

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 (offline), 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
- Different levels of control, from enhanced sensing to full Urban Control CMS connectivity

Applications



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 offers three levels of intelligent control, from enhanced standalone operation to Bluetooth and Urban Control CMS connectivity for responsive lighting and dusk-to-dawn operation.



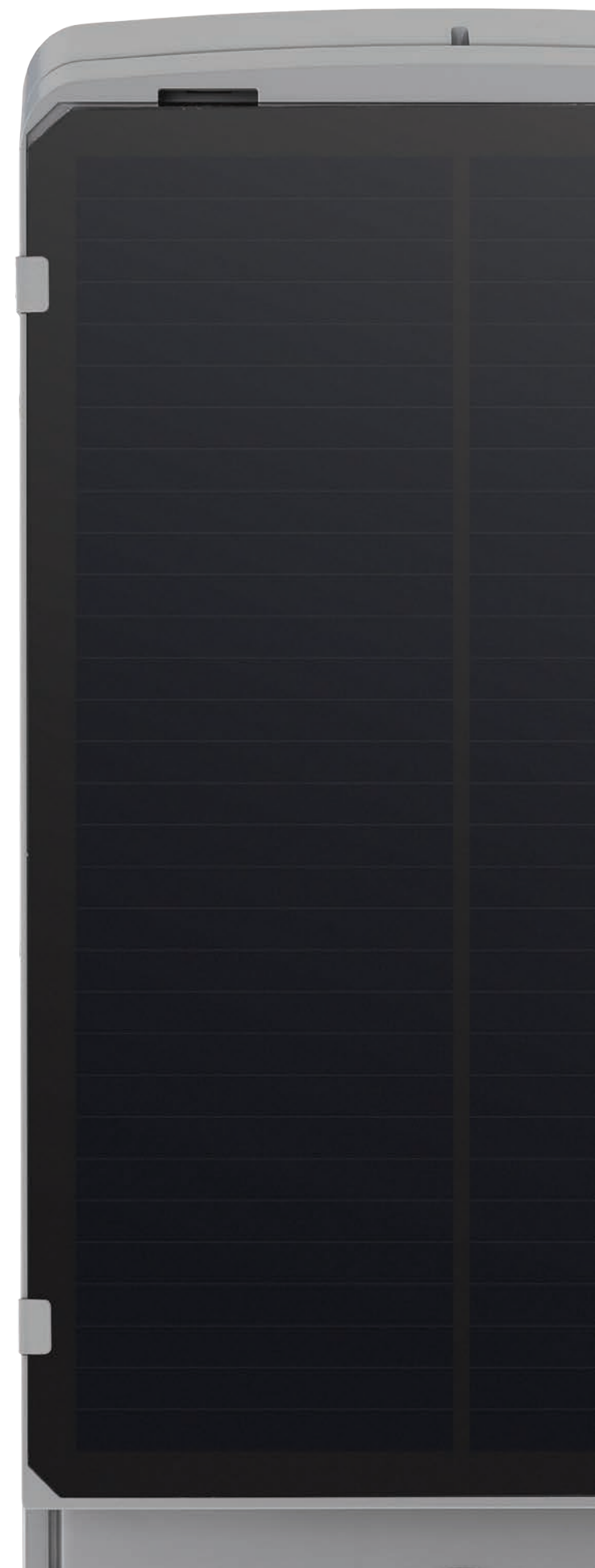
Durable construction

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.

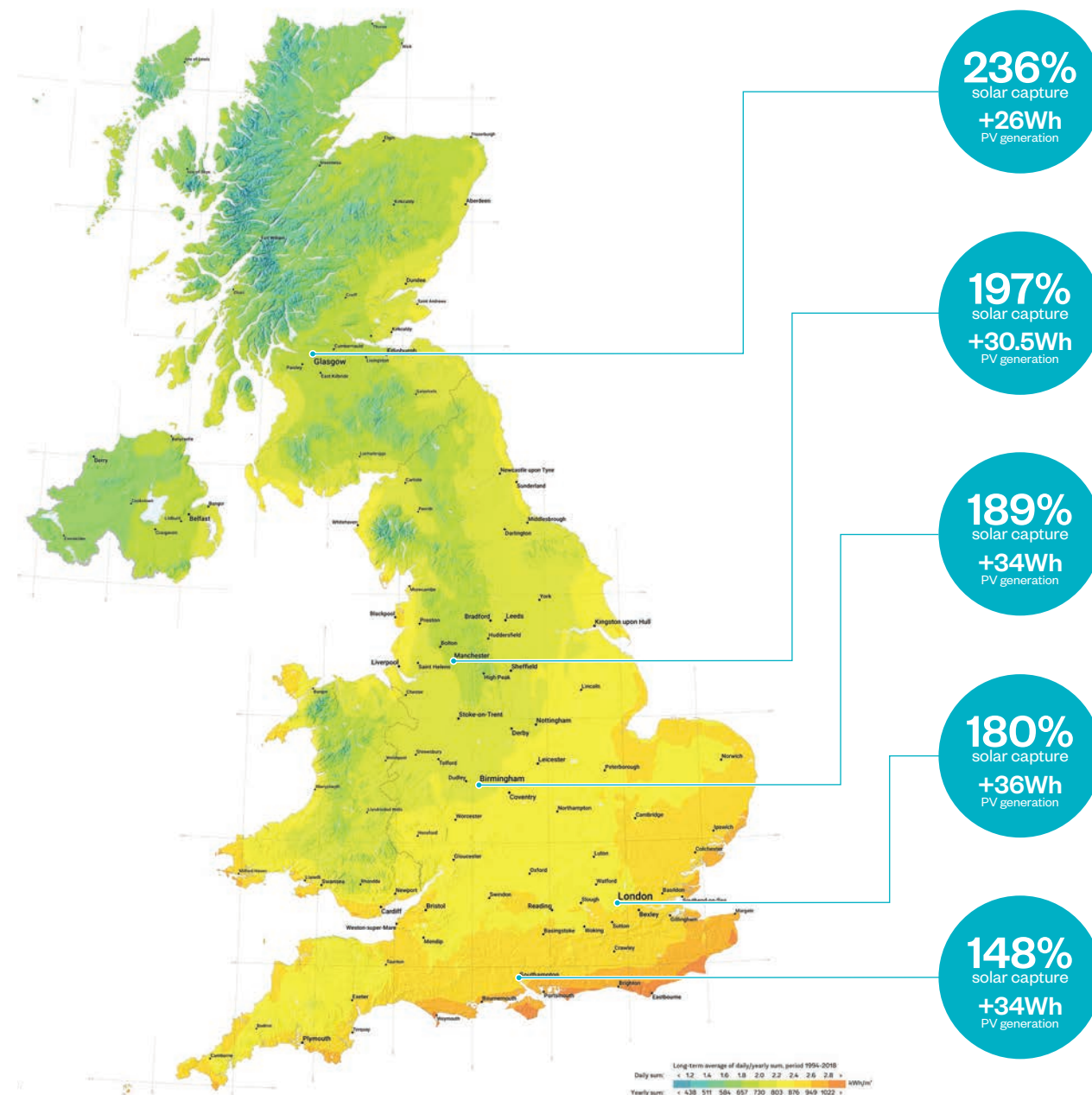
With four selectable tilt angles from 0° to 40°, Solaflex can be fine-tuned to suit location and conditions, delivering consistent through-the-night lighting even in challenging winter months and reliable performance regardless of geographic location, without the need for bulky external panels.





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 connectivity.



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 sensing and connectivity options via Bluetooth or Urban Control



Lumen output
up to 6,850 lm

LED Quantity
16

Controls & Connectivity
Enhanced PIR & Photocell / Bluetooth / Urban Control CMS



Sierra Solaflex Hybrid

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

Lumen output
up to 14,000 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.

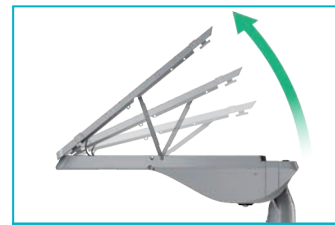


Enhanced control

Sierra Solaflex Plus is can be expanded to offer Bluetooth control, Urban Control CMS integration or enhanced sensors

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

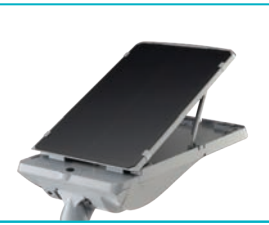


Anti-perch Guard

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

A 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



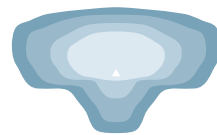
Diamond+ optics

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.

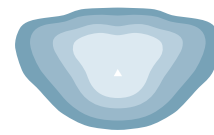
ROADS



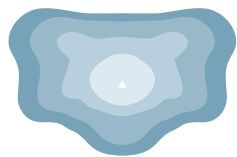
Diamond+ Optic - A1



Diamond+ Optic - A2



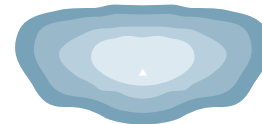
Diamond+ Optic - A3



Diamond+ Optic - A5

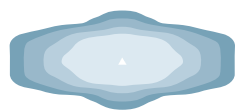


Diamond+ Optic - A6



Diamond+ Optic - A7

PATHWAYS



Diamond+ Optic - B1



Diamond+ Optic - B2



Diamond+ Optic - B3

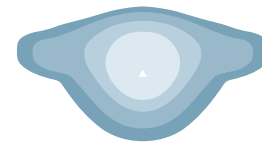
AREAS



Diamond+ Optic - C1



Diamond+ Optic - C2



Diamond+ Optic - C6





Sierra Solaflex Plus

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.



	Enhanced <i>Advanced standalone control</i>
Sierra Solaflex Plus Enhanced features an enhanced PIR sensor and photocell	
	Enhanced PIR detection
	Real-time clock dimming
	Standalone operation

	Bluetooth <i>Wireless group control</i>
Sierra Solaflex Plus Bluetooth enables group control through Bluetooth connectivity	
	Grouped control
	Adjustable settings
	Wireless commissioning

	Urban Control CMS <i>CMS connectivity and control</i>
Sierra Solaflex Plus Urban Control enables remote monitoring and control	
	Remote system monitoring
	Existing network integration
	Fast commissioning

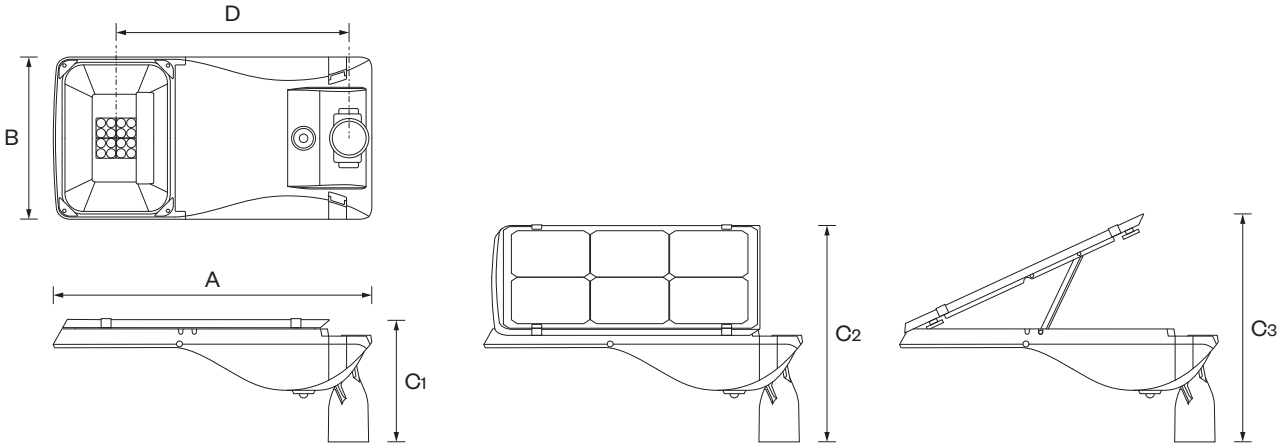
Luminaire performance

Sierra Solaflex						Sierra Solaflex Plus						Sierra Solaflex Hybrid					
		Max Lumen Output						Max Lumen Output						Max Lumen Output			
		2200K	2700K	3000K	4000K			2200K	2700K	3000K	4000K			2200K	2700K	3000K	4000K
16 LED	Im	5,790	6,374	6,580	6,854	16 LED	Im	5,790	6,374	6,580	6,854	16 LED	Im	5,790	6,374	6,580	6,854
	W	39	39	39	39		W	39	42	42	42		W	51	51	51	51
24 LED	Im	11,756	12,942	13,359	13,915	24 LED	Im	11,756	12,942	13,359	13,915	24 LED	Im	11,756	12,942	13,359	13,915
	W	78	78	78	78		W	78	84	84	84		W	78	84	84	84

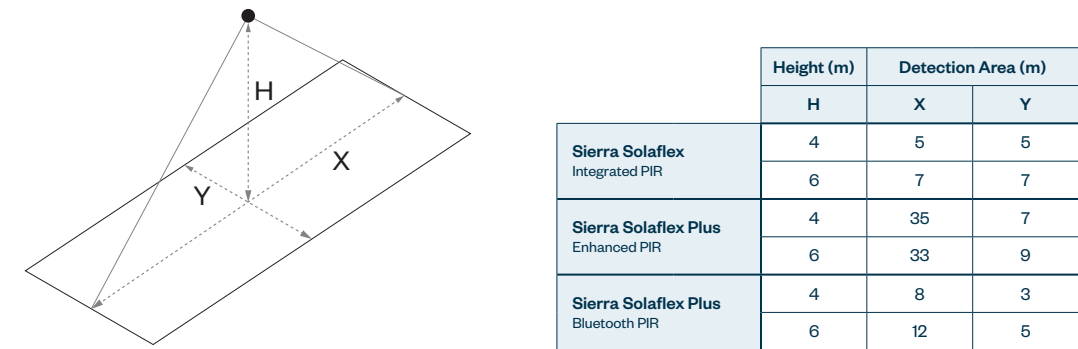
Data based on B2 optic and no Light Output Reduction (LOR) factor applied. Data provided as indication of performance. Please refer to photometric files for individual optic results.

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	0.25m²



PIR detection area



Product order codes

			Code	Example
Construction				
Model				
Sierra Solaflex			SSF	SSF
	Sierra Solaflex Plus		SSFP	
	Sierra Solaflex Hybrid	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				
2200K			22K	3K
2700K			27K	
3000K			3K	
4000K			4K	
Distribution				
Diamond+ A Optic			A1 / A2 / A3 / A5 / A6 / A7	A1
Diamond+ B Optic			B1 / B2 / B3	
Diamond+ C Optic			C1 / C2 / C6	
Control & Connectivity ²				
Sensors				
Integrated PIR sensor	-	-	PD	PD
-	Enhanced - 35 lux Zhaga photocell & PIR sensor	-	PH3WZNPZ	
-	Bluetooth - PIR Zhaga node (bottom) ³	-	PDBLUZ	
-	Bluetooth - Photocell Zhaga node (top) ³	-	PHBLUZ	
-	Urban Control - DC node with PIR Zhaga sensor	-	UDCPDG	
Notes: [3] Select drive current in 50mA increments. [2] For control & connectivity, select one option only. [3] For Bluetooth control, specify only one sensor (PIR or photocell) per luminaire. Each scheme must include at least one PIR sensor and one photocell. Contact DW Windsor for further information.				
Example Code: SSF_DP76_CFMT_MG4_16L_3K_A1_700_PD_DIM902206				

	Code
Accessories (order separately)	
Anti-roost spikes	SSFACCARS
Front light shield - Mid grey	SSFACCAGFCFMT
Front light shield - Black	SSFACCAGF10MT
Rear light shield - Mid grey	SSFACCAGRCFMT
Rear light shield - Black	SSFACCAGR10MT
Side light shield - Mid grey	SSFACCAGSCFMT
Side light shield - Black	SSFACCAGS10MT
Compass [1 per order]	SSFACCCOMPASS

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 is offered with enhanced control options, including Bluetooth connectivity and Urban Control CMS via a D4i driver

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 / A7)

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 14,000 lm

Colour Temperature

2200K / 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

Inclination

-15° to +15° (5° increments)

Solar Panel

Type: 4-way directional adjustment; 4 tilt angles (0°, 15°, 25°, 40°)

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: Enhanced / Bluetooth / Urban Control CMS

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

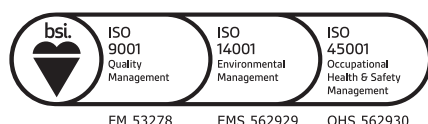
Anti-perch guards included / optional anti-roost spikes available

Installation & Maintenance

Includes SupportTag® for easy luminaire maintenance

Operational temperature range: -5°C to +50°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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