

Sierra Solaflex[®]

The all-in-one that does it all





Solar lighting that gives you more

Introducing Sierra Solaflex, a next-generation solar street light that combines the simplicity of an all-in-one luminaire with the performance of an adjustable solar panel.

Designed to maximise energy capture all year round, Sierra Solaflex features a fully adjustable integrated panel that can be orientated independently of the luminaire, ensuring optimal solar alignment without compromising lighting design. Available in both off-grid and hybrid configurations, it delivers reliable, sustainable illumination wherever it's needed, reducing costs, cutting carbon, and expanding the possibilities of solar lighting.

Key advantages

- Fully adjustable solar panel orientated in four directions, independent of luminaire orientation
- Four selectable tilt settings from 0° to 40° for optimised solar capture by location
- High performance with outputs up to 6,850lm, suitable for P lighting class applications
- Wind tunnel tested to withstand high wind speeds, even with the panel fully open
- Efficient operation with advanced HPBC solar panel technology for reliable lighting performance
- Offered in three versions with future-ready features including Zhaga sockets and CMS capability

Applications

-  Car parks
-  Footpaths
-  Cycleways
-  Housing developments
-  Business parks



Adjustable panel

Sierra Solaflex features a solar panel that can be positioned in four directions, ensuring it can always face south to maximise solar absorption, while the luminaire remains aligned to the road or pathway.



Solar efficiency

Sierra Solaflex maximises energy capture where it matters most, delivering over 200% more solar absorption in northern UK regions compared to a flat horizontal panel for reliable, year-round performance.



Enhanced control

Sierra Solaflex Plus includes a Zhaga compatible system that enables Bluetooth or CMS connectivity, offering real-time control and true dusk-to-dawn adjustment via a time clock or optional photocell.



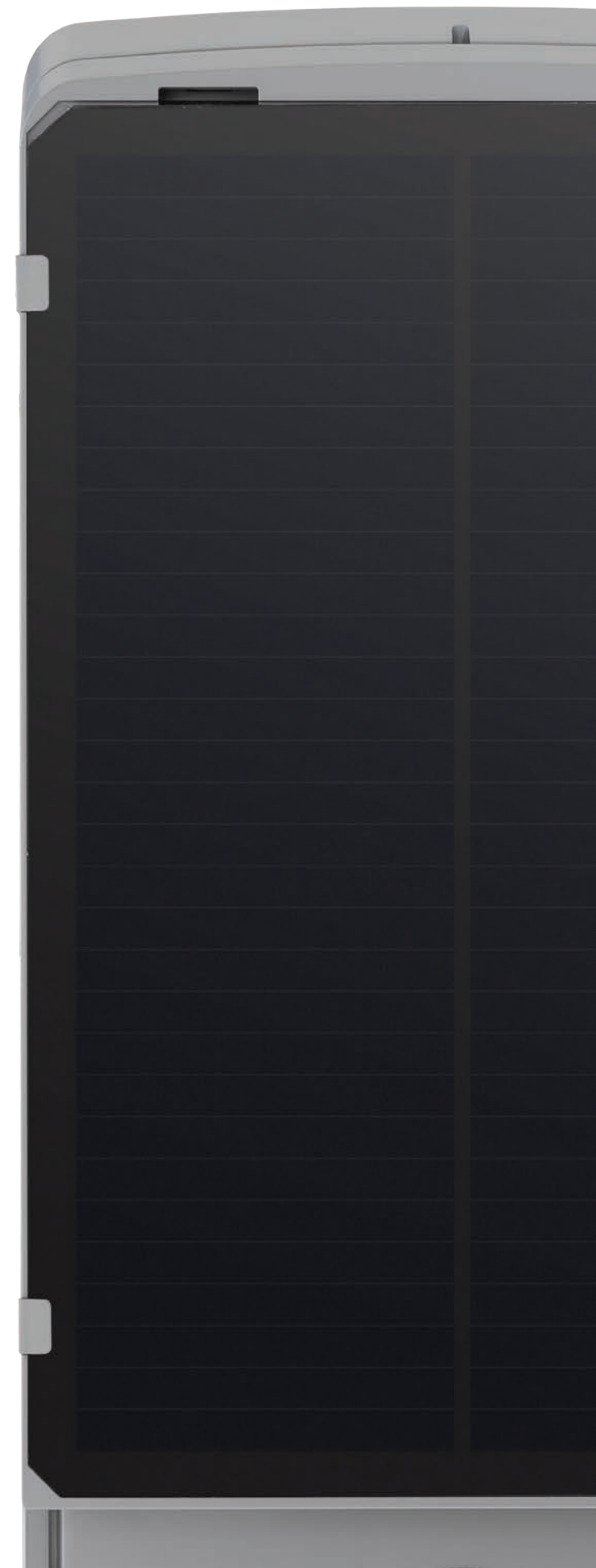
Durable construction

Sierra Solaflex is designed for extreme weather conditions and has been wind tunnel tested to withstand high wind speeds, ensuring reliable performance even when the solar panel is fully open.



Simplified installation

As an all-in-one solution with an adjustable panel design, Sierra Solaflex removes the need for reinforced columns and separate solar panels, making installation quicker, easier and more cost-effective.





Why solar lighting needs a rethink

Solar lighting is a viable alternative to conventional street lighting, yet its performance depends heavily on capturing solar irradiance. Long winter nights and low sun angles make year-round reliability difficult, with marked differences between northerly and southern regions.

Current solar luminaires force specifiers into compromises. All-in-one designs look good and are simple to install, but their horizontal panels cannot be angled towards the sun. External panel systems capture more energy but add weight, wind load, cost, and visual clutter. These drawbacks make it harder to deliver schemes that are both reliable and attractive.

How Sierra Solaflex can help

Sierra Solaflex looks like a typical street light but has been designed to overcome the limitations of existing solar luminaires. Its innovative panel can be positioned in four directions, allowing the luminaire to face the application area while the panel faces south to maximise solar capture — eliminating the trade-off between aesthetics and performance.

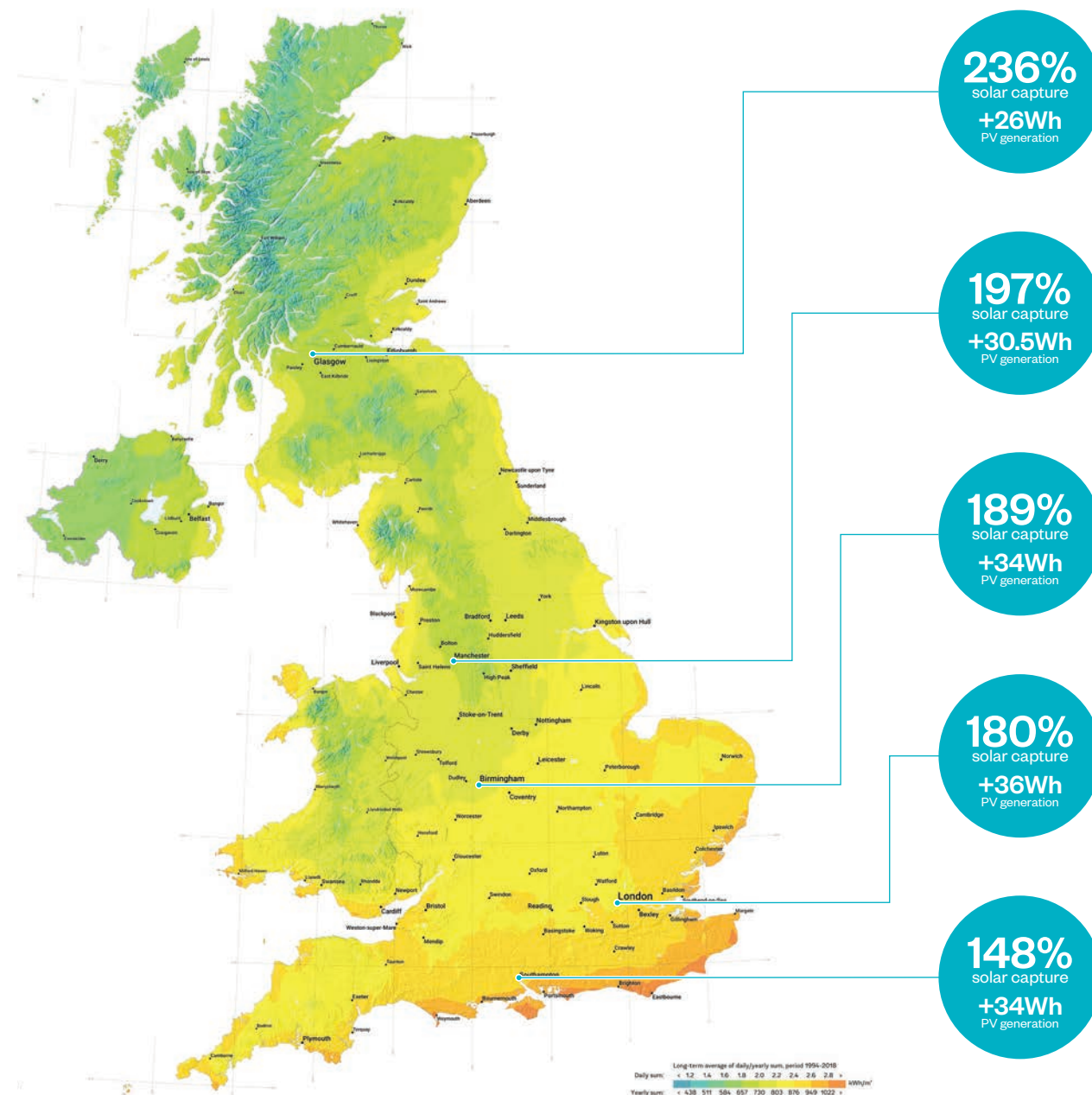
With four selectable tilt angles from 0° to 40°, Solaflex can be fine-tuned to suit location and conditions, delivering consistent through-the-night lighting even in challenging winter months and reliable performance regardless of geographic location, without the need for bulky external panels.





Maximising solar where it matters

Solar performance can vary significantly by location, with photovoltaic generation in northern regions much lower than in the south. By comparison, Sierra Solaflex's tilt-adjustable design dramatically increases solar capture over a horizontal panel, helping to close this gap and deliver more reliable performance year-round.



Values based on a comparison of Sierra Solar (horizontal panel) and Sierra Solaflex (panel tilted at 40°) facing due south.

Range overview

Sierra Solaflex is available in both off-grid and hybrid versions, giving specifiers the flexibility to meet different application requirements. For projects needing greater functionality, the Pro version delivers advanced control through its innovative D4i driver, enabling enhanced sensing and future connectivity via Zhaga sockets.



Sierra Solaflex

Standard off-grid model providing reliable, all-in-one solar lighting with simple, cost-effective operation

Lumen output
up to 6,850 lm

LED Quantity
16

Controls & Connectivity
Integrated PIR sensor



Sierra Solaflex Plus

Enhanced off-grid model with advanced control and sensing options via D4i driver and Zhaga sockets



Lumen output
up to 6,850 lm

LED Quantity
16

Controls & Connectivity
Bluetooth / CMS / Enhanced PIR / Photocell / Zhaga Sockets



Sierra Solaflex Hybrid

Hybrid solution combining solar with grid backup to guarantee year-round performance in all conditions

Lumen output
up to 16,650 lm

LED Quantity
16 / 24

Controls & Connectivity
Pre-programmed Dimming



Design features

Sierra Solaflex is a feature-packed, professional lighting solution designed to support a range of applications now, and in the future.

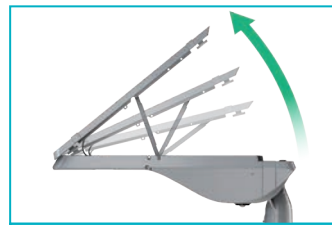


Zhaga Expansion

Sierra Solaflex Plus is available with Zhaga sockets, enabling Bluetooth control, CMS integration and enhanced sensor options

Designed for Circularity

Built with recycled materials and upgradeable components to extend service life, and mechanical fixings for easy disassembly



Tiltable Solar Panel

Sierra Solaflex's solar panel can be tilted to 0°, 15°, 25° and 40°, optimising energy capture across different locations and conditions



Anti-perch Guard

Supplied with anti-perch guards to deter birds from alighting on the panel, helping maintain cleanliness and consistent solar performance

High-efficiency Panel

Sierra Solaflex features the latest monocrystalline HPBC solar panel technology with class-leading 25% efficiency to maximise energy capture



4-way Adjustable Panel

Sierra Solaflex's panel can be set in four directions, independent of the luminaire, allowing it to always face the sun for maximum solar capture



Drainage Holes

Discreet drainage holes and an IP66-rated enclosure help prevent water ingress and keep the luminaire clean and protected

Toolless Entry

Sierra Solaflex uses over-centre latches for quick access to internal components, allowing straightforward maintenance on site

Flat Glass Glazing

Ultra-clear, toughened glass provides optimal performance while offering protection against impacts and water ingress

Diamond+ Optics

Sierra Solaflex is offered with our Diamond+ optics for precise beam control, supporting a range of lighting applications

Motion sensing

PIR sensor provides responsive control, boosting light levels only when needed to maximise illumination and energy efficiency

Advanced Battery

Features a large, high density LiFePO4 battery for reliable, safe storage and extended through-the-night performance



Mounting Options

Sierra Solaflex supports direct post or side entry mounting with incline adjustment from -15° to +15° in 5° increments



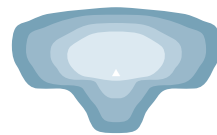
Diamond+ optics

Sierra Solaflex is offered with our Diamond+ optics, providing precise beam control and high efficacy across a range of applications. By ensuring light is directed only where needed, these optics enable more efficient lighting designs with improved visual comfort and reduced energy use.

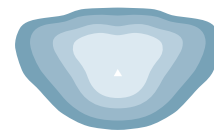
ROADS



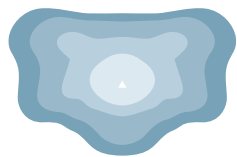
Diamond+ Optic - A1



Diamond+ Optic - A2



Diamond+ Optic - A3

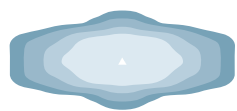


Diamond+ Optic - A5



Diamond+ Optic - A6

PATHWAYS



Diamond+ Optic - B1



Diamond+ Optic - B2



Diamond+ Optic - B3

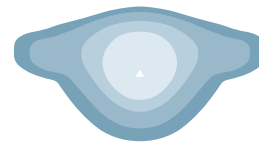
AREAS



Diamond+ Optic - C1



Diamond+ Optic - C2



Diamond+ Optic - C6





Enhanced controllability

For lighting applications that demand more control, Sierra Solaflex Plus features the latest Zhaga D4i driver technology, delivering a range of additional benefits. Through Zhaga socket expansion, it also supports Bluetooth control, CMS integration and enhanced sensing, providing a future-ready platform.



Wireless Control

Sierra Solaflex Plus enables real-time wireless management through Bluetooth via the Luceco Platform or CMS using a compatible DC node.

Key benefits

- ✓ Remote monitoring of system performance
- ✓ Wireless dimming and scheduling
- ✓ Fast commissioning and configuration
- ✓ Improved efficiency through responsive control



Intelligent D4i Driver

At the centre of Sierra Solaflex Plus is its innovative D4i DC driver that enabling precise dimming and sensor connection via standard Zhaga interfaces.

Key benefits

- ✓ Dimmable range from 1% to 100%
- ✓ Low standby losses to increase autonomy
- ✓ Direct sensor connection via Zhaga interfaces
- ✓ Battery protection for prolonged service life

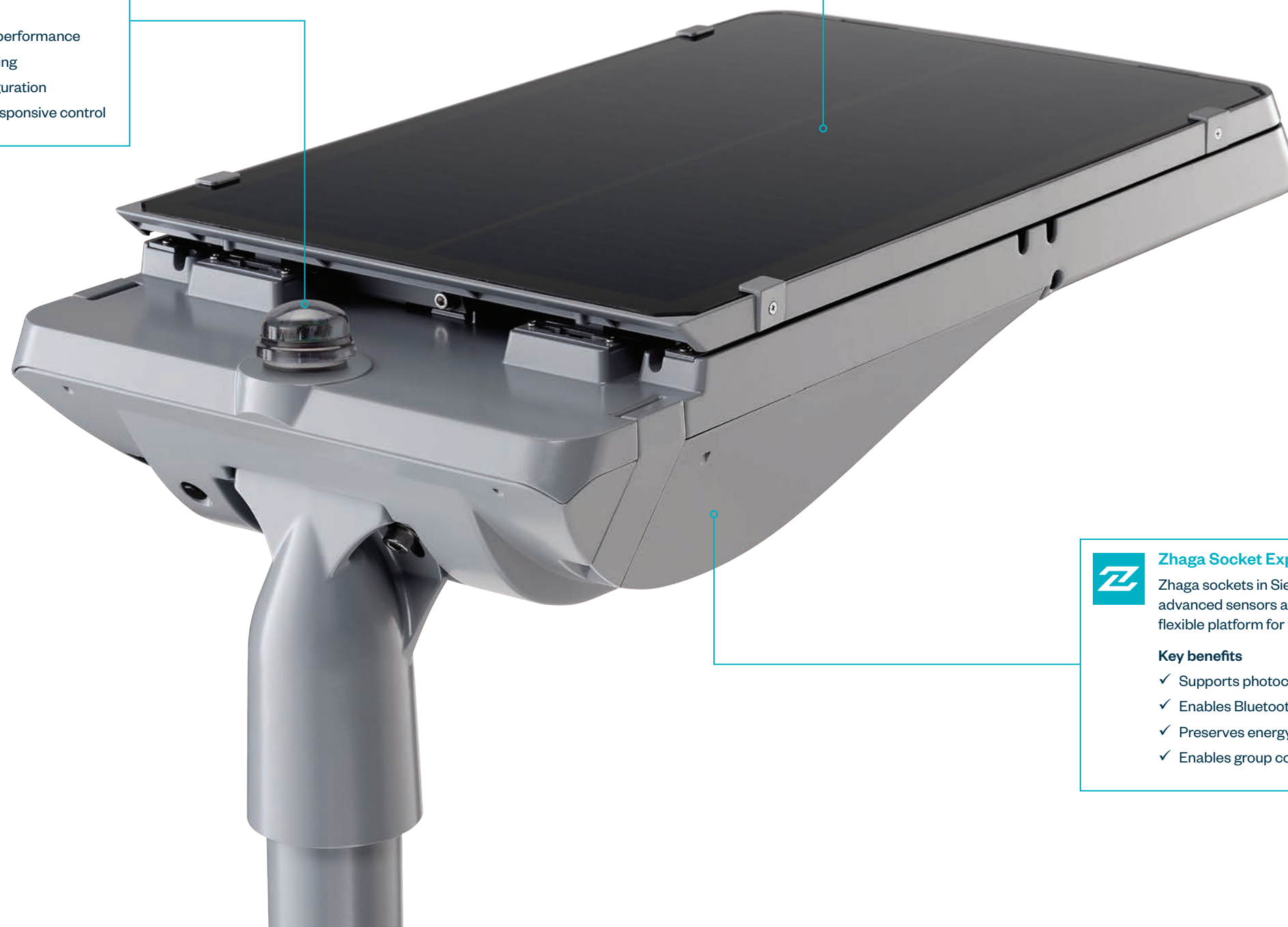


Zhaga Socket Expansion

Zhaga sockets in Sierra Solaflex Plus enable advanced sensors and connectivity, creating a flexible platform for now, or in the future.

Key benefits

- ✓ Supports photocells and enhanced PIR sensors
- ✓ Enables Bluetooth and CMS connectivity
- ✓ Preserves energy and improves performance
- ✓ Enables group control for luminaires



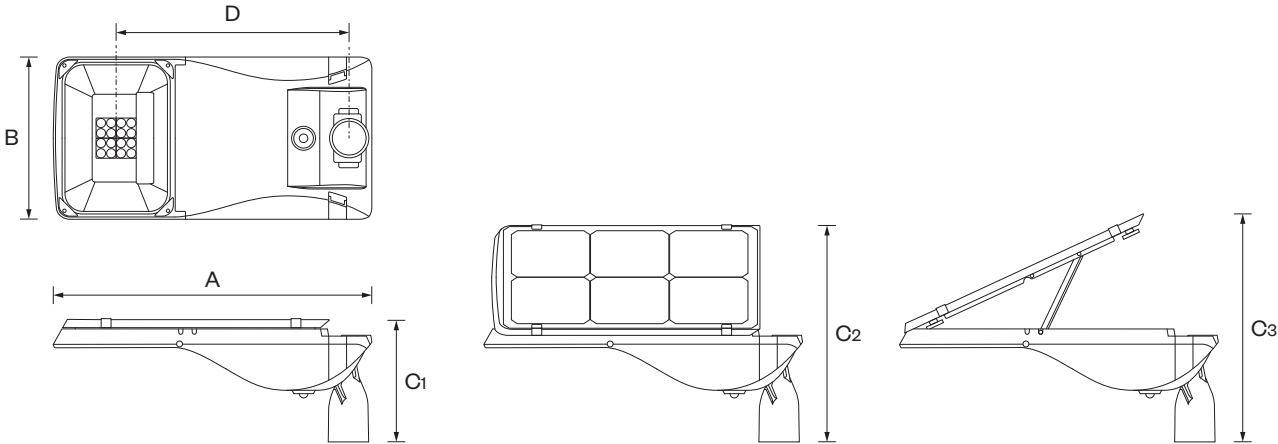
Luminaire performance

Sierra Solaflex					Sierra Solaflex Plus					Sierra Solaflex Hybrid				
16 LED	Im	Max Lumen Output			16 LED	Im	Max Lumen Output			16 LED	Im	Max Lumen Output		
		2700K	3000K	4000K			2700K	3000K	4000K			2700K	3000K	4000K
		W	W	W			W	W	W			W	W	W
		6,374	6,580	6,854			6,374	6,580	6,854			7,878	8,132	8,470
		39	39	39			42	42	42			51	51	51
												15,519	16,019	16,687
												78	78	78

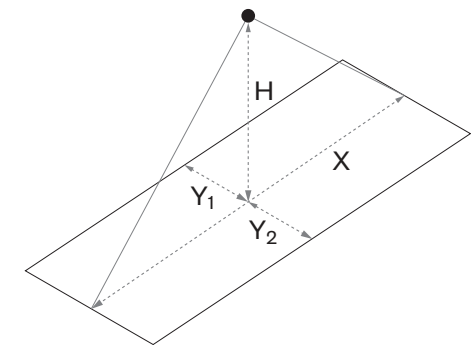
Data based on B2 optic and no Light Output Reduction (LOR) factor applied. Data provided as indication of performance. Please refer to photometric files for individual optic results.

Luminaire dimensions

	Dimensions (mm)						Weight (kg)	Windage [closed] (m²)	Windage [open] (m²)
	A	B	C1	C2	C3	D			
Sierra Solaflex	808	410	309	549	720	593	20	0.17m²	0.60m²



PIR detection area



	Height (m)	Detection Area (m)			
		H	X	Y	Y1 Y2
Sierra Solaflex (Integrated PIR)	4	5	5	2.5	2.5
	6	7	7	3.5	3.5
Sierra Solaflex Plus (Bluetooth Zhaga PIR)	4	8	3	1.5	1.5
	6	12	5	2.5	2.5
Sierra Solaflex Plus (Tridonic Zhaga PIR)	4	17	8	2	6
	6	26	12	3	9

Product order codes

				Code	Example
Construction					
Model					
Sierra Solaflex			SSF		SSF
			SSFP		
			SSFH		
Mounting					
Ø76mm direct post			DP76		DP76
Ø60mm side entry / direct post			SE60		
Colour					
RAL 7046 Mid grey matt finish			CFMT		CFMT
RAL 9005 Black matt finish			10MT		
Paint Type					
Marine-grade C4 coating			MG4		MG4
Light Source					
Light Engine					
16 LED	16 LED	16 LED	16L	16L	
-	-	24 LED	24L		
Colour Temperature					
2700K			27K	3K	
3000K			3K		
4000K			4K		
Distribution					
Diamond+ A Optic			A1 / A2 / A3 / A5 / A6		A1
Diamond+ B Optic			B1 / B2 / B3		
Diamond+ C Optic			C1 / C2 / C6		
Control & Connectivity ¹					
Sensors					
Integrated PIR sensor	-	-	PD	PD	
-	Zhaga Photocell 35 lux (top)	-	PH3ZN		
-	Zhaga Photocell 35 lux (top) Zhaga PIR sensor (bottom)	-	PH3ZNPZ		
-	Bluetooth PIR Zhaga node (bottom) ²	-	PDBLUZ		
-	Bluetooth photocell Zhaga node (top) ²	-	PHBLUZ		
Sockets					
-	4-pin Zhaga socket (top) ³	-	Z4		
-	4-pin Zhaga socket (bottom) ³	-	Z4A		
-	4-pin Zhaga socket (top and bottom) ³	-	Z4B		
Notes:					
[1] For control & connectivity, select one option only.					
[2] For Bluetooth control, specify only one sensor (PIR or photocell) per luminaire. Each scheme must include at least one photocell. Contact DW Windsor for further information.					
[3] For Zhaga sockets, please check driver compatibility with third-party sensors prior to ordering. Contact DW Windsor for more information.					
Example Code: SSF.DP76.CFMT.MG4.16L.3K.A1.PD					

	Code
Accessories (order separately)	
Anti-roost spikes	SSF.ACC.ARS
Front light shield	SSF.ACC.FLS
Rear light shield	SSF.ACC.RLS
Side light shield	SSF.ACC.SLS

Key Features

All-in-one solar street light with an integrated, adjustable panel to combine clean aesthetics with simple installation

Fully adjustable solar panel can be orientated in four directions and set to four tilt angles, maximising capture in any location

Available in three versions, offering either off-grid independence or hybrid backup to meet different project requirements

Sierra Solaflex Plus model offered with enhanced control and sensing options via a D4i driver and Zhaga sockets

Offered with Diamond+ optics to provide precise light distribution and greater design freedom for lighting schemes.

Dark Sky friendly with warmer colour temperatures available and 0% ULOR (at 0° inclination)

Options

Sierra Solaflex

Sierra Solaflex Plus

Sierra Solaflex Hybrid

Optical Control

Diamond+ A Optic: Roads (A1 / A2 / A3 / A5 / A6)

Diamond+ B Optic: Pathways (B1 / B2 / B3)

Diamond+ C Optic: Areas (C1 / C2 / C6)

Lifetime

> 100,000 hours L90

Total Luminaire Lumens

Sierra Solaflex: up to 6,850 lm

Sierra Solaflex Plus: up to 6,850 lm

Sierra Solaflex Hybrid: up to 16,650 lm

Colour Temperature

2700K / 3000K / 4000K

Colour Rendering Index

70Ra

Mounting

Ø76mm Post top / Ø60mm Post top

Ø60mm Side entry

Mounting Heights

Sierra Solaflex: 4 - 6m

Sierra Solaflex Plus: 4 - 6m

Sierra Solaflex Hybrid: 4 - 8m

Tilt / Inclination

-15° to +15° (5° increments)

Solar Panel

Type: 4-way adjustable (0° to 40° tilt)

Size: 50W (18V)

Efficiency: 25%

Material: HPBC (Monocrystalline)

Battery

Size: 576Wh (12.8V 45AH)

Material: Lithium iron phosphate (LiFePO4)

Control

Sierra Solaflex: Integrated PIR sensor

Sierra Solaflex Plus: Bluetooth / CMS / Photocell / PIR sensor

Sierra Solaflex Hybrid: Pre-programmed dimming

Colours

RAL 7046 Mid grey matt finish

RAL 9005 Black matt finish

Materials

Body: High pressure die-cast aluminium

Glazing: Toughened glass

Seals: Silicone

Finish: Marine-grade C4 coating

Accessories

Front, rear and side light shields available

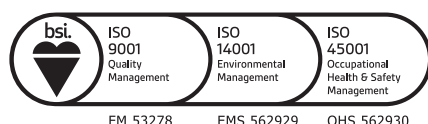
Anti-perch guards included / optional anti-roost spikes available

Installation & Maintenance

Includes SupportTag® for easy luminaire maintenance

Operational temperature range: -20°C to +40°C

* Hybrid version Class I



FM 53278

EMS 562929

OHS 562930

LUCECO plc

DW Windsor is part of the
Luceco Group

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