



FONROCHE
lighting

SOLAR
IS THE NEW
STANDARD

Agenda

- Who are we?
- Solar Smartlight technology
- Reliability



FLA HQ



Who we are

Established in 2011, Fonroche Lighting is the global leader in public solar lighting.

Based in southwest France (Lot-et-Garonne), we design, develop, manufacture and install off-grid solar streetlights to meet the needs of local authorities and businesses in France and around the world.

As early pioneers in our market, we believe that **solar is a better alternative to conventional grid-connected street**

OUR PRESENCE WORLDWIDE

A strong international footprint

FRANCE
HEADQUARTERS



AMERICA
FONROCHE
lighting



AMERICA
FONROCHE
lighting

SENEGAL
FONROCHE
lighting



SENEGAL
FONROCHE
lighting

BENIN
FONROCHE
lighting



BENIN
FONROCHE
lighting

LATIN AMERICA
FONROCHE
lighting



LATIN AMERICA
FONROCHE
lighting



SALES SUBSIDIARIES



PROJECT IMPLEMENTATION SUBSIDIARIES

5

International subsidiaries

100+

approved distributors

8,000

local authorities provided
with our solutions

(at end-2022)

In 2023

Opening of the world's largest solar lighting center



View of Fonroche Lighting's new head office in Agen, SW France

4 ha
site

9,000
sq.m.
floorspace

Production site with capacity for 300,000 solar streetlights/year

First smart training facility dedicated to solar lighting

Technology demonstrators

Largest battery testing laboratory



FONROCHE LIGHTING

“La Street”



solar is a better alternative to conventional grid-connected street

Components

PV MODULE

Self-cleaning glass with high-efficiency.
Poly or monocrystalline cells for **optimal light capture in all weather conditions.**
Service life: **30 years minimum.**

10 year warranty

LED LIGHT UNIT

Low energy consumption.
High performance > 190 Lm/W
40 to 80 W nominal – 2,700 K – 3,000 K – 4,000 K
Integrated heat dispersion.
Service life: **20 years minimum.**

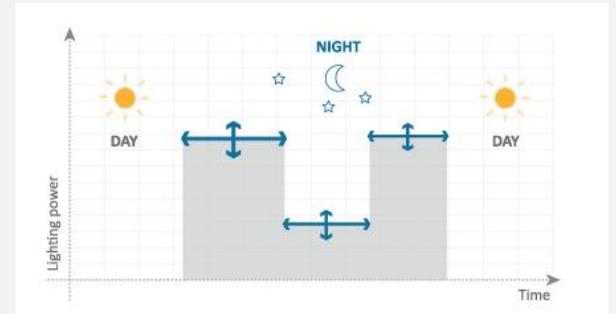
8 year warranty

TECHNOLOGY

Storage system and smart energy management



Smart system **designed** by Fonroche.
Programmable lighting schedules.
Anti blackout security, no outages possible.



365 nights of lighting a year guaranteed

NICKEL BATTERY (NiMH)
Operating temperature from **-58 F-140 F**
100% of charge usable without battery deterioration.
Compact and lightweight.
Service life: **3,650 cycles minimum or 10 to 12 years.**

8 year warranty

FONROCHE LIGHTING'S APPROACH

A unique approach for every project

1 project =
1 study



1

Identification
of project
requirements

2



Capture of local weather
data

For sizing the system (direct and diffuse irradiation, temperature, rainfall and solar calendar).



3



Sizing and simulation
of a typical year
averaged over weather
data for the previous 10
years.

4



Result:
365 nights of
lighting a year
guaranteed.

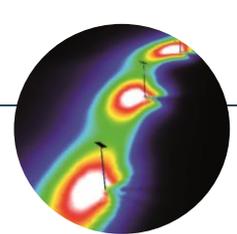
5



Fine adjustment
to create a bespoke
project according to
project location.

DIALux
Featured Project Award

6



A precisely
detailed layout to
keep costs under
control.



POWER ROOM

OUR EXPERTISE

The world's largest solar battery testing capacity

To guarantee the tough durability and efficiency of our systems and products, we set up a test laboratory dedicated to solar batteries. With over 500 sq.m. of floorspace, it has the largest testing capacity in the world.

20 climatic chambers to simulate all environments beyond real-world conditions

- Accelerated ageing and service life
- Thermal shock, rapid temperature variations (10°C/min)
- Leaktightness
- Corrosion, salt spray, etc.

Over 40,000 hours of testing for sign-off.



Our sustainable approach

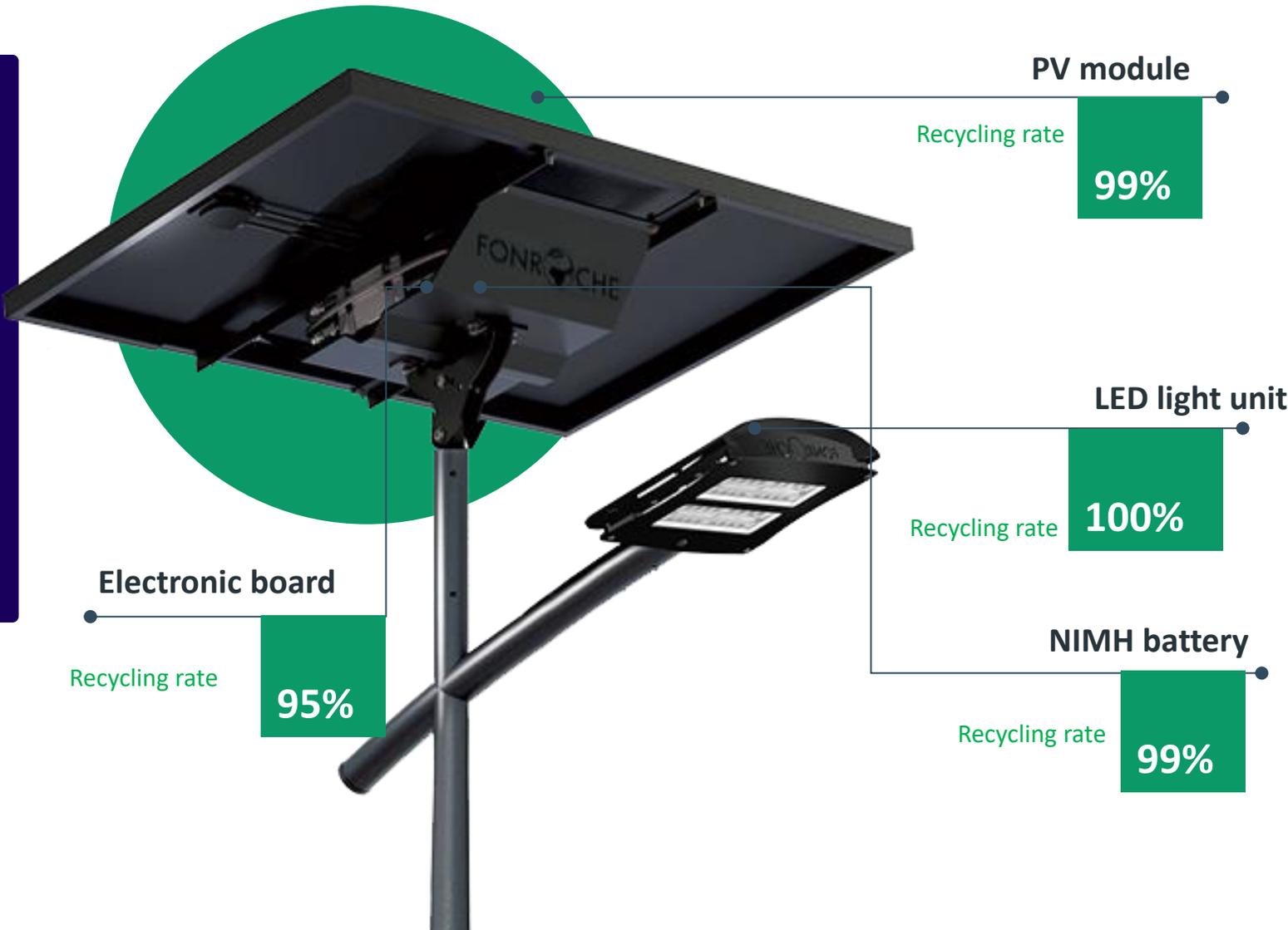
Ecodesign, recyclability, carbon footprint



SOLAR
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SUSTAINABLE APPROACH

Solar streetlight recyclability



Recycling rate of 95%

Long product service life and component recyclability are key aspects of Fonroche Lighting's environmental commitments.



Fonroche Lighting is a member of various environmental schemes to ensure its lighting components are effectively recycled at the end of their service life.



Monitor and control your streetlights remotely

Our R&D department has developed a long-range communication system, specially tailored to the management of Smartlight solar streetlights:

Remote monitoring and control of data from each streetlight

Remote diagnosis and preventive actions

Monitoring of one or more streetlights simultaneously

Geolocation of each light

FONROCHE
connect



Embedded communication system

143

Number of street lamp in your park

State of connected street lamp

Operating **143** | With default **0**



Energy available



Light on time **19:15** | Light off time **08:45**



Energy Produced **26940.20 kWh**



Economy of CO₂ **2.29 t**

SMARTLIGHT RANGE

Our ambiances



NEW-ART

Modern ambience

BELLE-EPOQUE

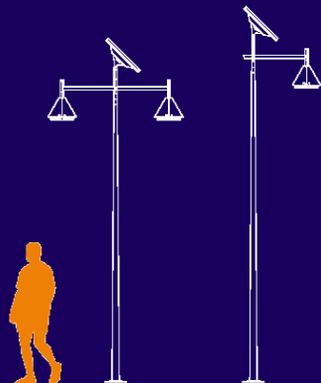
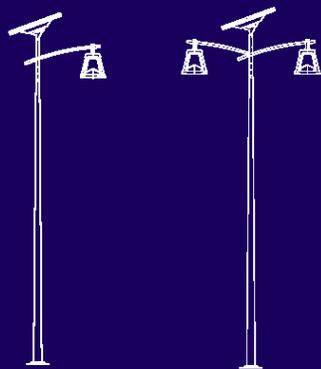
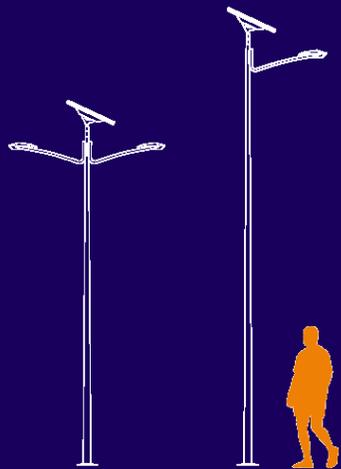
Traditional ambience

OPERA

Urban ambience

ESSENTIAL

Functional ambience



BELLE EPOQUE

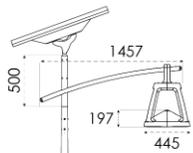
TRADITION & MODERNITY

Inspired by traditional lighting, the BELLE EPOQUE lantern for Fonroche solar streetlights is a nostalgic nod to the past and retains the shape of the lanterns of yesteryear. By suspending the lantern upside down, we have brought it up to date, giving it a robust look, with a refined profile, making it truly distinctive.



AMBIENCES

Traditional ambience *Refined urban style*



- Cast aluminum
- Oblong-profile crosspiece
- Single and dual crosspiece
- Bird guard
- Customization possible



Applications: village and town squares, parks and gardens, roadways, etc.



OPERA

ADORNMENT & CUSTOMISATION

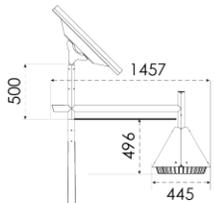
OPERA is a lantern for Fonroche solar streetlights that reinterprets and brings a contemporary dimension to the design cues of traditional lighting, such as decorative ornaments and arches.



AMBIENCES

Urban ambience

A style to suit every location



- Cast aluminum with decorative sheet metal
- Suspended effect crosspiece
- Single and dual crosspiece
- Customization possible



Applications: roads, streets, parking facilities, residential developments, etc.



ESSENTIAL

TIMELESS DESIGN
MULTIPLE APPLICATIONS

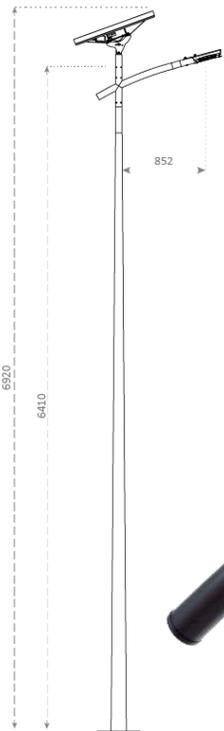
With its timeless design, the ESSENTIAL lantern is the perfect fit for any project and any setting. Highly functional, this lantern with its sleek, slender styling is designed to fit with any environment.



AMBIENCES

Functional ambience

For all types of applications



- Pole in galvanized steel (EN40 standard)
- Available with single and dual arm
- Robust
- Multiple applications



Applications: parking lots, roads, roundabouts, parks and gardens, housing estates, etc.





09/19/2023

Fonroche Lighting America
10F Roessler Rd.
Woburn, MA 01801

Re: RTI New Product Evaluation Tracking #22-3223
"Power 365 Autonomous Solar Street & Road Light"

Thank you for submitting your product for evaluation. The Texas Department of Transportation's (TxDOT) Traffic Safety Division (TRF) has reviewed your request for approval of the "Power 365 Autonomous Solar Street & Road Light." TRF approves the use of this product for non-breakaway applications placed outside the clear zone or behind traffic barrier.

A Special Specification will be required for TxDOT use, to include, at a minimum, addressing measurement, payment, and materials. The photometric pattern of the product's luminaire will need to conform to TxDOT Departmental Materials Specification 11011 or be written into this Special Specification. Furthermore, the batteries and solar panels will need to comply with the requirements for 3-day or 5-day battery backup as set forth in Special Specification 6063.

This product shall be added to the Approved Product List under the TxDOT Product Evaluation page and expires three years from the date of this letter and shall need to be recertified at that time.

This letter shall not be considered a product endorsement, nor shall it be used for promotional purposes.

Thank you for contacting the Texas Department of Transportation. If you have further questions, please contact us at 512-416-4738.

Sincerely,

TXDOT



IDAHO TRANSPORTATION
DEPARTMENT
P.O. Box 7129 • Boise, ID 83707-1129
(208) 334-8000 • itd.idaho.gov

September 5, 2023

via email

FONROCHE LIGHTING AMERICA
10F Roessler RD
Woburn, MA 01801

Product: Smartlight
Category: 619 Illumination
Sub-Category: LED Luminaires - Solar

The Idaho Transportation Department Product Review Team has completed evaluation of your product for the Qualified Products List (QPL) program. In reviewing your product and associated test results, we have determined that it is suitable for the intended use in the category/subcategory listed above, under **Provisional Approval**.

Product restrictions are listed as follows:

Design assistance from manufacturer is required to obtain correct AASHTO lighting criteria.

The product will retain this QPL status solely at the Department's discretion. Product status is contingent upon the following conditions:

- Continues to meet the Department's product specifications
- Performs satisfactorily under field conditions.
- To ensure the QPL information remains current we require the following updates. Failure to provide updated information when applicable or when requested could result in removal of your product from the QPL.
 - Manufacturer submittal of updates whenever any changes are made in regard to the product design or composition, company name, address, or contact information.
 - Product is subject to a mandatory 5-year update/approval process.

We reserve the right to request additional samples for testing at our convenience and/or require the submittal of current test data from a qualified testing laboratory for our review. Further product determination may require performance evaluation.

IDOT



Russell R. McMurry, P.E., Commissioner
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308
(404) 631-1990 Main Office

December 12, 2022

Hocine Benaoum
Fonroche Lighting America
10F Roessler Rd.
Woburn, MA 01801

Dear Hocine:

Subject: New Products Evaluation Committee Action on Fonroche Lighting America's "Smartlight" NPE 2208-1

Product Description: The Smartlight is an autonomous solar street and roads light. It is infrastructure grade, solar powered and completely off-grid.

Thank you for submitting your product to the New Products Evaluation Committee for consideration. The Committee has reviewed the subject product and recommended the Department classify this product as "Existing Specification" as potentially meeting the Georgia Department of Transportation Specification Sections 647, 925, 927, and 939. The primary specification, Section 927, covers the general requirements of luminaires and allows for innovations to streetlights. The vendor shall present the product to contractors and send cut sheets to the Office of Design Policy and Support for approval. They may also speak with counties and cities for use of this product. Use of this product is limited to the application for which it is intended.

If you have any questions concerning this matter, please contact the Office of Design Policy and Support at 404-631-1684 or any correspondence can be sent to the attention of Robert Graham at RGraham@dot.ga.gov.

We appreciate your interest in marketing products that benefit the Georgia Department of Transportation and the citizens of Georgia.

Sincerely,

GDOT

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E-mail: bel.streetlighting@lacity.org

March 15, 2023

Fonroche Lighting America
10F Roessler Rd
Woburn, MA 01801

APPROVAL OF THE FONROCHE SOLAR (LOCAL) STREET LIGHT

Thank you for your interest and participation in the City of Los Angeles Street Lighting Testing and Evaluation Program.

We are pleased to inform you that based on the results of our testing and evaluation, the following solar powered luminaire assembly is **approved as modified** (see attached specifications) for paved local streets and existing poles with no banners or restrictive signs attached.

Catalog # / Description
RFS-72W32LED-3K-R2M
RoadFocus luminaire 3000K, Type 2 Roadway
P305F-4P-HW-MC
305W solar panel (10' ft) with 1248Wh NiMH Battery

Spec Sheet
SmartLight Single RFS-042022
SmartLight Single RFS-042022

Sincerely,

Richard Sarigumba, Division Manager
New Technology & Energy Efficiency Division
Bureau of Street Lighting
Avalonwood Research Institute, member of the Illumination Society of America

LA street lighting bureau

DOT approval



FONROCHE
lighting AMERICA



The Difference



Thank you!



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