

Off-grid Solar Lighting

Light where it's needed.

No power required.





Let there be light

Vital to all life on earth, the sun is an abundant source of natural energy. Every hour, the amount of power that reaches our planet from the sun is greater than the entire world consumes in a year. Solar power offers a virtually unlimited source of clean, renewable energy – and this relatively untapped resource is increasingly considered as the future-facing solution to support our growing energy needs.

Within this brochure, you'll find a range of innovative, solar lighting solutions from DW Windsor designed to support a variety of off-grid lighting applications.

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Why solar lighting?

With no need for cabling or connection to the grid, solar-powered lighting provides the opportunity to bring light to any location, making it ideal for remote or environmentally sensitive applications. And with zero emissions and no ongoing electricity costs, solar lighting is fast becoming a viable solution for organisations looking to reduce their annual electrical expenditure and cut carbon emissions.



Clean energy source

Solar lighting offers a sustainable, environmentally friendly alternative to traditional cabled solutions which draw their electricity from the national power grid.

By harnessing the power of the sun to provide illumination, solar lighting can reduce our dependence on fossil fuels for electricity production, significantly reducing carbon emissions and lowering air pollution while also helping to protect the environment and natural resources.

Furthermore, solar lighting technology also offers energy independence by reducing our reliance on traditional energy infrastructure and therefore is unaffected by power disruption.



Lighting where needed

Offering unparalleled flexibility and versatility of location, solar lighting has the unique ability of delivering illumination wherever it is required.

Perfect for a wide variety of 'off grid' applications, solar luminaires can be installed in remote areas with no access to the power grid, or simply anywhere that cable trenching would be financially prohibitive or overly disruptive – such as conservation areas or places of special environmental interest.

What's more, these luminaires can be deployed quickly to provide temporary lighting in situations where illumination is required for safety and security, such as new housing developments, highway maintenance or special events.



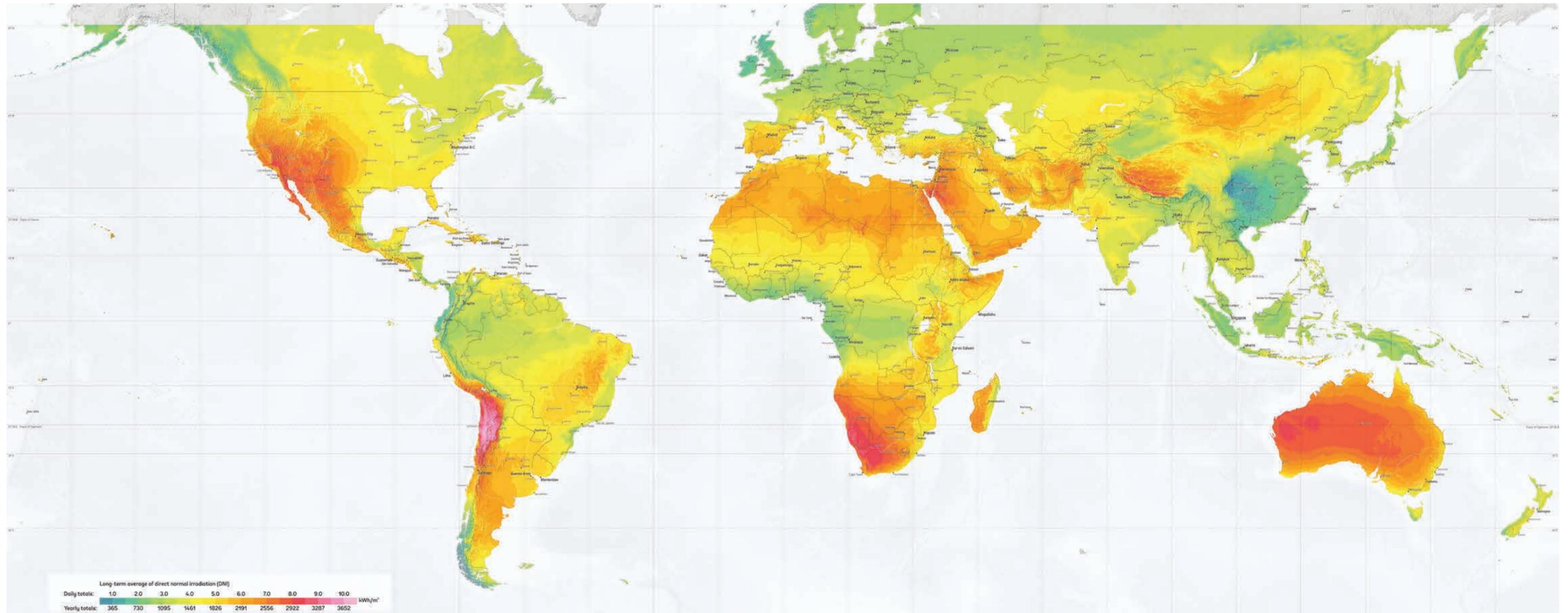
No electricity costs

Once installed, solar lighting is essentially a source of 'free' illumination. With no ongoing electricity costs, and in the face of rising global energy prices, solar lighting has become a commercially feasible alternative for appropriate applications.

When factoring in the costs of trenching for cabled lighting solutions and the fact that no specialist electrical skills are required for installation, the argument in favour of solar is even more persuasive.

As solar technology continues to advance, while the price of energy continues to rise, cost-effective solar lighting is now within reach of more applications than ever before.





How we design for solar

Solar lighting is rapidly gaining traction across the globe as a sustainable and cost-effective solution for exterior lighting. While adoption can be more complex in regions with lower solar irradiance, our experienced team supports customers at every step through our expert Power Design approach, helping to navigate challenges and find the right solar solution for you.

1

Initial assessment

We begin by gathering detailed site data and customer requirements. This includes location, usage patterns, and environmental conditions to evaluate whether solar is a feasible and appropriate option.

2

Lighting design

We create a tailored lighting design to understand if solar will work effectively on-site. This includes identifying optimal column positions and accounting for shading from trees or surrounding structures.

3

Power analysis

We analyse the available solar energy at each site, focusing on the year's most challenging months. This ensures the system delivers reliable performance, even during periods of low solar irradiance.

4

Product specification

We recommend the most suitable solar solution based on project needs and design goals. This includes the luminaire choice and solar configuration to deliver the desired performance and appearance.

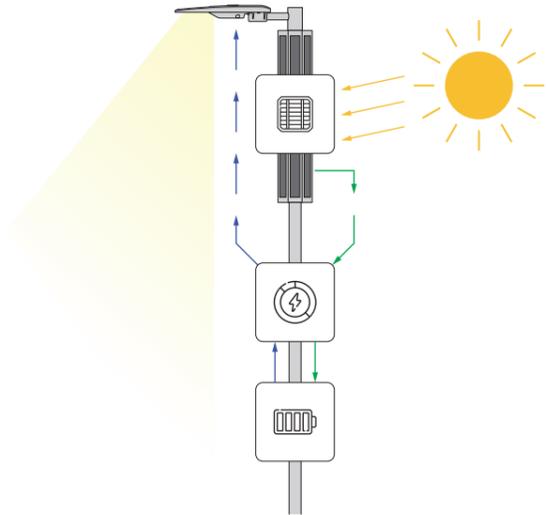
Solar lighting technology

How solar works

The photovoltaic effect is a physical and chemical phenomenon that generates voltage and electrical current in a material upon exposure to light. When the sun shines onto a solar panel, energy from the sunlight is absorbed by semiconductor materials in the panel. This creates direct current (DC) electricity that charges a connected battery which, in turn, powers the light.

At DW Windsor, Our solar lighting solutions take advantage of the latest solar technologies, as well as the highest quality materials to ensure our product quality and performance standards are maintained.

In addition to the LED light source, there are three critical components to an off-grid solar lighting solution – the solar panels, batteries and control system.



Monocrystalline panels

Photovoltaic (PV) cells convert light directly into electricity; however, not all solar panels are the same. At DW Windsor, we only use monocrystalline panels made from single silicon crystals as these offer a higher efficiency compared to other solar panels



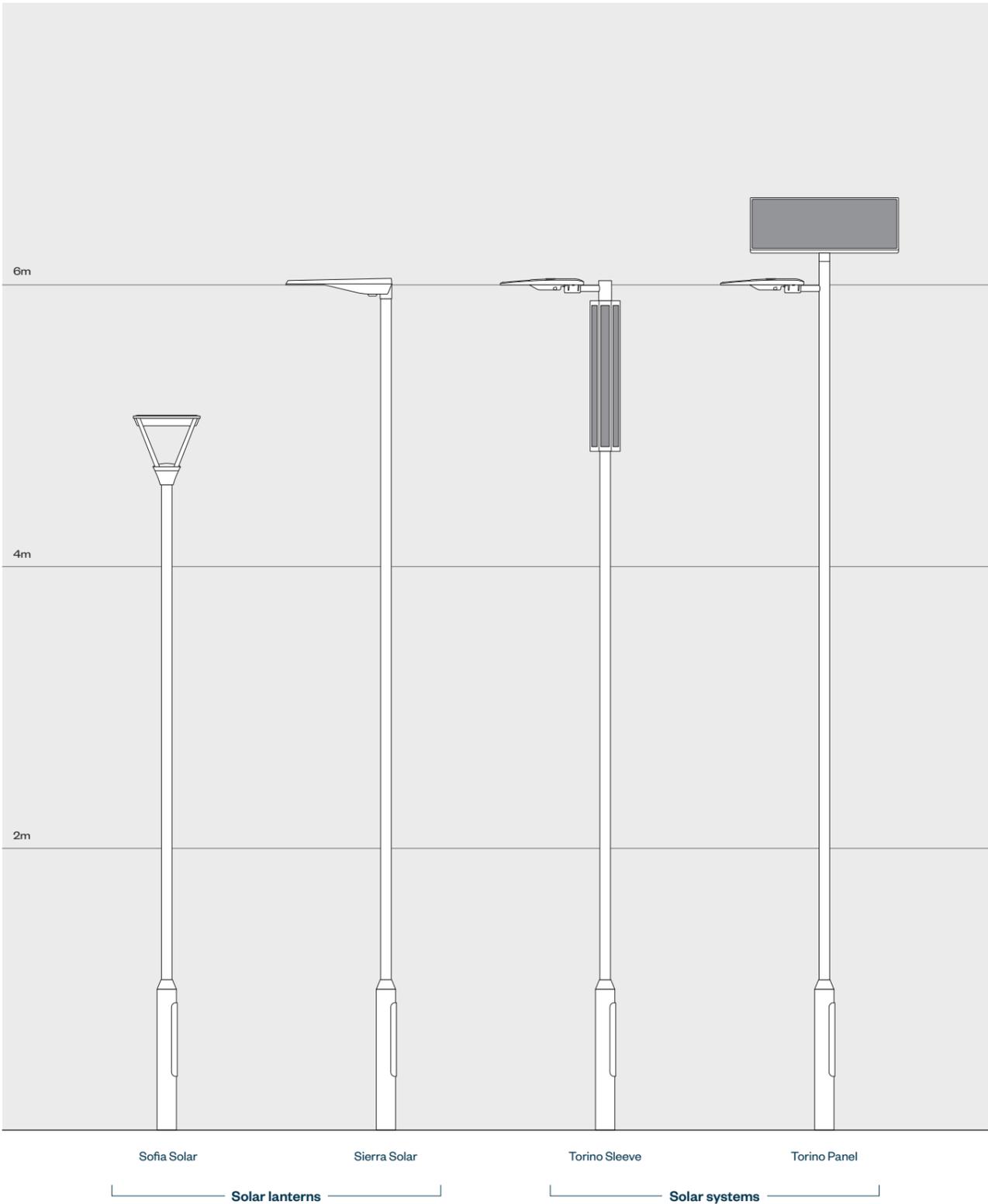
Lithium iron phosphate batteries

Our solar solutions utilise lithium iron phosphate (LiFePO4) batteries which offer significant advantages over other battery types due to their higher energy density, including added safety, longer lifespan and a wider operational temperature range



Intelligent control systems

All of our solar solutions are managed by advanced lighting controllers to optimise battery life and are fitted with motion sensors to help manage light levels during quieter periods to ensure reliable and consistent illumination throughout the night



Solar lighting solutions

We offer a range of solar lighting solutions – from standalone Solar Lanterns with integrated panels, to modular Solar Systems which can be customised to suit the specific needs of your geography and location, helping to deliver the right light in the right place at the right time.



Sofia Solar

Contemporary post-top solution

Sofia Solar is a contemporary, post-top luminaire that draws inspiration from traditional lanterns. It features an elegant, open-sided design and an integrated solar panel for a more discreet appearance. The luminaire is also Dark Sky friendly, helping to combat light pollution.

Typical applications



Footpaths



Parks & plazas



Housing developments

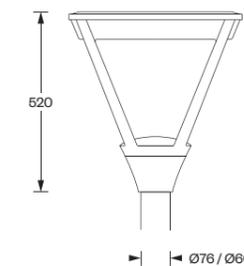
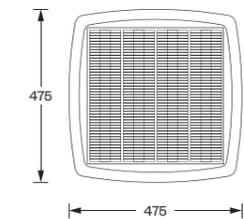
Technical details

Lumen output:	1800lm
Power:	12W
Optical control:	4 distributions
Colour temperature:	2700K / 3000K / 4000K
Solar panel:	18W
Battery capacity:	154Wh
Autonomy:	Varies by usage and location, contact us for calculations
Control:	Integrated PIR sensor
Materials:	Die-cast aluminium housing Tempered glass glazing Monocrystalline silicon panel Lithium iron phosphate battery
Mounting:	Ø76 / Ø60mm post-top

Luminaire finishes:

BLACK
RAL 9005

METALLIC GREY
RAL 9007





Sierra Solar

Functional column-mounted solution

Sierra Solar is a modern, all-in-one functional lighting solution defined by its angled design and low-profile appearance. Featuring an integrated solar panel, Sierra Solar is suited to a wide range of off-grid lighting applications. The luminaire is also Dark Sky friendly, helping to combat light pollution.

Technical details

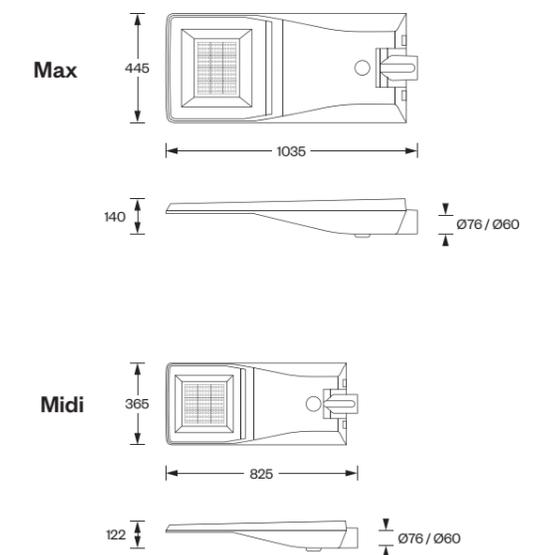
- Lumen output:** 6100lm (Midi) / 9700lm (Max)
- Power:** 30W (Midi) / 50W (Max)
- Optical control:** 3 distributions
- Colour temperature:** 3000K / 4000K
- Solar panel:** 45W (Midi) / 75W (Max)
- Battery capacity:** 538Wh (Midi) / 922Wh (Max)
- Autonomy:** Varies by usage and location, contact us for calculations
- Control:** Integrated PIR sensor
- Materials:** Die-cast aluminium housing
Tempered glass glazing
Monocrystalline silicon panel
Lithium iron phosphate battery
- Mounting:** Ø76 / Ø60mm post-top & side entry

Luminaire finishes:

- BLACK
RAL 9005
- METALLIC GREY
RAL 9007

Typical applications

-  Car parks
-  Cycleways
-  Business parks



- IP 66
- IK 08
- UK CA
- CE
- 



Torino Sleeve with Kirium One



Torino Sleeve with Kirium Pro S

Torino Sleeve

Scalable solar lighting solution

Torino Sleeve is a vertical solar solution featuring wraparound photovoltaic panels to maximise solar absorption regardless of orientation. Available in three sizes, the tubular design is also wind and weather-resistant. Torino Sleeve can be specified with almost all of DW Windsor luminaires.

Technical details

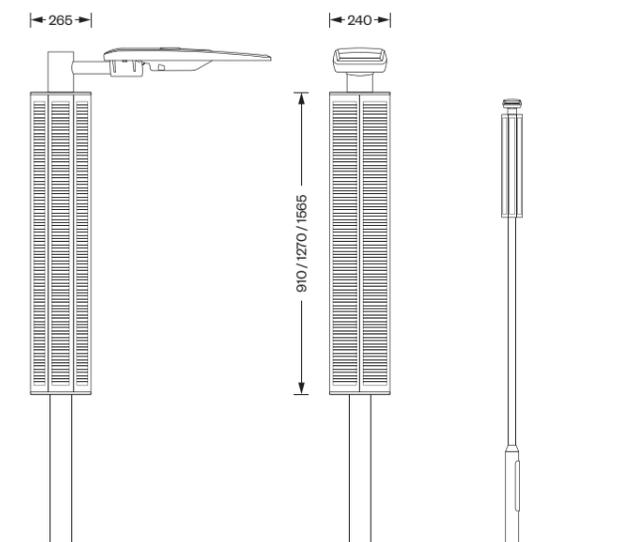
Lumen output:	up to 6000lm
Power:	up to 40W
Optical control:	up to 14 distributions
Colour temperature:	2700K / 3000K / 4000K
Solar panel:	100W / 150W / 200W
Battery capacity:	307Wh / 691Wh
Autonomy:	Varies by usage and location, contact us for calculations
Control:	Integrated PIR sensor
Materials:	Die-cast aluminium frame Monocrystalline silicon panel Lithium iron phosphate battery
Mounting:	Ø76 / Ø60mm post-top & side entry

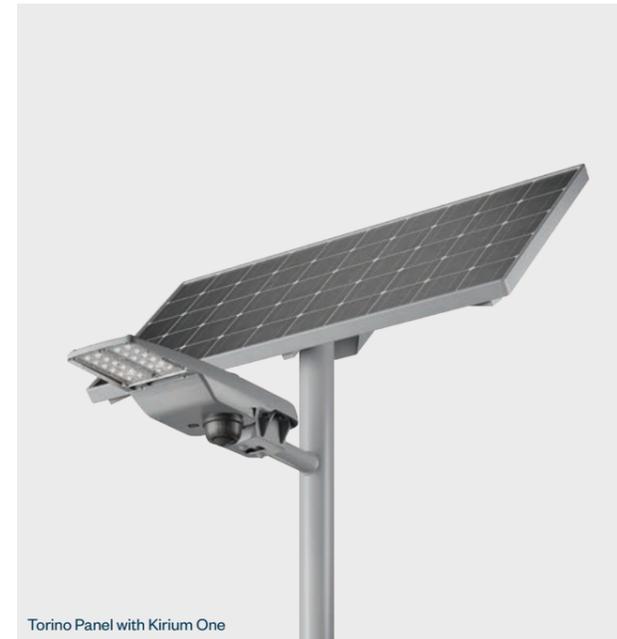
Luminaire finishes:
(other colours available on request)



Typical applications

-  Footpaths
-  Car parks
-  Housing developments





Torino Panel with Kirium One



Torino Panel with Kirium Pro S

Torino Panel

Simple solar lighting solution

Torino Panel is a simple, cost-effective solar solution featuring a flat PV panel mounted directly to the top of the column. With a tilt angle optimised for your location, the panel can be easily orientated to maximise solar absorption. Torino Panel can be specified with a range of DW Windsor luminaires.

Technical details

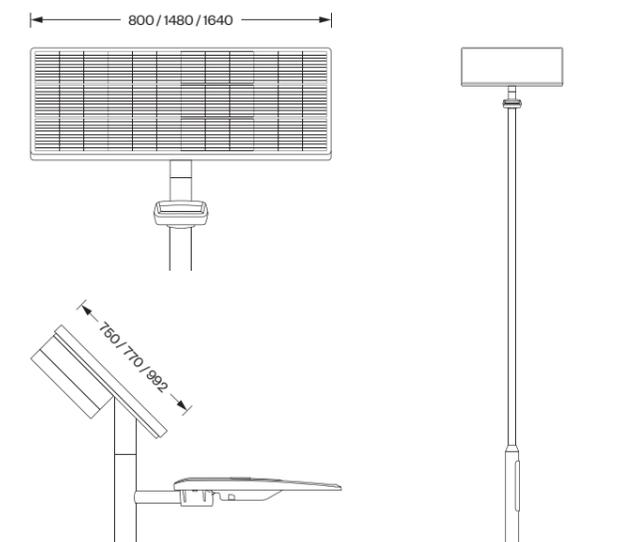
Lumen output:	up to 6000lm
Power:	up to 40W
Optical control:	up to 14 distributions
Colour temperature:	2700K / 3000K / 4000K
Solar panel:	100W / 200W / 300W
Battery capacity:	307Wh / 691Wh
Autonomy:	Varies by usage and location, contact us for calculations
Control:	Integrated PIR sensor
Materials:	Aluminium frame Monocrystalline silicon panel Lithium iron phosphate battery
Mounting:	Ø60mm side entry

Luminaire finishes:
(other colours available on request)



Typical applications

-  Footpaths
-  Car parks
-  Housing developments





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