TECHNICAL SPECIFICATIONS

AES LUMINARY COLLECTOR
Models 1.5AR, 1.9AR, 2.5AR

AES Solar
Established 1979

The AES Luminary is a flat plate solar thermal collector combining solar innovation with our long term experience in solar design and manufacturing. We are proud to introduce our market leading collector which demonstrates our in-house ability to apply world class technical and visual design with state of the art technology.

EFFICIENT
High efficiency collector with anti-reflective technology and up to 97.5% solar transmission level.

DURABLE
Tested to international engineering standard EN ISO 9806 for durability and performance.

ATTRACTIVE
70mm thick and weighing 23-35kg. In roof options are available for seamless integration with most roof coverings and the colour blends well with tile and slate.

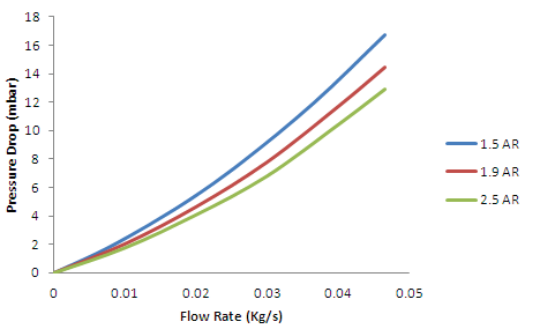
VERSATILE
Portrait, landscape, ground, wall or roof mounted, including flat roofs. A range of sizes and fixings are available.

EASY INSTALLATION
The AES sliding nut fixing method allows easy adjustment and fitting onto roof. The roof integration system fits together like a jigsaw, hardly any measuring required. The Luminary is one of the lightest glass covered flat plate collectors per square meter available.

In Roof

On Roof

A - Frame



The AES Luminary is Solar Keymark certified and tested to the ISO EN 9806 global standard for solar thermal collectors. You can be assured it satisfies the highest standards of construction quality and it comes with a 10 year warranty.

Solar Keymark certification also means that the collector qualifies for Government incentives including the UK domestic and non-domestic Renewable Heat Incentive (RHI) schemes.

Custom Extrusion

Captive Nut Fixing

96%±2 Efficiency Absorber Plates

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	1.5AR	1.9AR	2.5AR
Gross Area	1.5m²	1.9m²	2.5m²
Height	1300mm	1650mm	2150mm
Width	1150mm	1150mm	1150mm
Thickness	70mm		
Aperture Area	1.38m²	1.76m²	2.31m²
Weight	23Kg	28Kg	35Kg
Absorber	Aluminium fins metallurgically bonded to rhombic copper waterways providing large water to wall contact for maximum heat transfer. Sputter coated selective surface: solar absorption = 96%±2, thermal emission = 7% ±2.		
Glazing	3.2mm low iron, tempered (EN 12150) solar glass with double sided anti reflective surface. +2 Matt textured surface. Solar transmission 95.5% -1.5		
Frame	Custom designed aluminium extrusion with all round fixing channels and sliding nuts for easy fitting. Coloured RAL 7012 dark grey.		
Insulation	Rigid PIR foam, manufactured with zero ODP. Class O fire rating. Thermal conductivity 0.021W/mK		
Flow and Return Connections	Flow = 15mm copper pipe. Return = AES connection kit including external sensor pocket required – connection is to 15mm copper compression fitting.		
Fluid Content	0.86L	1.03L*	1.29L
Recommended Flow Rate	0.25 – 1 L/min/m²		
Transfer Fluid	Premixed solar antifreeze with inhibitors. (100% Tyfocor antifreeze mixture recommended)		
Max. Working Pressure	10 bar (tested to 15 bar)		
Zero loss Efficiency, η	0.788	0.785*	0.781
Heat loss coefficient	a1= 5.028, a2= 0.009	a1= 4.621*, a2= 0.014*	a1= 4.021, a2= 0.022
Peak Power Output (at irradiance of 1000W/m²)	1.082kW	1.372kW	1.808kW
Tilt angle range	20° - 90°		
Stagnation Temperature	170.1°C		
Maximum snow loading	≤2.4kN/m²		
Maximum wind loading	≤1.2kN/m²		
Testing	ISO EN 9806 by CENER, Spain. Solar Keymark certification by DIN CERTO, Germany.		
Certification	Solar Keymark - registration number: 011-7S2383 F		
Life expectancy	In excess of 25 years		
Warranty	10 years		
Applications	Small to large domestic hot water systems, industrial processes and swimming pool heating.		

*Interpolated from test data for 1.5 AR and 2.5 AR models

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