



GemSUN 10W LED Solar System

A True Dusk to Dawn Solution

Our system operates from sunset to sunrise for 365 days per year across mainland UK¹. Outside of mainland UK? - Give our solar team a call to assess suitability.

Easy Installation

Our solar solution is designed for quick installation utilising our simple click and play connectors. No trenching or cabling required.

Next Generation Technology

High performance LED Luminaire with Zhaga Book 18 Socket & 12V DC Motion Sensor to increase output from 50% to 100% brightness when motion is detected in a pre-defined area. This saves battery energy and ensures dusk to dawn operation

Environmentally Friendly

Significantly reduce the carbon footprint of conventional lighting installations. Self-sufficient solution with no ongoing electricity demand.

Free Lighting Design Service

Ideal for car parks and roadways, using our GemSUN 10W system, we can provide lighting designs to meet BS5489 P4 - P6 UK road specifications³.

Future Proof & Easy Access Design

Our bespoke column battery and solar controller are situated behind the locked column door at the base of the column for quick visual access to the solar controller and seamless battery replacements with our simple plug and play system.

Applications

- | | | |
|---|---|---|
|  Footpaths |  Housing Estates |  Railways |
|  Public Areas |  Car Parks |  Rural Areas |
|  Residential Roads |  Bus Stops |  Dark Skies |



NB: Bird spikes included with UK installation system.

MADE IN
BRITAIN

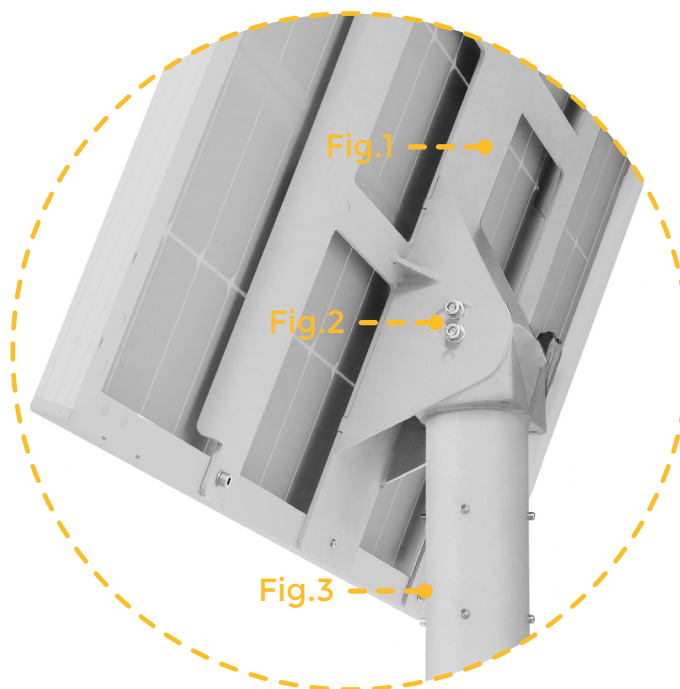


Fig.1: Solar Panel & Frame

Strong and light weight frame for suitability in most windage conditions.

Fig.2: Adjustable Bracket

Fully adjustable bracket with 360° rotation and 0°-90° tilt for optimising the setup based on the install location.

Fig.3: Tethering Eyebolts

For increased safety we incorporate eyebolts for tethering the Solar Panel to the bracket.

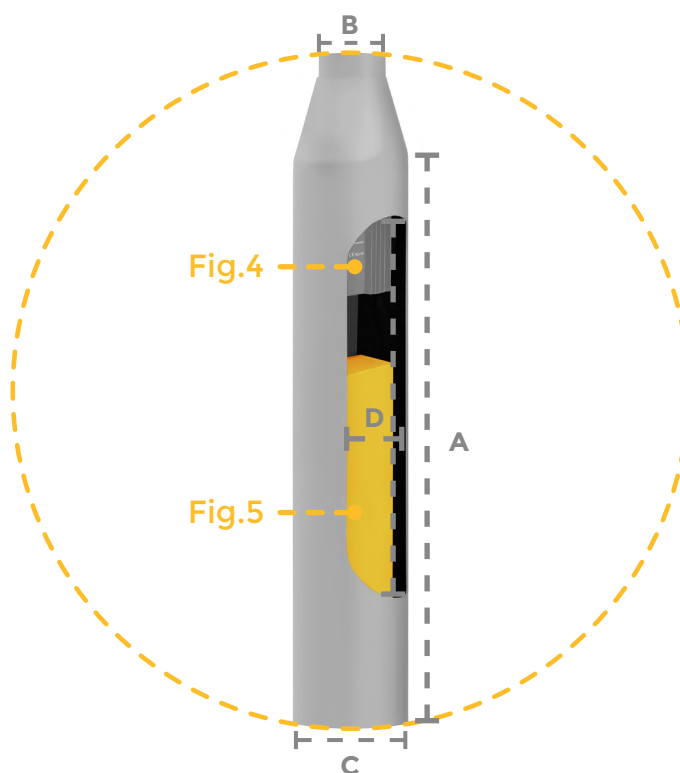


Fig.4: Solar Controller

Intelligent smart controller for harnessing the solar energy and storing it in the battery whilst also balancing and reporting on the battery cells status.

Fig.5: LiFePO4 Battery

The Lithium Iron Phosphate battery footprint fits inside root mount and flange plate columns. No feeder pillars or external enclosures required.

A = 1850mm lower column base.
B = Outside Dia. Ø 89mm (see order codes).
C = 168mm Outside Dia.Ø base.
D = 100mm x 600mm door aperture.
E = 1250mm below ground bitumen root.

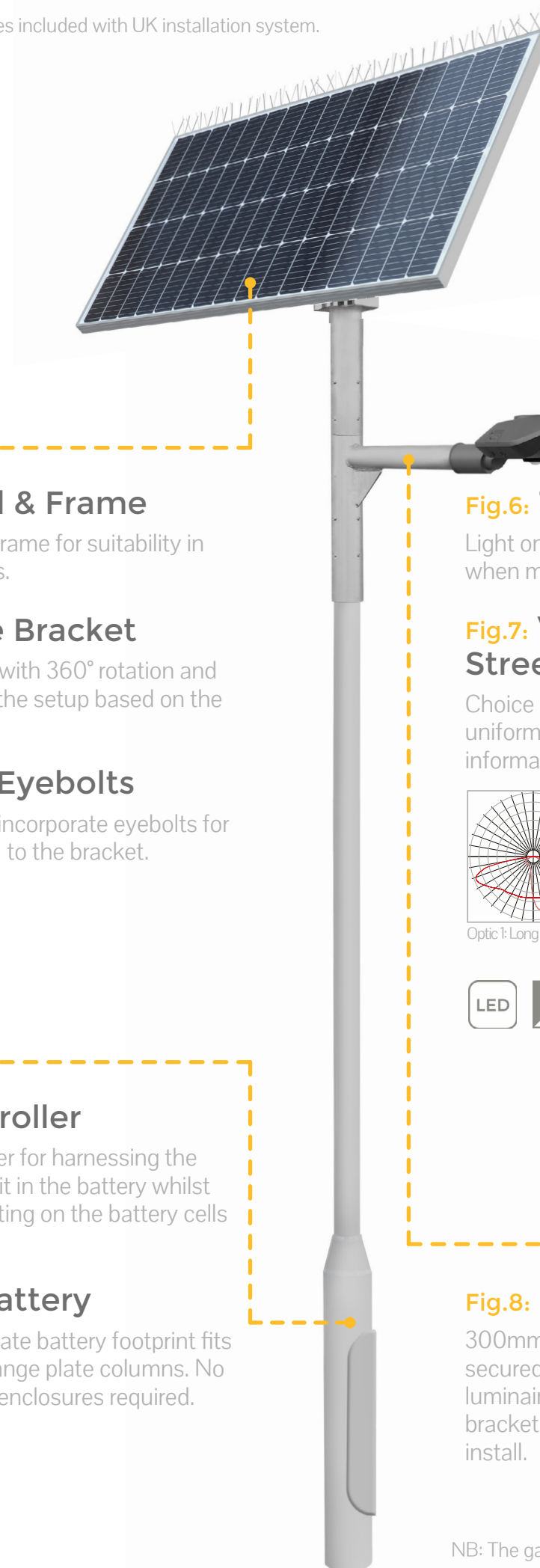


Fig.6: 12VDC Motion Sensor

Light on at 50% output, increasing to 100% when motion is detected*1.

Fig.7: Vesper 10W 12VDC LED Street Light

Choice of optics for maximum coverage and uniformity. See the Vesper data sheet for full information.

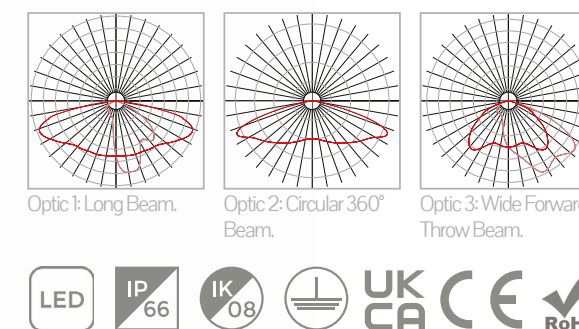
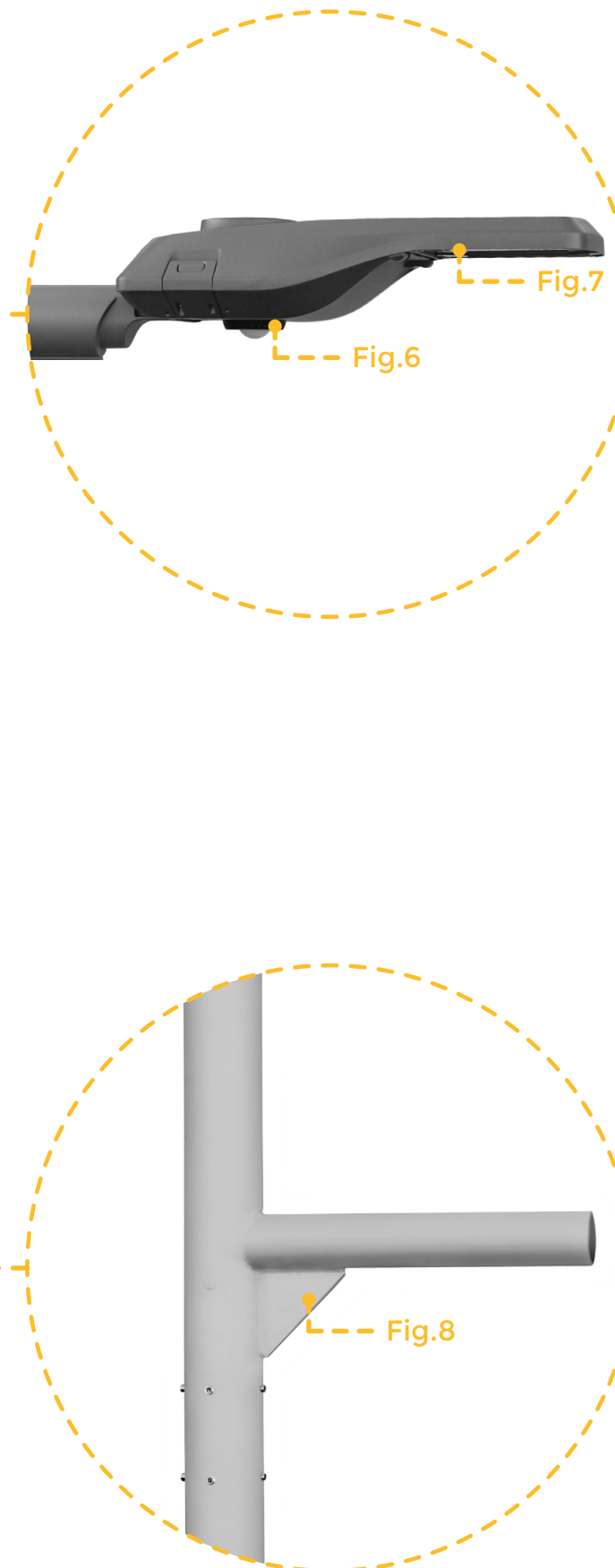


Fig.8: Luminaire Bracket

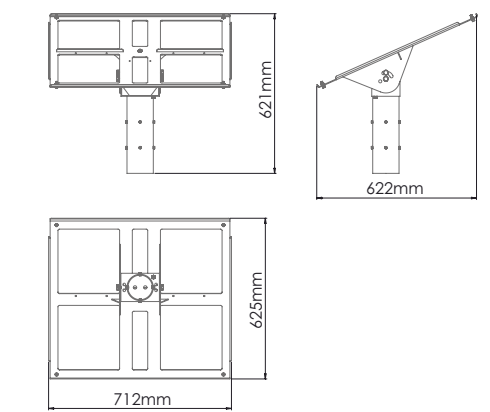
300mm outreach arm with 360° rotation, secured with heavy duty grub screws. The luminaire bracket is separate to the solar panel bracket which makes for a quick and easy install.



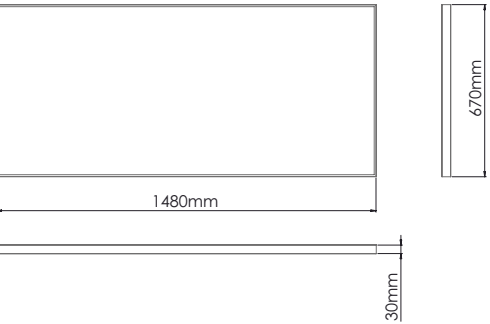
NB: The galvanised column depicted is not included. To order separately from Gemma Lighting, see the Wind Zone Guide.

Dimensions & Weight

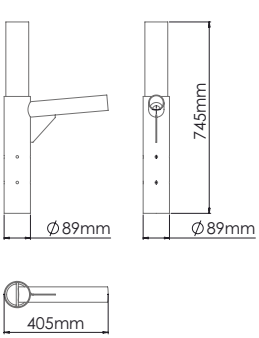
Frame & Bracket : 10.60Kg



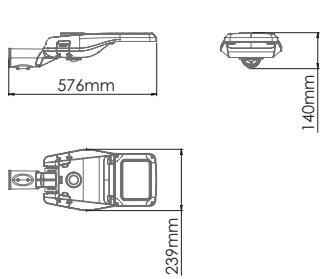
Solar PV Panel: 13.50Kg



Luminaire Bracket: 7.40Kg



Vesper Street Light: 4.50Kg



Order Codes

89mm (No Spigot) Column - 10W LED Street Light & Solar System

GSV10-DAX-GH-175-60-19GV-89-1	GemSun Vesper 10W, RAL7024 Light, 2700K, Sensor, Galv Metal Work 89mm, Optic 1
GSV10-DAW-GH-175-60-19GV-89-1	GemSun Vesper 10W, RAL7024 Light, 3000K, Sensor, Galv Metal Work 89mm, Optic 1
GSV10-DAN-GH-175-60-19GV-89-1	GemSun Vesper 10W, RAL7024 Light, 4000K, Sensor, Galv Metal Work 89mm, Optic 1

Options:
Optic 2 = Change ‘-1’ to ‘-2’. **Optic 3** = Change ‘-1’ to ‘-3’.
Black (RAL9005) Luminaire = Change ‘GH’ to ‘B’.
Black (RAL9005) Metal Work = Change ‘19GV’ to ‘19B’.

Key

*1 - Subject to correct installation in accordance with Gemma Lighting’s GemSUN 10W install instructions. Will operate 365 days per year based on a combined operation of 14hrs @ 50% and 2hrs @ 100% with 720 nightly activations of 10 seconds or 120 activations of 60 seconds (trigger hold time of motion sensor).

*2 - If retrofitting to existing columns please consult with a structural engineer to ensure foundations and column are suitable for weight and size of equipment. See Wind Zone Guide for more information.

*3 - Every road is different, so a lighting design is required to confirm LUX levels meet BS standard. This is offered as a free service from Gemma Lighting.

NB: Gemma Lighting’s standard terms and conditions apply to this solar lighting solution. Information correct at the time of publication; V20250402.

UK Wind Zone Guide



ARM - Armagh ANG - Anglesey BED - Bedfordshire BUC - Buckinghamshire CAM - Cambridgeshire CDF - Cardiff CLE - Cleveland DER - Darlington DER - Derbyshire DLO - Derry / Londonderry FAL - Falkirk	FER - Fermanagh FLT - Flintshire GLO - Greater London GMA - Greater Manchester GWY - Gwynedd H&W - Hereford & Worcester HAM - Hampshire HER - Hertfordshire HLP - Hartlepool INV - Inveraclyde LEI - Leicestershire	MER - Merseyside MID - Middlesbrough MGL - Mid Glamorgan NLC - North Lincolnshire NOR - Northamptonshire NOT - Nottinghamshire NWS - North West Somerset PLY - Plymouth RCT - Rhondda Cynon Taff REN - Renfrewshire SHR - Shropshire	SOT - Stockton on Tees STA - Staffordshire SYO - South Yorkshire TAW - Telford and Wrekin T&W - Tyne & Wear VOG - Vale of Glamorgan WAR - Warwickshire WGL - West Glamorgan WRE - Wrexham WMI - West Midlands WYO - West Yorkshire
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Wind Loading Categories:

The rationalised wind loading factor, Rwf, are all stated at 10m above ground level, and for a mean return period of 25 years.

Note: The information given in this specification is for guidance only. Coastal sites, sites above 250m, or sites subject to funnelling will require special consideration. If in doubt please seek professional advice.

Terrain Category II - 8m and above.
Terrain Category III - less than 8m.

Terrain Cat. I: Seasides. At the edge of a lake with a length exposed to the wind of at least 5km. Flat even land without obstacles.

Terrain Cat. II: Fenced off cultivated land, some small agricultural buildings, houses of trees.

Terrain Cat. III: Industrial or sub-urban zones and forest.

Terrain Cat. VI: Urban perimeters with at least 15% of the surface built on, and/or on which the average heights of buildings exceed 15m.

Wind Region Colour Key:

Extra Heavy	Medium
Heavy	Light

Wind	Terrain	4m Column Height (Total Height w/ Bracket & Panel = 5M)		5m Column Height (Total Height w/ Bracket & Panel = 6M)	
Region	Category	4m Dia.	4m Order Code	5m Dia.	5m Order Code
Light	II	89mm	4TC-RM-89-HD-SOLAR	89mm	5TC-RM-89-HD-SOLAR
	III	89mm	4TC-RM-89-HD-SOLAR	89mm	5TC-RM-89-HD-SOLAR
Medium	II	89mm	4TC-RM-89-HD-SOLAR	89mm	5TC-RM-89-HD-SOLAR
	III	89mm	4TC-RM-89-HD-SOLAR	89mm	5TC-RM-89-HD-SOLAR
Heavy	II	89mm	4TC-RM-89-HD-SOLAR	89mm	5TC-RM-89-HD-SOLAR
	III	89mm	4TC-RM-89-HD-SOLAR	89mm	5TC-RM-89-HD-SOLAR
Extra Heavy	II	Contact Solar Team to Discuss		Contact Solar Team to Discuss	
	III	Contact Solar Team to Discuss		Contact Solar Team to Discuss	

Options: **Black Column** = Change ‘SOLAR’ to ‘SOLAR-B’.



gemma 
the UK's lighting company



Member No: FM57330



Member No: 227

**UK Manufacturer of
Exterior LED Lighting &
Solar Systems**

Gemma Lighting Ltd,
Unit 3, Marshlands Spur, Farlington,
Portsmouth, Hampshire, PO6 1RX,
United Kingdom.

Tel: +44 (0) 2392 315 911
Email: solar@gemmalighting.com
Web: www.gemmalighting.com

Due to constant product development and improvements, Gemma Lighting Ltd reserves the right to change specifications without prior notification or public announcement. Information correct at the time of publication; V20250402.

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