which is normally longer as TM-21 Addendum B explicitly states "The Calculated and Projected Lp(Dk) are not to be reported". This Lifetime refers to the life of a single LED however the system life is longer since the probability and binomial distribution of all LEDs in the system means that the average led is performing above the specification and compensates for the LEDs falling below.

<b>LED Lifetime Rating</b>	L70B10
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<b>Ambient Temp (°C)</b>	25 °C	40 °C
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<b>L90B10</b>	55000 hrs	54000 hrs
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This rating defines the performance of the led within its lifetime. L relates to lumen depreciation, where the proceeding number gives the resultant lumen output at the end of it reported lifetime. L70, would mean 70% lumen depreciation which means 70% of its initial output and is tested accordingly to TM-21. The B part refers to failures, which can be define as the percentage of LEDs which fall below the L value in the projected lifetime. A value of B10 refers to 10% failure and a value of B50 refers to 50% failure. After the defined lifetime, the system will reach the defined lumen depreciation and the average led failures is defined by the B rating. The B rating is defined in and tested to IEC62717.

<b>TM-21 Test Hours</b>	17000 hrs
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## COLOUR TEMPERATURE

<b>CCT</b>	3000 K
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<b>CCT Colour</b>	Warm White
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<b>Luminaire Lumens</b>	995 lm
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All photometric data has a tolerance of  $\pm 10\%$ . Luminaire lumens refers to the exit lumens or delivered lumens from the luminaire.

## DRIVER

<b>Dimmable</b>	Yes
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<b>Driver Code</b>	10974
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<b>Driver Included</b>	Yes
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<b>Integrated Driver</b>	No
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<b>Driver Type</b>	Dimmable ( Phase cut)
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<b>Driver Warranty</b>	3 Yr
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<b>Flex &amp; Plug or Lead Length</b>	120 mm
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<b>Wiring Type</b>	Re-wireable Flex & Plug (2 pin)
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## ENERGY SAVINGS SCHEME

<b>Ipart Approval</b>	Yes
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<b>REES Approval</b>	Yes
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<b>VEU Approval</b>	Yes
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## COMPLIANCE

<b>Standards</b>	AS/NZS 60598.1 AS/NZS 60598.2.2 AS/NZS 61347.1 AS/NZS 61347.2.13 AS CISPR 15 AS 1530.4:2014
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## WARRANTY

<b>Domestic Use Warranty</b>	3 RTB (Total 3 Years)
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<b>Operational Lifetime</b>	30000 hrs
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<b>VIP Warranty</b>	2 Onsite, 3 RTB (Total 5 Years)
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VIP warranty is available to registered users and is subjected to additional terms and conditions.

## DIMENSIONS

<b>Cutout</b>	92 mm
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<b>Product Diameter</b>	110 mm
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<b>Product Height</b>	38 mm
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## LINE DRAWINGS

### AT9012/FR

## PHOTOMETRICS

### AT9012/WH/FR/WW

## ACCESSORIES

<b>Order code</b>	10121
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<b>Description</b>	140mm Downlight Extension Plate - White
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<b>Item Code</b>	AT9018/WH
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<b>Order code</b>	10130
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<b>Description</b>	170mm Downlight Extension Plate - White
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<b>Item Code</b>	AT9019/WH
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## Recommended Drivers

Order code	Item Code	Description
14929	<b>DK1-0AABBHZX00035</b>	Driver Kit - Wireless DALI+ LED driver with 1.2m 2 core flex and plug - set to 350mA
14911	<b>DK1-0AADADZX00035</b>	Driver Kit - DALI-2 LED driver with 1.2m 2 core flex and plug and 2 core flying lead - set to 350mA
14947	<b>DK1-0AAJADZX00035</b>	Driver Kit - DALI-2 LED driver with 2.4m CMS lead - set to 350mA
14965	<b>DK1-0AAKADZX00035</b>	Driver Kit - DALI-2 LED driver with 2.4m Wire-By-Click (WBC) lead - set to 350mA