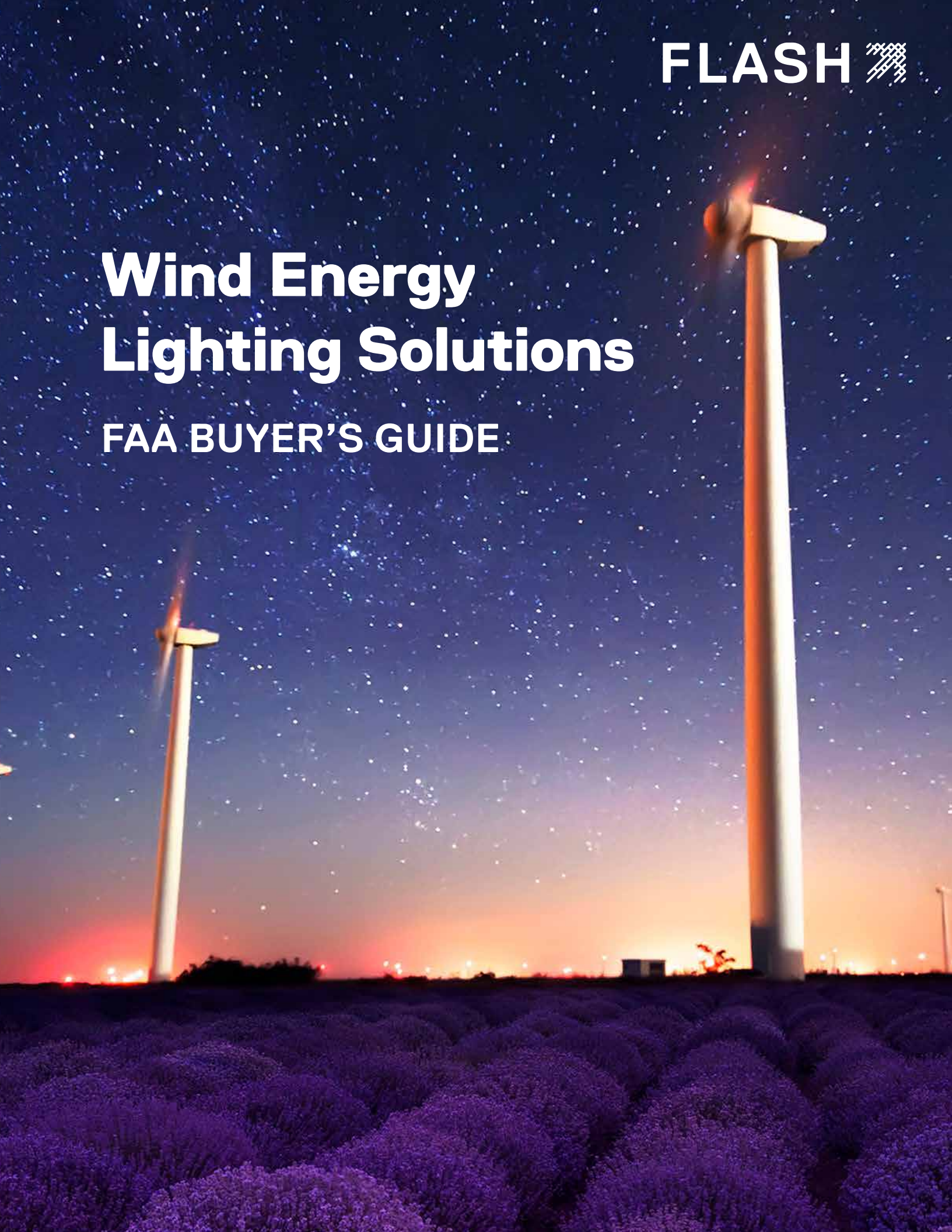
FLASH

Wind Energy Lighting Solutions

FAA BUYER'S GUIDE





Contents

Flash Enhances Wind Safety 2
Wind Energy Farm Solutions 4
- Permanent Wind Turbine Lights
- Temporary Wind Turbine Lights

MET Tower Solutions 12
ADLS Equipment 16
Accessories 20
- Mounting Brackets
- Circuit Protection and Wiring
- Solar Power Solutions

Flash Enhances Wind Safety

Since 1970, Flash Technology has been a trusted Original Equipment Manufacturer (OEM) of obstruction lighting solutions. Our commitment to quality, innovation, and performance ensures that wind energy developers and operators can maintain compliance without compromise.

Designed and manufactured in ISO 9001:2015-certified facilities, our wind lighting systems protect more than 20,000 wind turbine and MET tower assets worldwide.

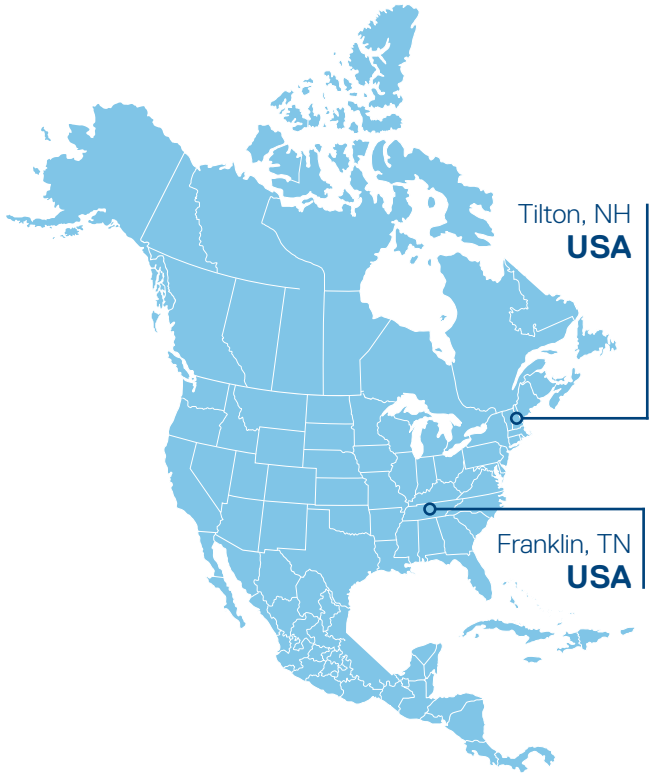
Built for long-term reliability and cost-effective operation, Flash Technology's obstruction lighting solutions are independently certified to FAA, ICAO, Transport Canada, and AFAC Mexico standards. Our comprehensive portfolio includes permanent and temporary wind turbine lighting, MET tower lighting, solar-powered obstruction systems, mounting hardware, and surge protection solutions.



A Brand of SPX Aids to Navigation

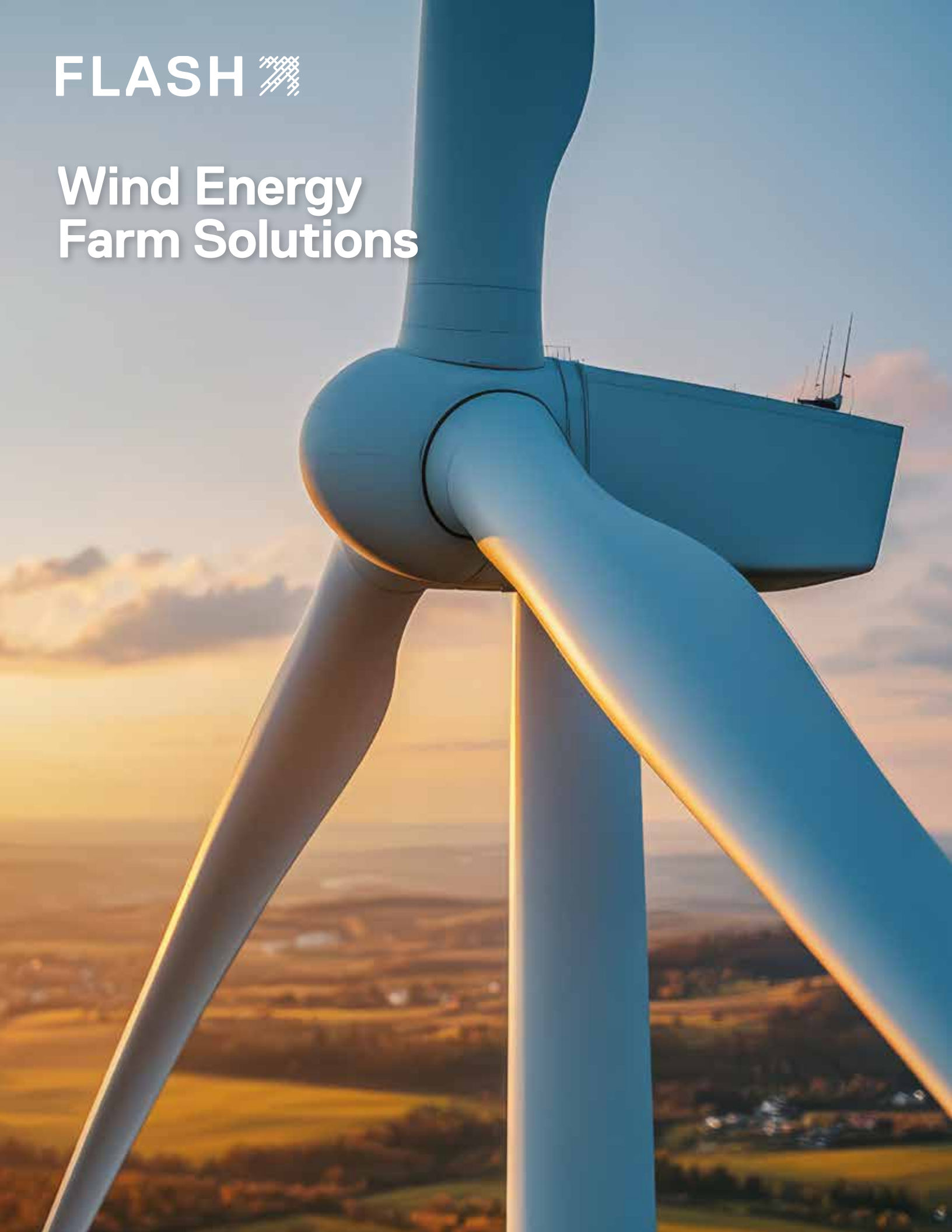
Since joining SPX Technologies in 2003, Flash Technology has combined its industry-leading obstruction lighting expertise with the strength of a global infrastructure technology company.

As part of the SPX Aids to Navigation division, alongside Avlite, Sabik, Sealite, and ITL, we offer a comprehensive portfolio of airfield, marine, and obstruction lighting solutions supported by a worldwide network of resources and service.



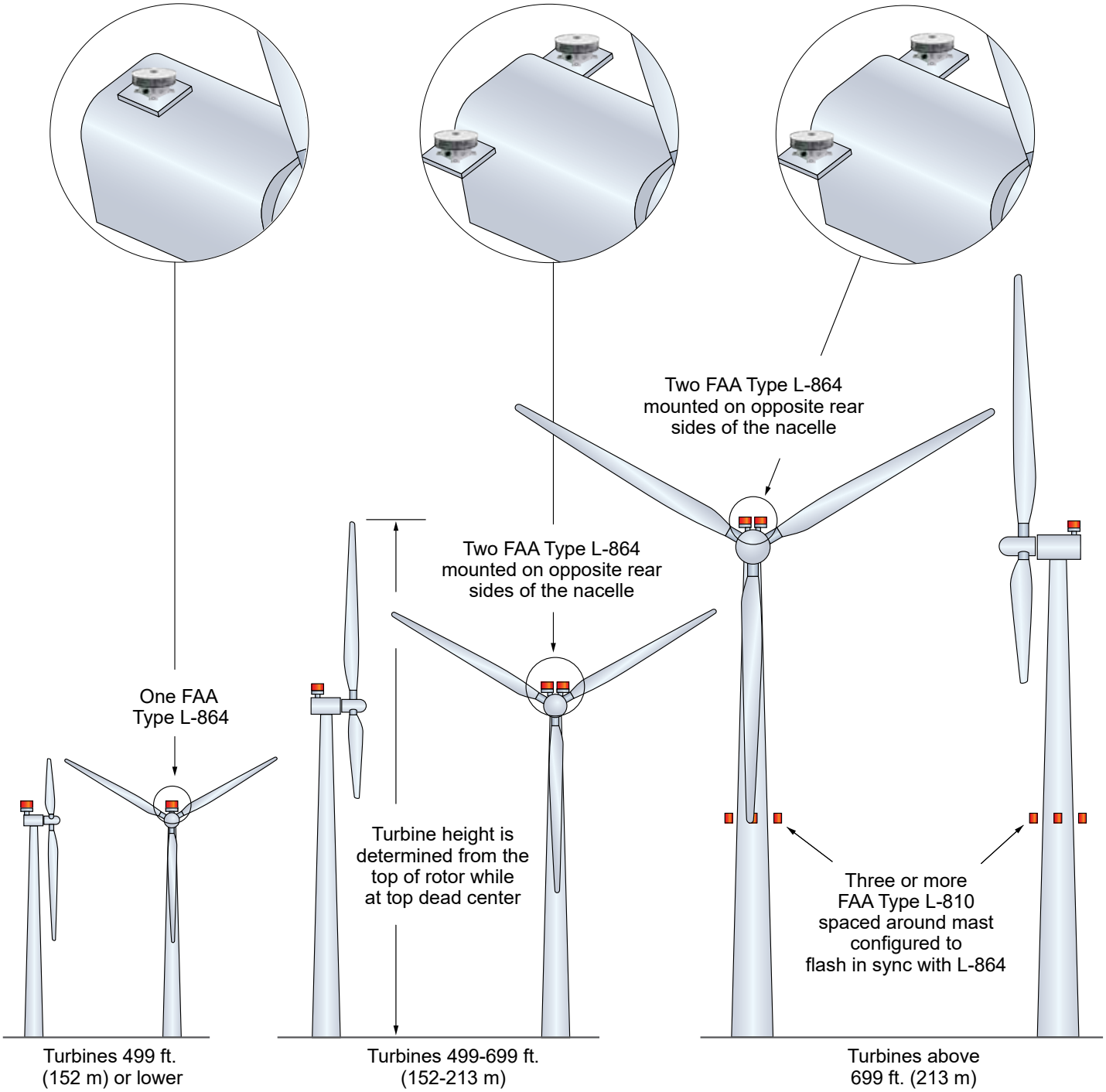
FLASH

Wind Energy Farm Solutions



FAA Guidelines for Permanent Installations

In accordance with FAA Advisory Circular 70/7460-1N, Obstruction Marking and Lighting, all permanent wind turbine installations should be marked and lighted as shown below to ensure visibility to aircraft and compliance with aviation safety requirements.





Permanent Wind Turbine Lights

FTS 370i-2

Part Number F1370670

The FTS 370i-2 is an integrated wind obstruction light delivering reliable, “set it and forget it” performance enabling operators to confidently meet FAA aviation safety requirement. Paired with Flash’s FTC 370-2 Light Control Module (LCM), this advanced solution strengthens cybersecurity and supports seamless radar integration to reduce the risk of disruption and support continuous, safe operation.

Key Features

- Intertek Certified to FAA AC 150/5345-43J, Type L-864
- Simplified, All-in-One Design
- **Optional** LCM 2 Light Control Module providing cybersecure, ADLS-integrated lighting control





Simplified, All-In-One Design Light

Built on a proven, durable design, the fully integrated FTS 370i-2 operates as a stand-alone obstruction light, eliminating the need for an external controller and freeing valuable space within the nacelle.

Seamless Radar System Integration

Compatible with Aircraft Detection Lighting System (ADLS) from leading providers like DeTect™ and Terma™, these lights are designed for seamless integration and support dual monitoring through both the ADLS controller and Supervisory Control and Data Acquisition (SCADA) system.

Highly Efficient Lighting Solution

The FTS 370i-2 uses advanced LED technology to deliver significant energy and cost savings, further enhanced when paired with the LCM. The LCM illuminates the light only when an aircraft is detected nearby, optimizing efficiency without compromising safety.

FLASH

Temporary Wind Turbine Lights





FAA Requirements for Wind Turbine Lighting During Construction

Ensure your wind turbines comply with federal lighting regulations by adhering to these three FAA requirements for lighting wind farm construction sites.

1. **L-810 Steady-Burning Light Mandate for Wind Turbines Under Construction.**

   To ensure nighttime aviation safety, the FAA mandates that wind turbine construction reaching a height of 50 feet must be equipped with temporary L-810 steady-burning red obstruction lights at the highest point. Solar powered LED red lights that meet the L-810 photometric standard can be used if site power is unavailable. These temporary lights must remain operational until permanent L-864 flashing-red lights are active. The FAA explicitly prohibits relying on a Notice to Air Missions (NOTAM) to avoid temporary lighting.

   Source: FAA AC 70/7460-1N Section 13.8

2. **Temporary Lights Must Have a Minimum Intensity of 32.5 Candela at their Peak.**

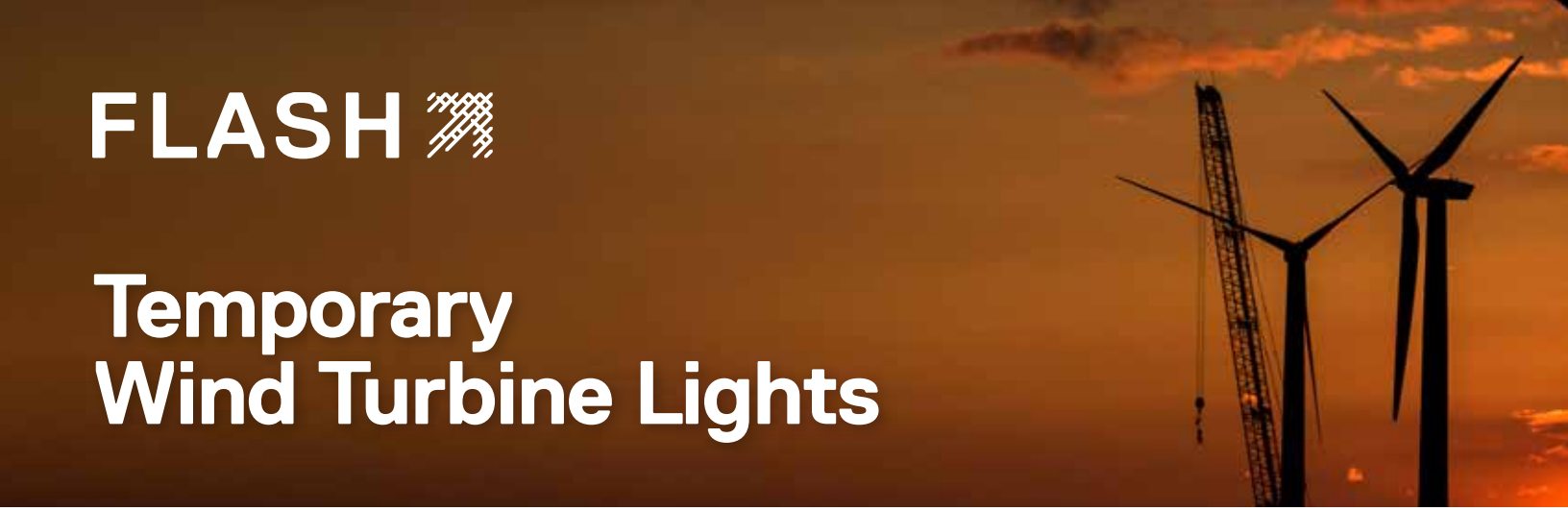
   The center of the vertical beam spread must be positioned between +4 and +20 degrees, maintaining a minimum vertical beam spread of 10 degrees. Furthermore, a minimum intensity of 32.5 candela must be sustained across all 360-degree radials.

   Source: FAA AC 150/5345-43J

3. **Temporary Solar Lighting Systems Must Have Seven (7) Days of Autonomy and 32.5 Candela.**

   Autonomy measures how long the light stays on if solar charging stops completely due to bad weather or unexpected factors. For example, a system with 7 days of autonomy will run continuously for 7 days during prolonged bad weather or unexpected outages.

   Source: FAA Engineering Brief 76 (EB76)



FLASH

Temporary Wind Turbine Lights

OL800 Compact

Part Number F1903711

The OL800 is a self-contained solar FAA L-810 light using high-efficiency solar panels that requires minimal ongoing maintenance. With the top-mounted LED display and simple tap-to-activate feature, you can easily check light settings without an external controller. The rugged design ensures the maximum battery life and light performance even in the harshest of environments.

Key Features

- Long-lasting batteries with 7 days of autonomy in high sun regions
- **Optional** charging port allows fast battery charging prior to lantern deployment
- **Optional** Infrared Programmer for remote control





OL800 Large

Part Number F1903710

The OL800 is a self-contained solar FAA L-810 light using high-efficiency solar panels that requires minimal ongoing maintenance. With the top-mounted LED display and simple tap-to-activate feature, you can easily check light settings without an external controller. The rugged design ensures the maximum battery life and light performance even in the harshest of environments.

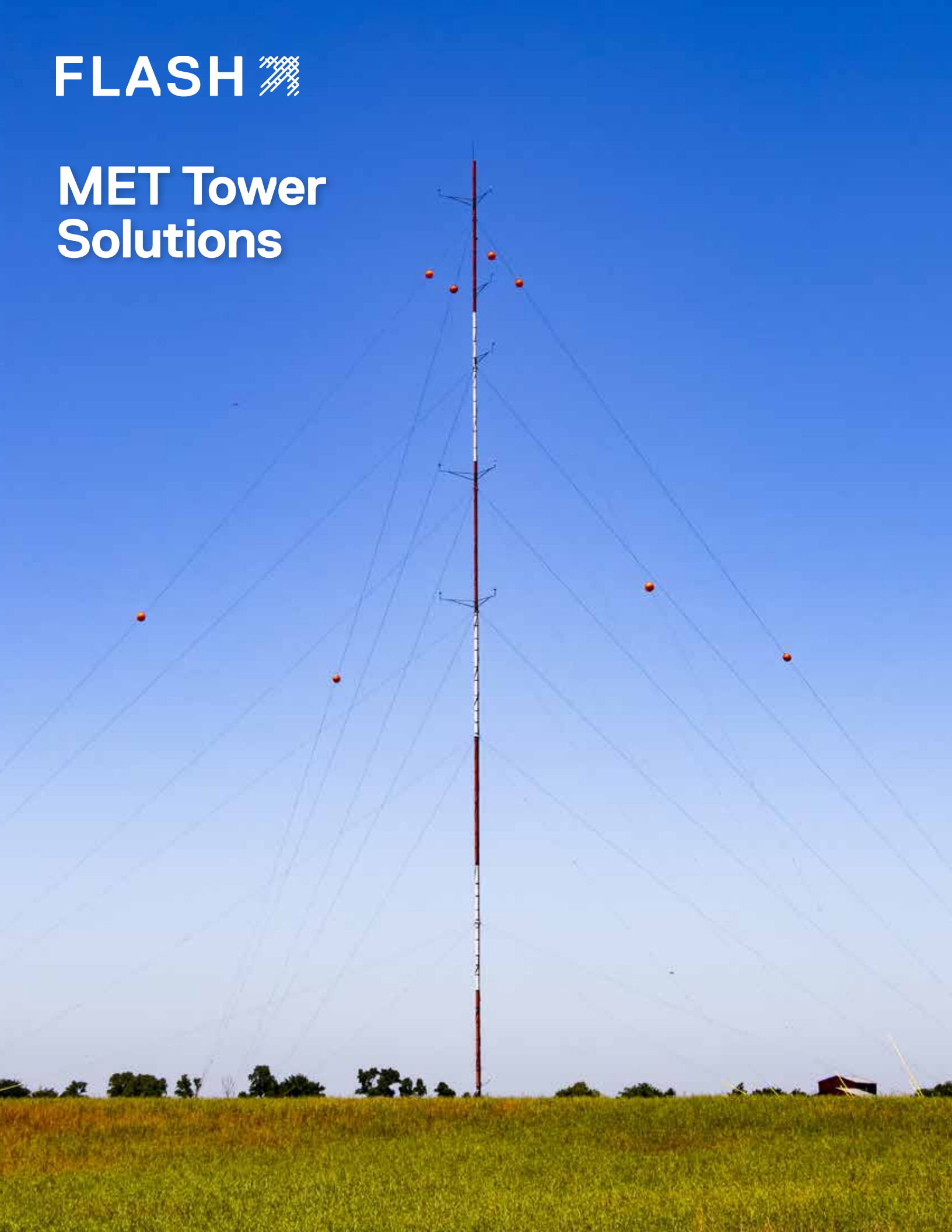
Key Features

- Long-lasting batteries for 16-19 days of autonomy
- **Optional** charging port allows fast battery charging prior to lantern deployment
- **Optional** Infrared Programmer for remote control



FLASH

MET Tower Solutions



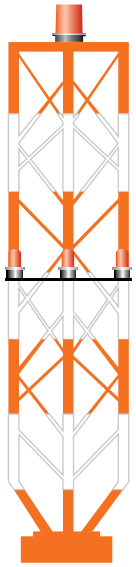
FAA Guidelines for MET Towers

The marking requirements for Meteorological Evaluation Towers (MET) vary depending on the height of the structure and must comply with **FAA Advisory Circular 70/7460-1N, Obstruction Marking and Lighting**.

MET Towers Under 200 feet AGL

Monopole Towers
Alternating bands of aviation orange and white paint

Guyed Towers
Alternating bands of aviation orange and white paint, with high-visibility sleeves and spherical markers on guy wires

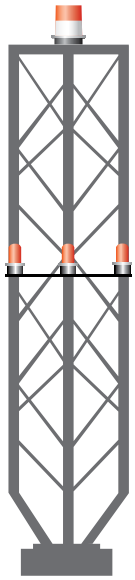


FAA A1 TOWER

- Over 150 ft. but not more than 350 ft. including any appurtenances
- One (1) L-864 red/IR medium intensity beacon
- Two (2) or more L-810 red/IR marker lights configured to flash in sync with L-864 beacon

MET Towers Over 200 feet AGL

Follow FAA lighting regulations for red or dual towers based on their FAA filing and total height



FAA E1 TOWER

- Over 200 ft. but not more than 350 ft. including any appurtenances
- One (1) L-864/865 dual medium intensity beacon
- Two (2) or more L-810 red/IR marker lights configured to flash in sync with L-864 beacon



FLASH

MET Tower Lights

Vanguard® Medium FTS 370d

Part Number F1402010

The FTS 370d is a dual (white, red/infrared) FAA L-864/L-865 type LED obstruction lighting system designed for FAA Type E Towers ranging between 200 and 700 feet above ground level (AGL).

Key Features

- Intertek Certified to FAA AC 150/5345-43J, Type L-864/L-865 and L-810
- Includes an Aircraft Detection Lighting System (ADLS) interface
- Seven (7) dry contact relays for monitoring
- Surge immunity of 25kA to withstand 99% of all lightning strikes
- **Optional** SMART card for GPS synchronization between MET tower and wind turbine lights, control of lighting system, and detailed diagnostic data



ADLS Integration

- Light Suppression via Auxiliary Connection to ADLS Radar



Vanguard® Red FTS 371 SMART

Part Number F13714S1

The FTS 371 SMART is a low-power consumption FAA L-864 type red obstruction lighting system. It is a solution for wind turbines taller than 699 feet and meteorological (MET) towers.

Key Features

- Intertek Certified to FAA AC 150/5345-43J, Type L-864 and L-810
- 4 dry contact relays (beacon, marker and photodiode alarms and MODE status)
- Dry contact relay for integration with Aircraft Detection Lighting System (ADLS) interface
- Modbus RTU Serial RS-485 monitoring capability



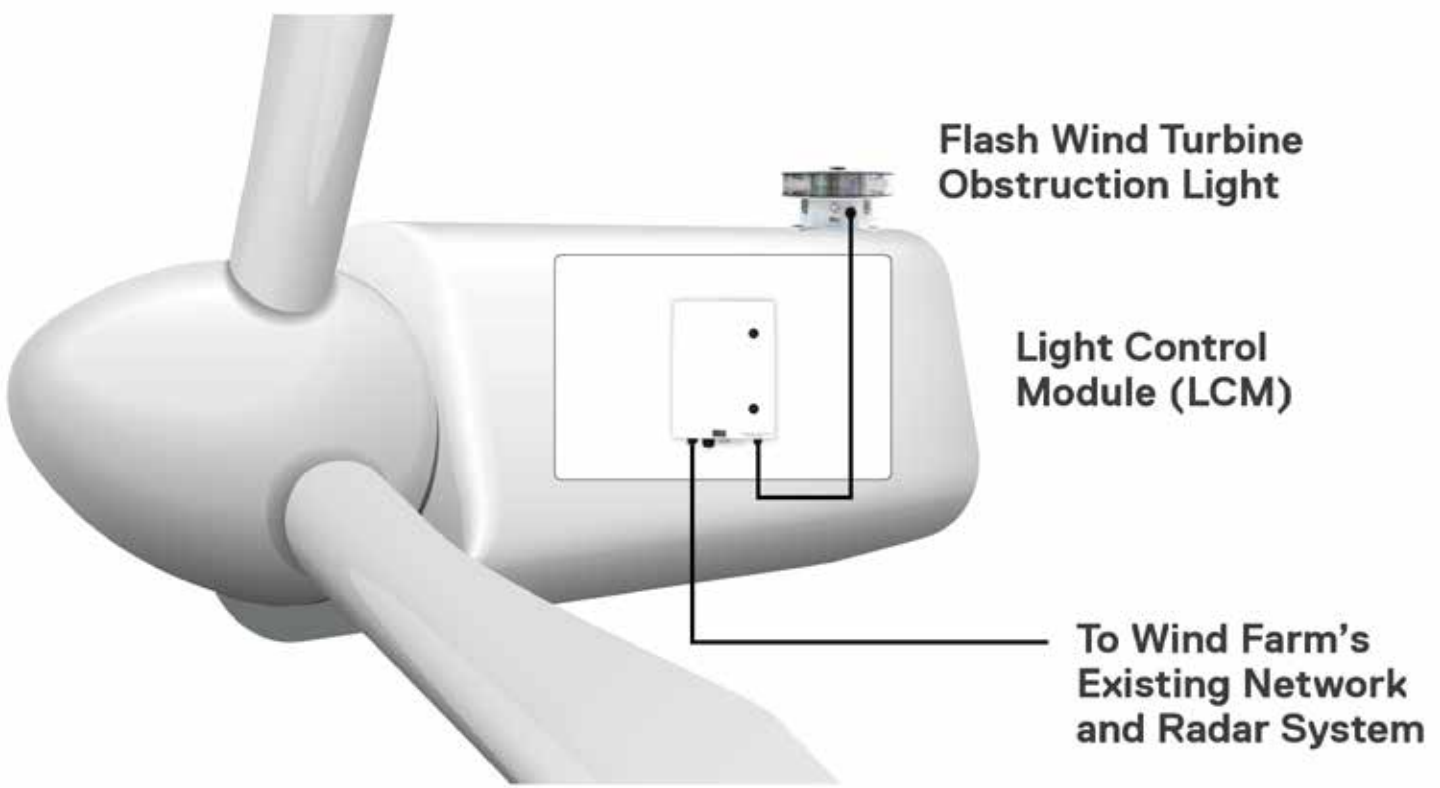
ADLS Integration

- Optional FTC 370 or FTC 370-2 (cybersecure) Light Control Module connected to Dry Contact or Modbus interface.

FLASH

ADLS Equipment





Obstruction lighting is essential for aviation safety, however, continuous nighttime illumination on wind turbines and tall structures like MET towers can create unwanted light pollution for local communities and wildlife.

An Aircraft Detection Lighting System (ADLS) provides a smarter solution. Driven by advanced radar technology, the system continuously monitors the nearby airspace and illuminates obstruction lights only when an aircraft enters the FAA-designated perimeter. By keeping the lights off during clear airspace, ADLS preserves dark skies and minimizes community disruption without compromising aviation safety.

Purpose-built for ADLS integration, our connectivity solutions seamlessly integrate wind turbine and MET tower obstruction lighting with leading radar systems to streamline deployment and deliver reliable communication and dependable lighting control.



FLASH

ADLS Equipment

FTC 370

Part Number F1371500

The FTC 370 Light Control Module (LCM) seamlessly links wind turbine obstruction lights with leading Aircraft Detection Lighting Systems (ADLS), including the DeTect HARRIER® and the Terma SCANTER platforms. By streamlining integration and enabling reliable system communication, the FTC 370 ensures turbine lights operate only when aircraft are present, preserving dark skies, and enhancing operational efficiency without sacrificing aviation safety.

Key Features

- Controls up to 2 Flash wind turbine obstruction lights
- Modbus Transmission Control Protocol (TCP) via Ethernet network
- Built-in failsafe protection for communication errors with ADLS





FTC 370-2

Part Number 51005746

For cybersecurity-critical projects, pairing the FTC 370-2 Light Control Module (LCM) with the FTS 370i-2 delivers an intelligent, secure lighting control solution. Engineered to fortify network security, this combination seamlessly integrates with leading Aircraft Detection Lighting System (ADLS) radar platforms, including DeTect HARRIER® and the Terma SCANTER, to minimize operational disruptions while ensuring continuous obstruction lighting and uncompromised aviation safety.

Key Features

- Supports cybersecurity controls consistent with CIS Controls v8 IG1
- Features a secure, key-lock enclosure to prevent unauthorized access
- Controls up to 2 Flash wind turbine obstruction lights
- Modbus Transmission Control Protocol (TCP) via Ethernet network
- Built-in failsafe protection for communication errors with ADLS



FLASH

Accessories





Delivering Cutting-Edge Technologies and Turnkey Solutions

Flash Technology provides a comprehensive line of wind turbine lighting accessories engineered to simplify installation and ensure regulatory compliance. Our product lineup includes mounting brackets, overvoltage protection (OVP) devices, junction boxes for dual obstruction lights, and solar power solutions. Designed for broad compatibility across turbine platforms, these accessories streamline setup and ensure seamless integration between turbines and obstruction lighting systems.

Engineered with Telecommunications Industry Association (TIA) certification, our turbine brackets fit a wide range of nacelles and integrate seamlessly with obstruction lighting systems. For specialized applications, Flash Technology provides custom engineering to design mounting solutions tailored to your exact turbine specification and ensure precision fit with simplified installation.

FLASH

Mounting Brackets

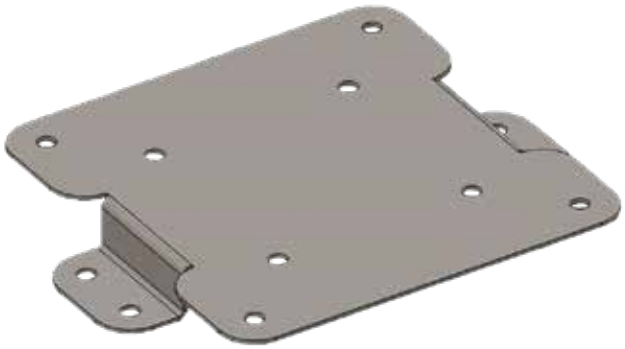


Adjustable Bracket

Part Number 11000017307

Adaptable bracket designed to fit a diverse set of wind turbines.

Compatible with:
GE 1.5, 2.3, 2.5, 2.8 MW
Vestas V155, V150v V136, V126, V117, V112, V105

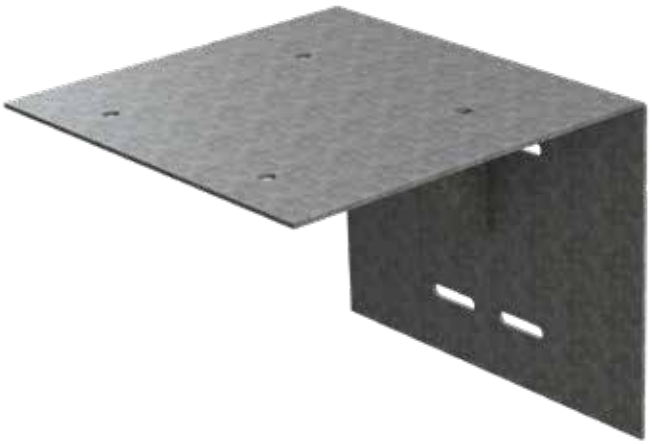


Nordex Bracket

Part Number F3365072

Compatible with:
Nordex N155





Siemens Bracket

Part Number F3991190

Compatible with:
Siemens G120



Sierra Bracket

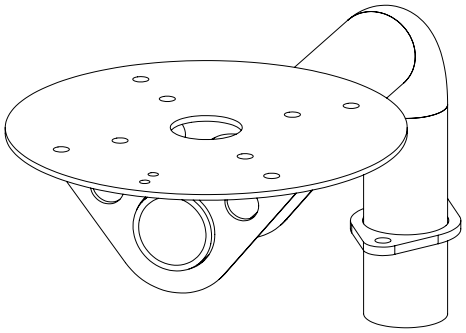
Part Number 12003133

Compatible with:
GE Sierra



FLASH

Mounting Brackets





Vestas Brackets

Part Number F3991252

Compatible with:
Vestas 2 MW

Part Number BCN-WIND-BKT-VE

Compatible with:
Vestas Series

Circuit Protection and Wiring



Overvoltage Protection

Part Number F1390190

Approved for Siemens wind turbines, the Overvoltage Protection (OVP) device safeguards obstruction lighting systems against lightning strikes and power surges. Installation is typically required on Siemens turbine platforms to ensure electrical compliance and system longevity.



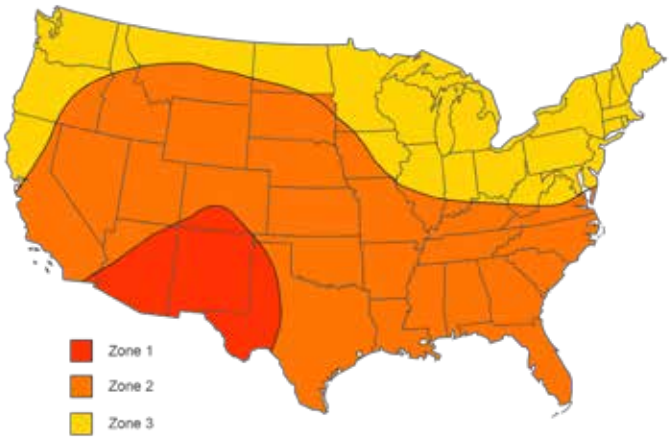
Dual Lighting Junction Box

Part Number F1390200

Wind turbines exceeding 499 feet require dual FAA obstruction lighting. The dual lighting junction box consolidates wiring from both light fixtures into a single output, streamlining connection to the site's Supervisory Control and Data Acquisition (SCADA) system or Aircraft Detection Lighting System (ADLS).

Solar Power Solutions

Flash Technology delivers turnkey solar power solutions tailored for off-grid applications. Custom-engineered for regional solar irradiance, these systems offer plug-and-play compatibility with FTS 370 and FTS 371 lighting systems, providing a minimum of 7 days of power autonomy to ensure full compliance with FAA Engineering Brief 76 (EB76) standards.



Engineered specifically for obstruction lighting demands, this system handles high inrush currents and incorporates regulated power circuitry to deliver consistent, uninterrupted power regardless of solar fluctuations.

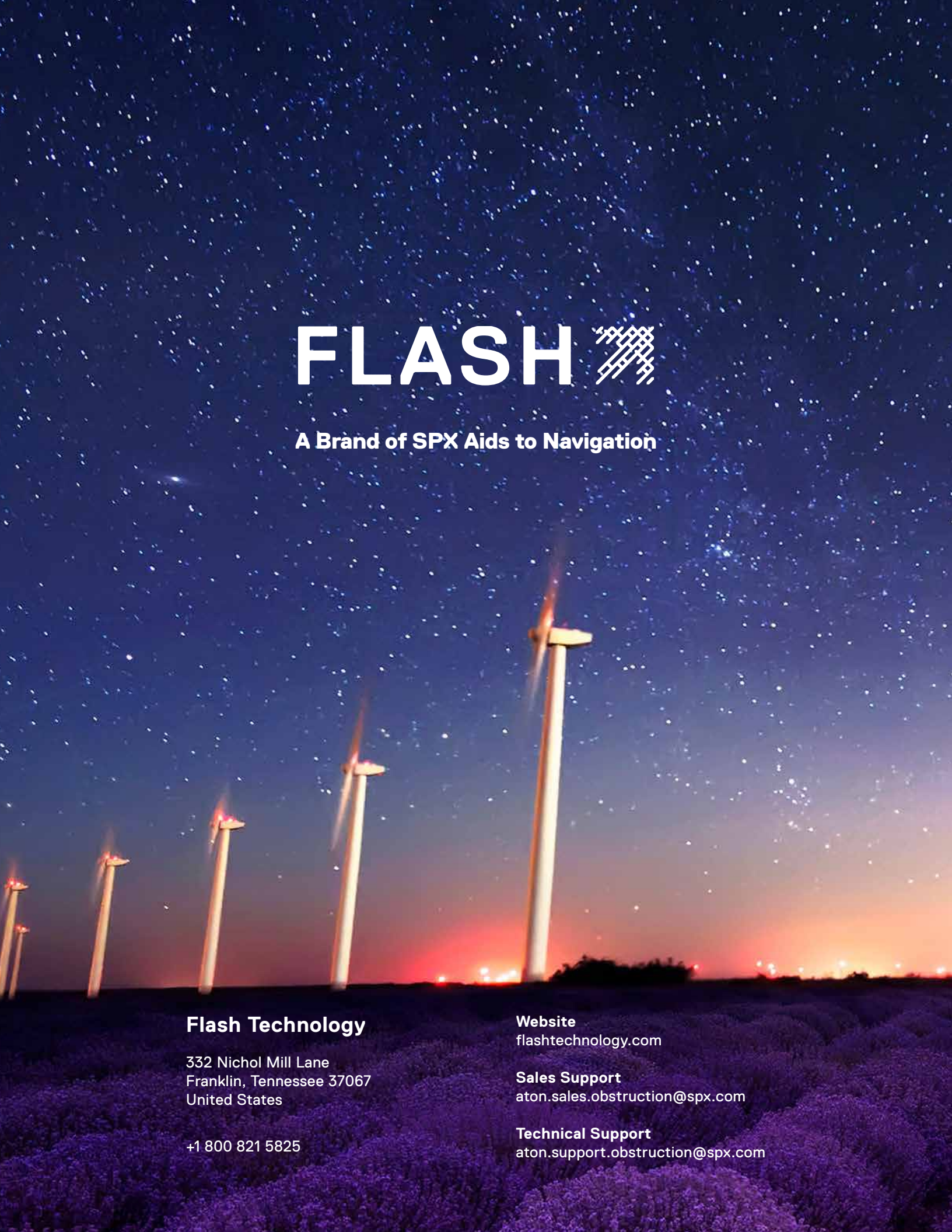


Key Features

- FAA AC 70/7460-1N compliant lighting
- Robust systems, reliable operation in adverse weather
- Charge controller to maximize battery life and performance



Contact Flash
to help you plan your wind energy lighting solutions and navigate safety compliance.



FLASH

A Brand of SPX Aids to Navigation

Flash Technology

332 Nichol Mill Lane
Franklin, Tennessee 37067
United States

+1 800 821 5825

Website
flashtechnology.com

Sales Support
aton.sales.obstruction@spx.com

Technical Support
aton.support.obstruction@spx.com