

# NOWATT LIGHTING

ARCHITECTURAL SOLAR LIGHTING

Sustainable lighting solutions  
2021

LIGHTING  
—  
MARKING



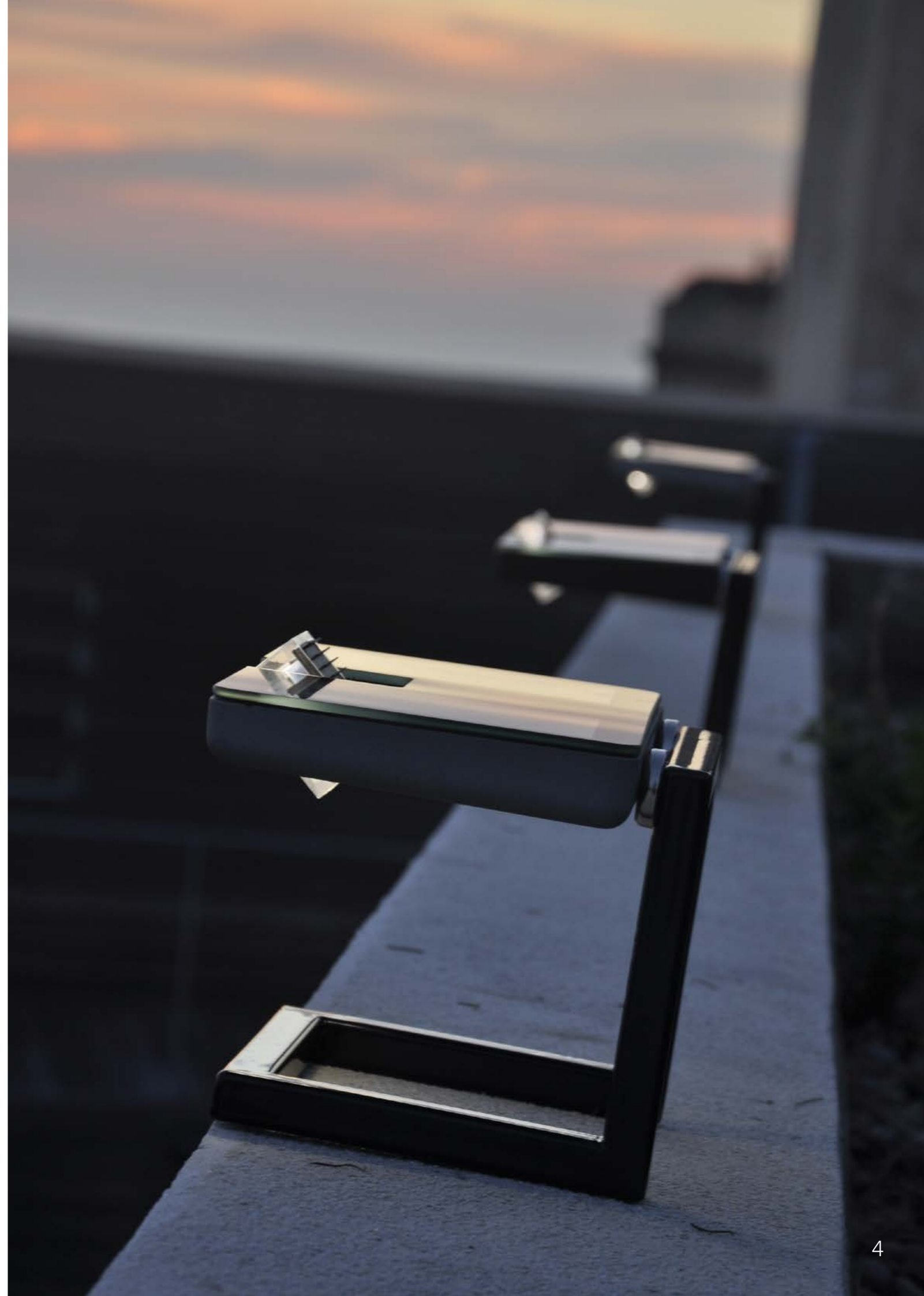
# ARCHITECTURAL LIGHTING

Nowatt Lighting is the fusion of solar lighting and architectural light. We design and manufacture devices that are both technically efficient and free from wiring works. If our DNA is solar, our goal is above all to create beautiful products that meet the aspirations of lighting designers, to best support them in their projects.

Our devices combine elegance, performance and sustainability. We are committed to designing a wide variety of products, fitting precisely into architectural and landscaping projects. The marking of a pedestrian path, the lighting of a public space, the luminous decoration of a facade, the lighting of a cycle path ...

Nowatt Lighting devices form a complete, smart and flexible range.

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# THE TECHNOLOGICAL LEAPS OF SOLAR

## Batteries

—  
Use of LiFePO4 batteries 8000 cycles at 50 % DoD. Lifespan greater than 20 years of use.

## Leds

—  
Latest generation of Leds achieving an efficiency ratio of 185 lumens/Watt for a white 3000 K thanks to binning and our low intensity steering.

## Solar cells

—  
Use of Back Contact cells. Efficiency 24 %. 85 % of production still preserved after 25 years of use.

## Components and softwares

—  
Use of microprocessors, of MPPT and algorithms to optimize the energy production and the luminous flux.



*Libourne - Coup d'éclat*

**THE EFFICIENCY OF OUR SOLAR LIGHTING DEVICES IS BOOSTED BY THE EFFICENCY GAINS OF THEIR VARIOUS COMPONENTS**

Nowadays, solar lighting is a technically justified solution in many lighting projects, beyond installation and consumption savings and environmental impact...

**Sustainable lighting that lasts all year long, even in winter.**

# CRYSTAL STUD

## PRODUCT ADVANTAGES:

- Glass stud sleekly diffusing light.
- Choice among one million of colors.
- Creation of 100 % tailor-made scenarios via the smartphone application.
- Modular and resistant.



The most economic solution to mark  
slow mobility lanes



**SUSTAINABLE  
MARKING SOLUTIONS  
FOR CYCLE PATHS**

# CRYSTAL STUD

**MARKING SOLUTIONS  
FOR ALL KIND OF  
APPLICATIONS**

# CRYSTAL STUD



**CONNECTED MARKING  
SOLUTIONS FOR DYNAMIC  
LIGHTING SCENARIOS**

# CRYSTAL STUD



**MARKING SOLUTIONS FOR  
URBAN VALORIZATION**



# CRYSTAL STUD



**MARKING SOLUTIONS  
FOR LANDSCAPING  
PROJECTS**

# ONYX COLUMN



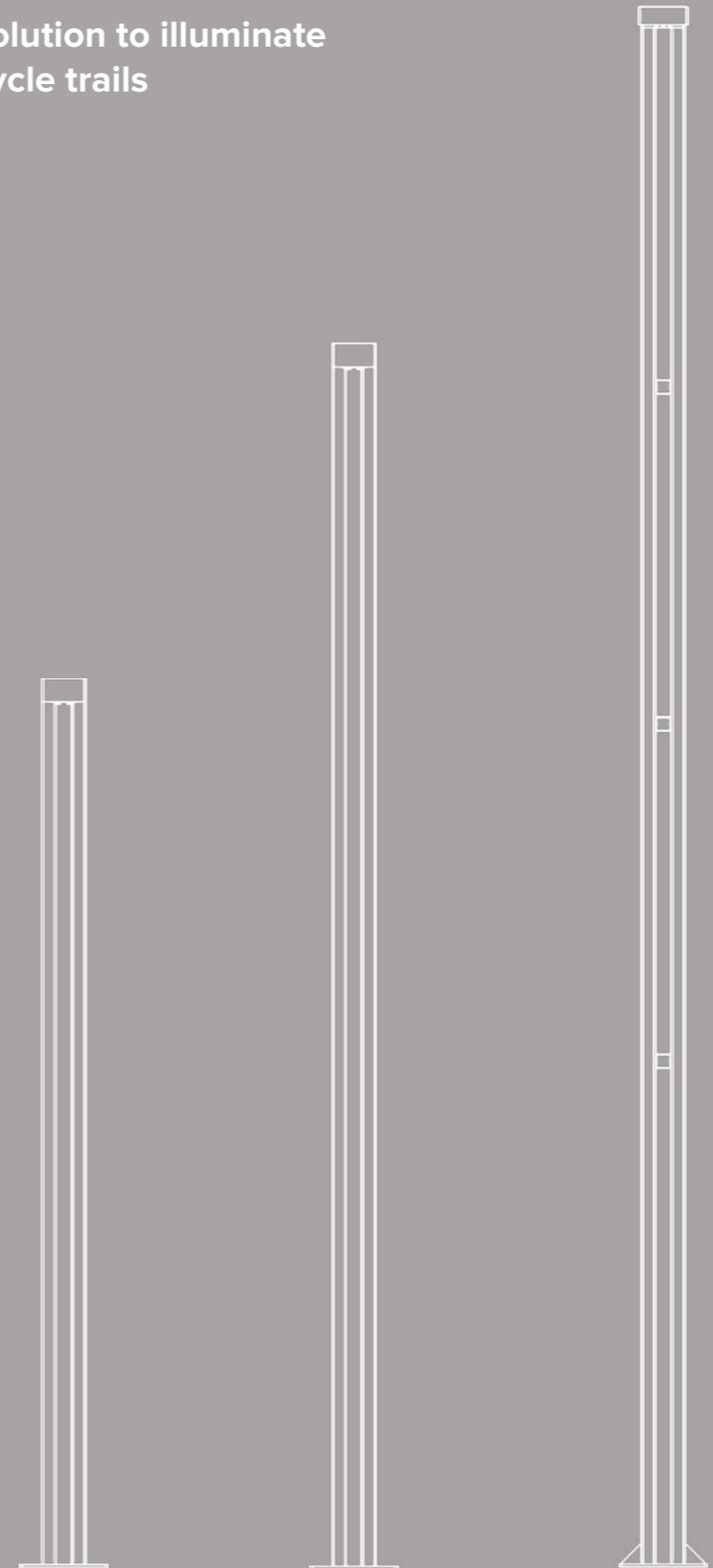
## PRODUCT ADVANTAGES:

- Interdistances between 15 and 30 meters.
- Creation of 100 % tailor-made scenarios via the smartphone application.
- Bidirectional motion sensor and light wave options.

## LIGHTING SOLUTIONS FOR SLOW MOBILITY LANES

The most efficient solution to illuminate  
and secure your bicycle trails

5 M  
4 M  
3 M

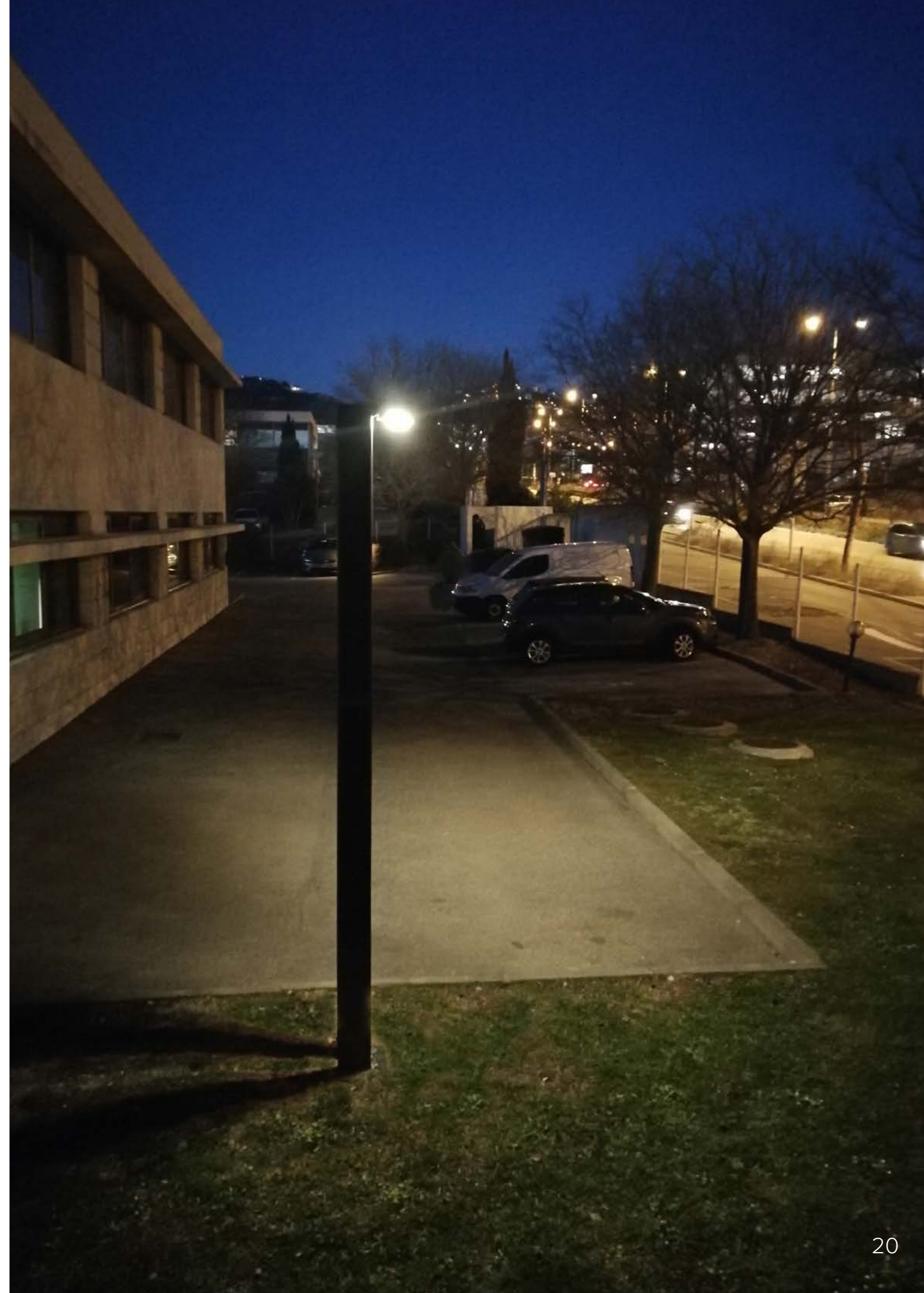


# ONYX COLUMN

**LIGHTING SOLUTIONS FOR  
SLOW MOBILITY LANES**



**A wide choice of optics for an optimal  
adaptation to the space to enlighten.**





**ONYX**  
COLUMN

**FLEXIBLE LIGHTING SOLUTIONS  
FOR SPECIAL PROJECTS**

# ONYX BOLLARD

The solution 100 % adaptable to enlighten the pathways



*Le Broc - Semelec 63*



*Libourne - Coup d'éclat*

## PRODUCT ADVANTAGES:

- The vertical solar panels on both sides allow the bollard to be oriented in all directions regardless of the North.
- A wide choice of optics and color temperatures.
- An optical block adjustable to 220°.

## POWERFUL AND MODULAR LIGHTING SOLUTIONS

# ONYX BOLLARD

ARCHITECTURAL AND  
LANDSCAPING LIGHTING  
SOLUTIONS

# ONYX BOLLARD



ARCHITECTURAL  
SOLAR LIGHTING SOLUTIONS



**AUTONOMOUS  
AND AESTHETIC  
LIGHTING  
SOLUTIONS**

# ONYX PROJECTOR

**A concentrate of Nowatt technology**

**PRODUCT ADVANTAGES:**

- A wide choice of optics and color temperatures.
- An optical block adjustable to 220°.
- Many fixing devices available to adapt to a wide choice of applications.





# E-ONYX POWER

The lighting solar solution both  
powerful and versatile

**PRODUCT ADVANTAGES:**

- The projector is remote: the solar panels can be optimally oriented while directing the light beam to the ideal location.
- Large surface of solar panels.
- A wide variety of applications.

**SOLAR AND  
MULTIDIRECTIONAL  
LIGHTING SOLUTIONS**



# E-ONYX POWER

SOLAR AND MULTIDIRECTIONAL  
LIGHTING SOLUTIONS

TREES AND FACADES  
LIGHTING SOLUTIONS



# E-ONYX STUD

*A product co-developed with Lumteam*

**PRODUCT ADVANTAGES:**

- A large surface of solar collectors allowing an optimal luminous flux.
- Possibility of tilting the optics up to 12°.
- Aesthetic and resistant.



**The solar solution to enhance green spaces**

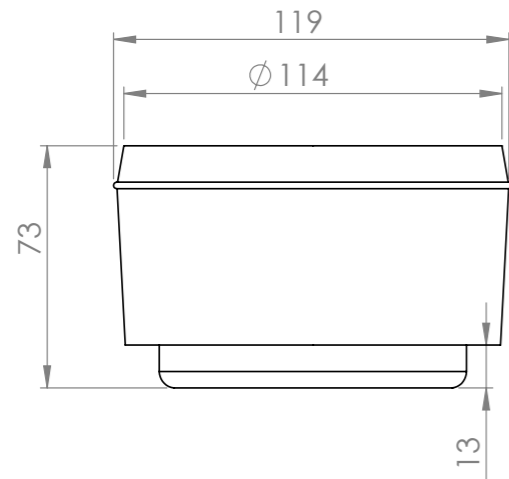
# E-ONYX STUD

# CRYSTAL STUD



# DATASHEETS

## CRYSTAL STUD

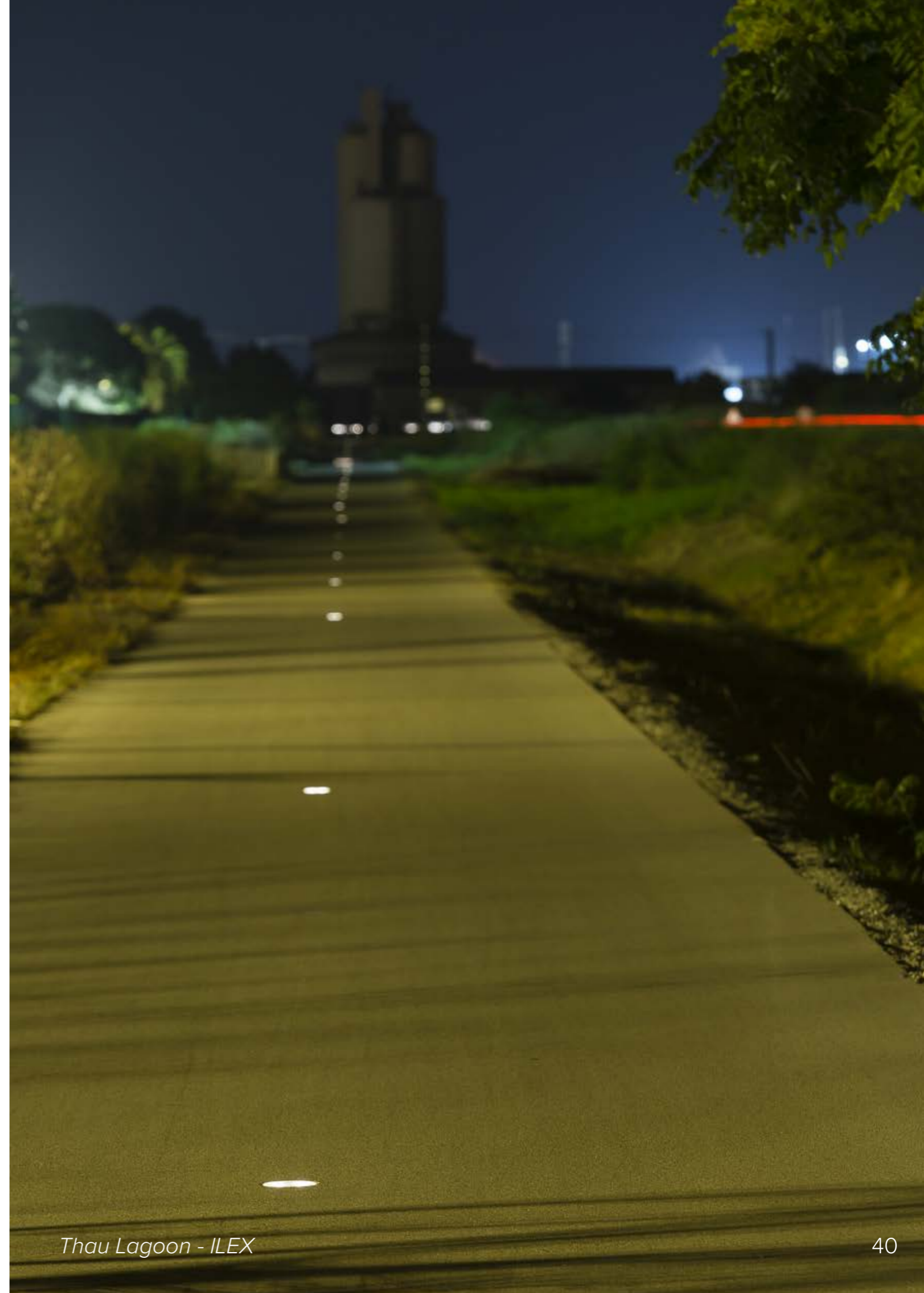


CE

IK

IP

- Solar outdoor marking fixture with Led.
- Tempered glass frame thickness 15 mm + aluminum tube.
- Battery LiFePO4 4,5 Ah.
- Solar panel Sunpower Back Contact.
- Weight: 1,25 kg.
- Class III - IP67 - IK10 - CE.
- Choice of color temperatures: amber, 3000 K, 4000 K, or RGBW.
- Bluetooth connection to remotely control the product via the smartphone app: scenarios and operating time.



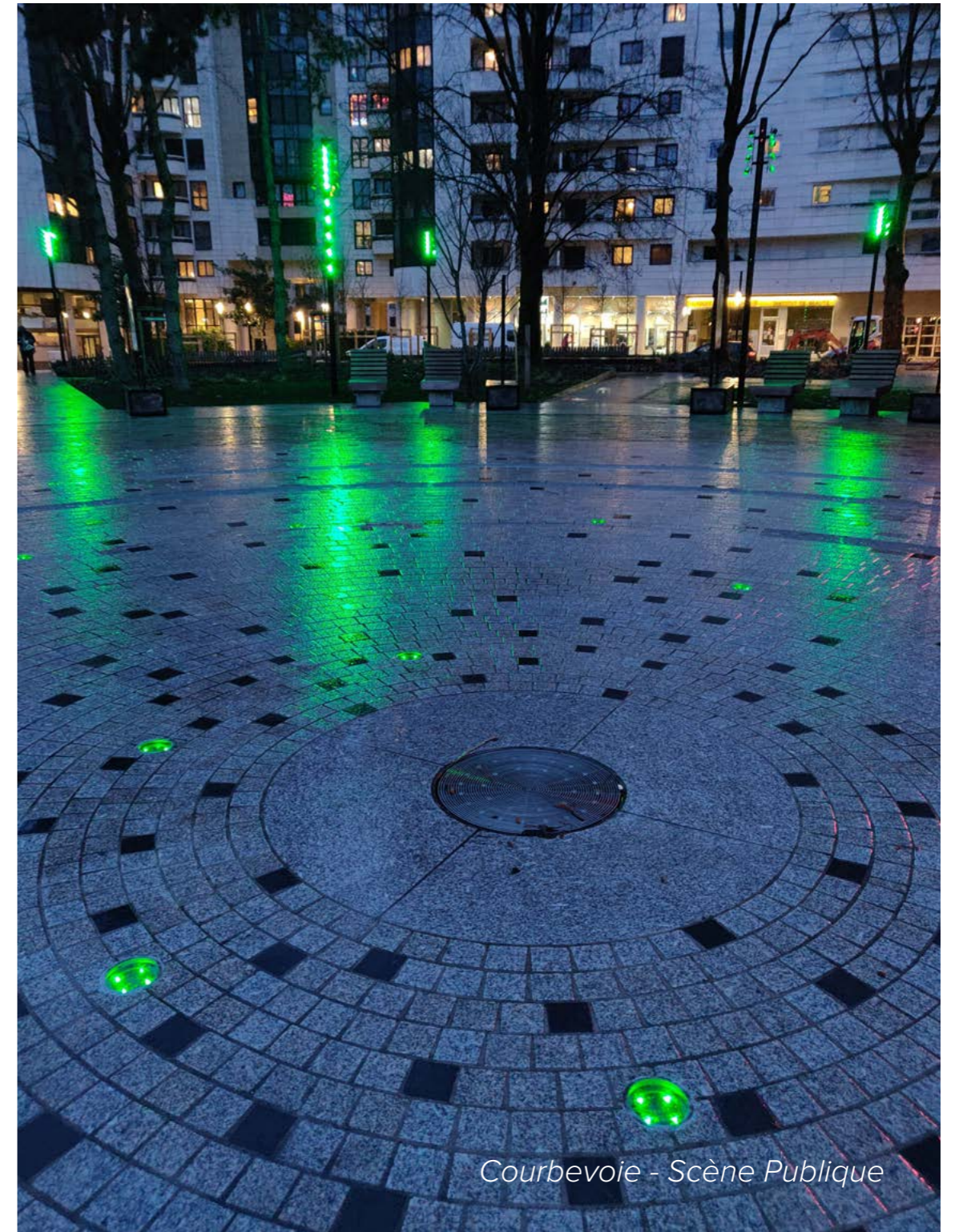
# NETWORKS AND CONNECTIONS

## CRYSTAL STUD

NOWATT LIGHTING IS THE ONLY MANUFACTURER IN THE WORLD TO BE ABLE TO SYNCHRONIZE **SOLAR MARKING** DEVICES AMONG THEMSELVES BY **MESH** NETWORK AND TO A **DMX**

### OPERATION:

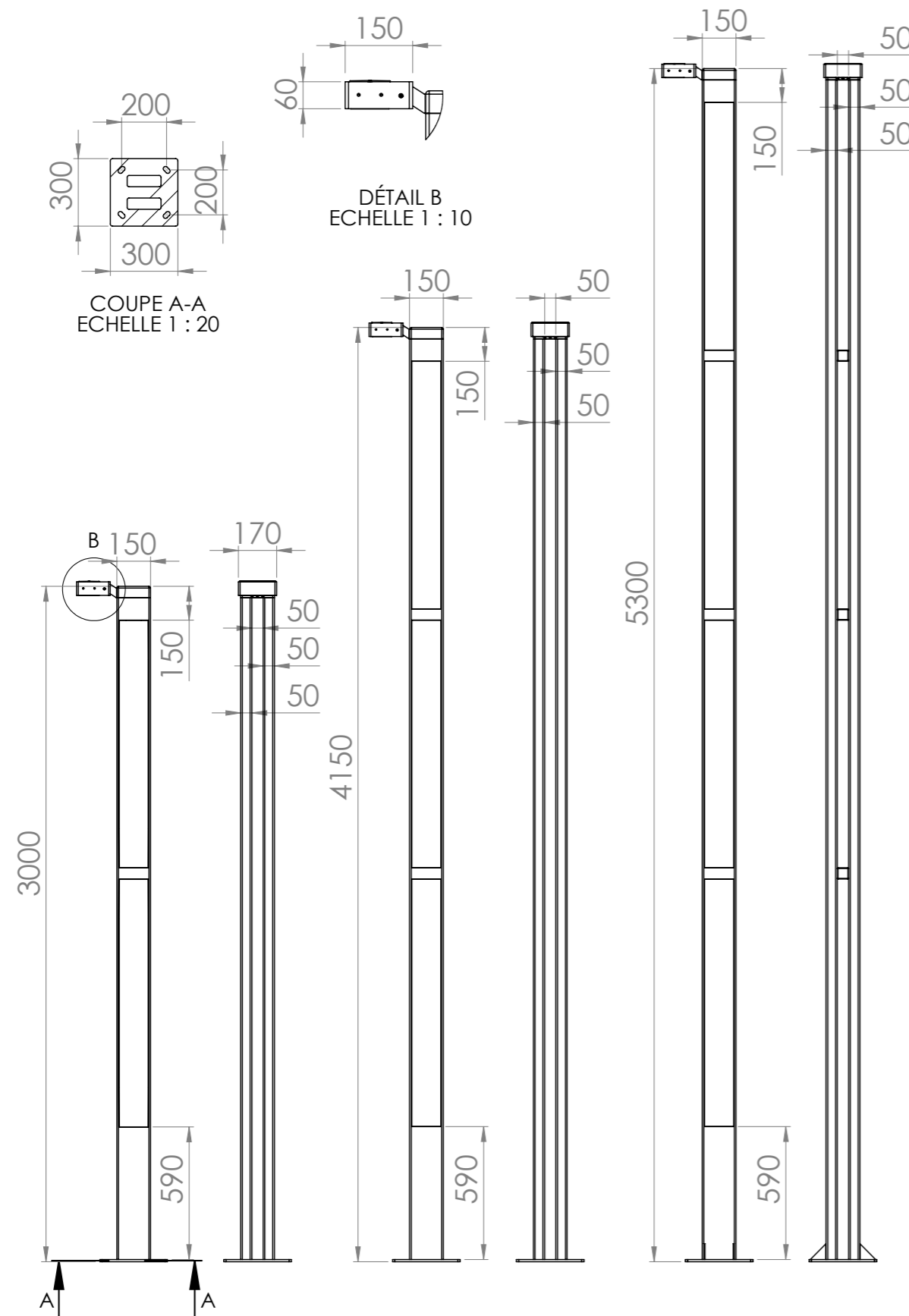
- The Gateway provides a control interface between the DMX system used for the rest of the lighting project and all of the Nowatt Lighting studs.
- Crystal Mesh studs light up in sync with the rest of the project.
- The Mesh system allows the realization of light animation scenarios.



Crystal Studs Mesh synchronizable among themselves and with the rest of the project in DMX via the Nowatt Lighting's Gateway.

# DATASHEETS

## ONYX COLUMN



- Solar outdoor light fixture connected with Led.
- Galvanized steel frame with polyester powdered coated paint finish.
- Battery LiFePO4.
- Solar cells Sunpower Back Contact.
- Class III - IP67 for the lantern - IP55 for the column - IK07 - CE.
- Color temperatures : 2200 K / 2700 K / 3000 K / 4000 K.
- Choice of photometries:
  - Optic 10: If width of the path > Height of the column,
  - Optic 11: If width of the path = Height of the column,
  - Optic 12: If width of the path < Height of the column.
- Options bidirectional motion sensor + light wave.
- Bluetooth connection to remotely control the product via the smartphone app.

Onyx Column	Dimensions	Weight
3 meters	3000 x 150 x 150 mm	75 kg
4 meters	4150 x 150 x 150 mm	95 kg
5 meters	5300 x 150 x 150 mm	115 kg

CE  
IK  
IP



Graphite color  
Interpon Futura Black  
2100 Sand blasted  
Code YW359 F

*Other colors on demand*

# PHOTOMETRIES ONYX COLUMN

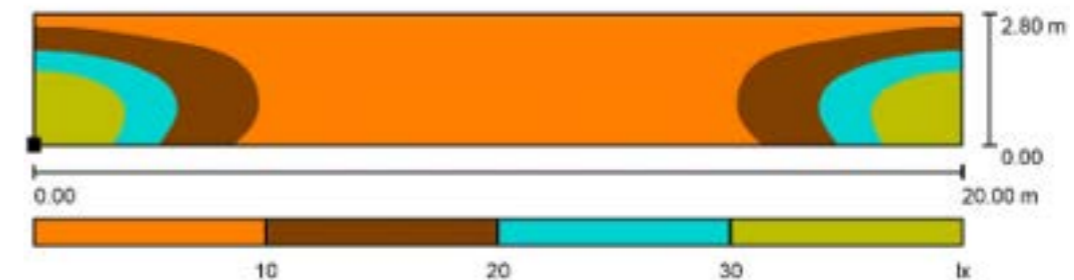
## EXAMPLES

The Onyx column is available with heights of 3, 4 or 5 meters and optics adapted to the width of the path to enlighten. One easily obtains in average 11 to 12 lux, thus respecting the EN 13201 standard. By choosing a higher column, the interdistances can be optimized. The optics are chosen accordingly to the width of the path to be illuminated.

**AVERAGE ILLUMINANCE 12 LUX**  
**INTERDISTANCE 25 MÈTRES**

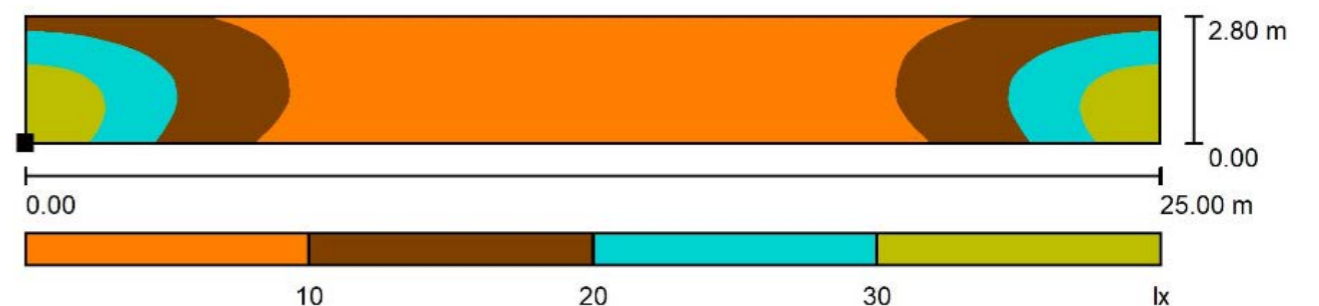
The photometric studies below are carried out in Marseille, France, with a 3000 K Led and 6 hours of operation per night.

### Column 3 m - path 3 m - interdistance 20 m



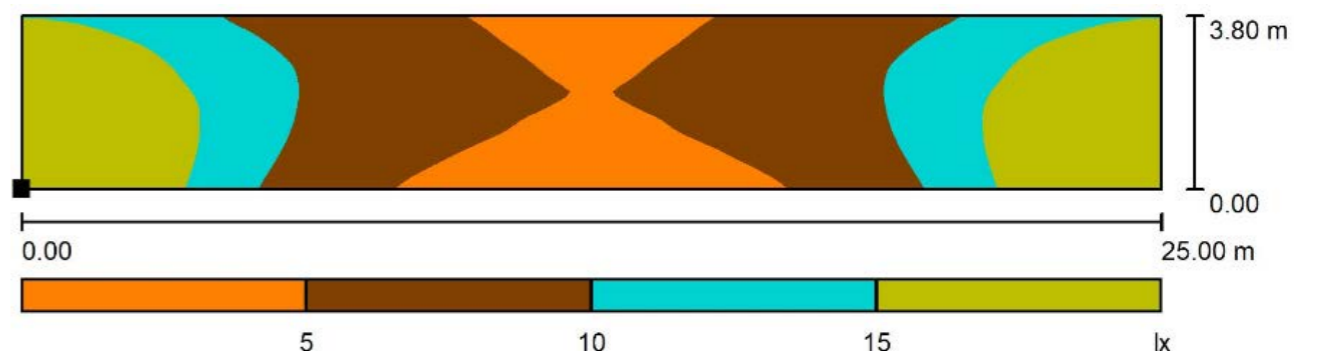
With 3-meter Onyx columns, a 3-meter-wide path, an interdistance of 20 meters, one obtains an average illuminance of 12 lux and a uniformity of 0.176.

### Column 4 m - path 3 m - interdistance 25 m



With 4-meter Onyx columns, a 3-meter-wide path, an interdistance of 25 meters, one obtains an average illuminance of 12 lux and a uniformity of 0.196.

### Column 5 m - path 4 m - interdistance 25 m

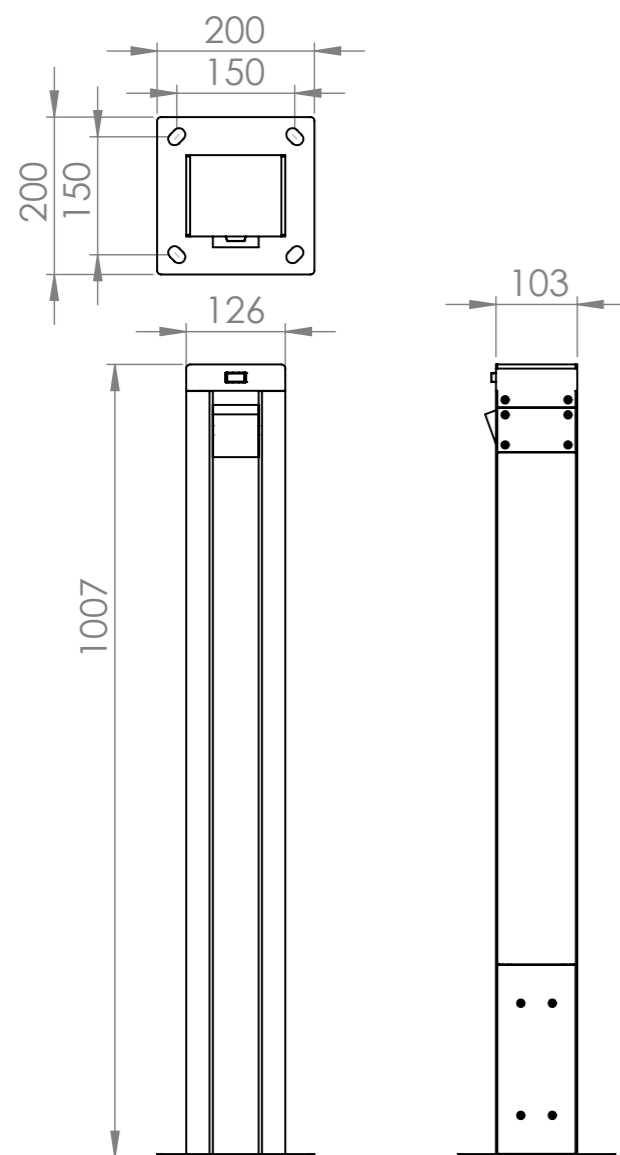


With 5-meter Onyx columns, a 4-meter-wide path, an interdistance of 25 meters, one obtains an average illuminance of 11 lux and a uniformity of 0.309.



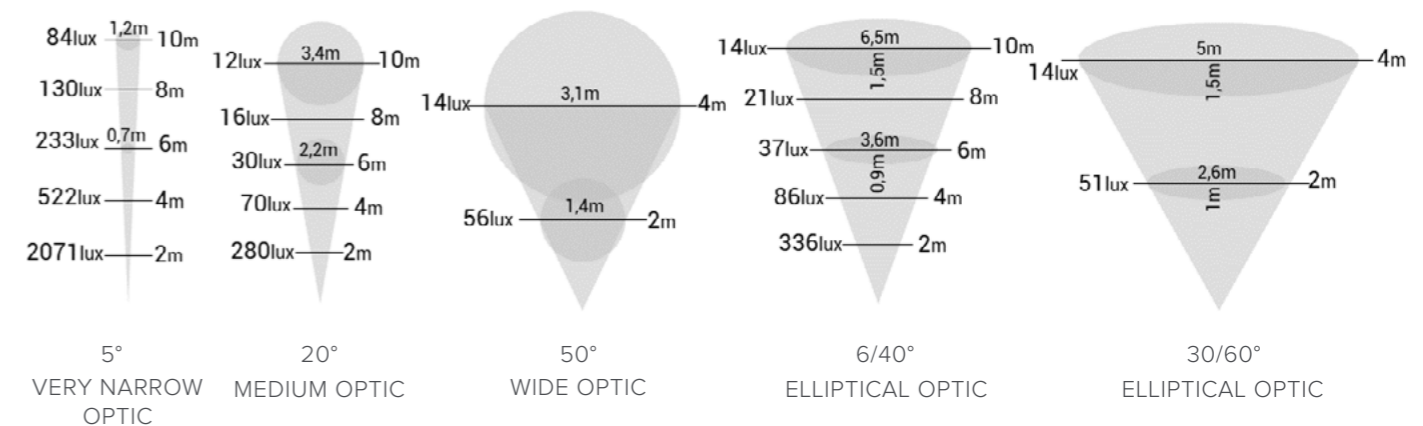
# DATASHEETS

## ONYX BOLLARD



- Solar outdoor light fixture with Led.
- Built in steel treated antioxidation, polyester powdered coated paint finish.
- Optical block PMMA adjustable.
- Battery LiFePO4 13 Ah.
- Solar panels Sunpower Back Contact.
- Weight: 12,5 kg.
- Classe III - IP67 for the block and IP55 for the bollard - IK07 - CE.
- Manual control or via the smartphone app.
- Standard scenarios:
  - 6 h from sunset,
  - 4 h from sunset and 2 h before sunrise,
  - Presence detection.

Maximum illuminance in Lux for an average winter UAP in Marseille, for a 6 hours lighting with a 4000 K Led light source.



CE		Graphite color Interpon Futura Black 2100 Sand-blasted Code YW359 F
IK		
IP		Silver color Interpon D2525 Structura 2100 Sand-blasted Code Y2329F

Other colors on demand

# DATASHEETS

## ONYX PROJECTOR



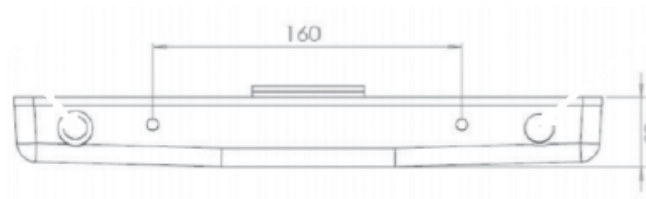
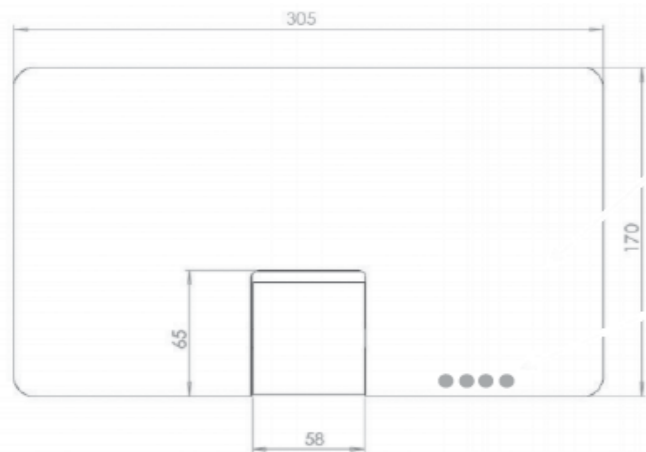
Top bracket



Wall-mounted fastening

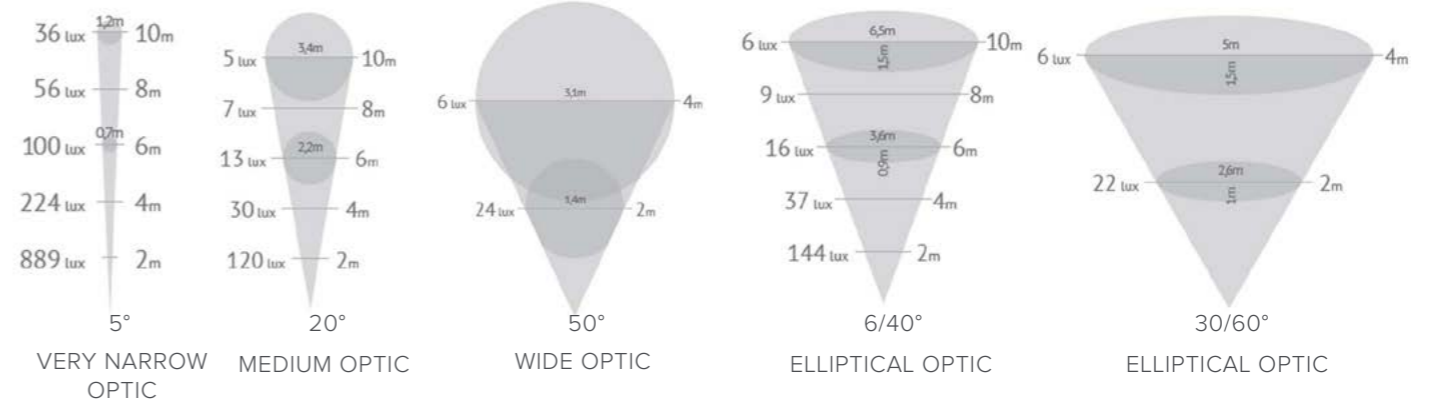


Base fixing



- Solar outdoor light fixture with Led.
- Built in die-cast aluminum, polyester powdered coated paint finish.
- Screen printed tempered glass 4 mm thick.
- Optical block PMMA rotating to 220°.
- Battery LiFePO4 10 Ah.
- Solar panels Sunpower Back Contact.
- Weight: 2 kg.
- Classe III - IP67 - IK10 - CE.
- Manual control or via the smartphone app.
- Standard scenarios:
  - 6 h from sunset,
  - 4 h from sunset and 2 h before sunrise,
  - Presence detection.

Maximum illuminance in Lux for an average winter UAP in Marseille, for a 6 hours lighting with a 4000 K Led light source.



CE

IK

IP



Graphite color  
Interpon Futura Black  
2100 Sand-blasted  
Code YW359 F



Silver color  
Interpon D2525 Structura  
2100 Sand-blasted  
Code Y2329F

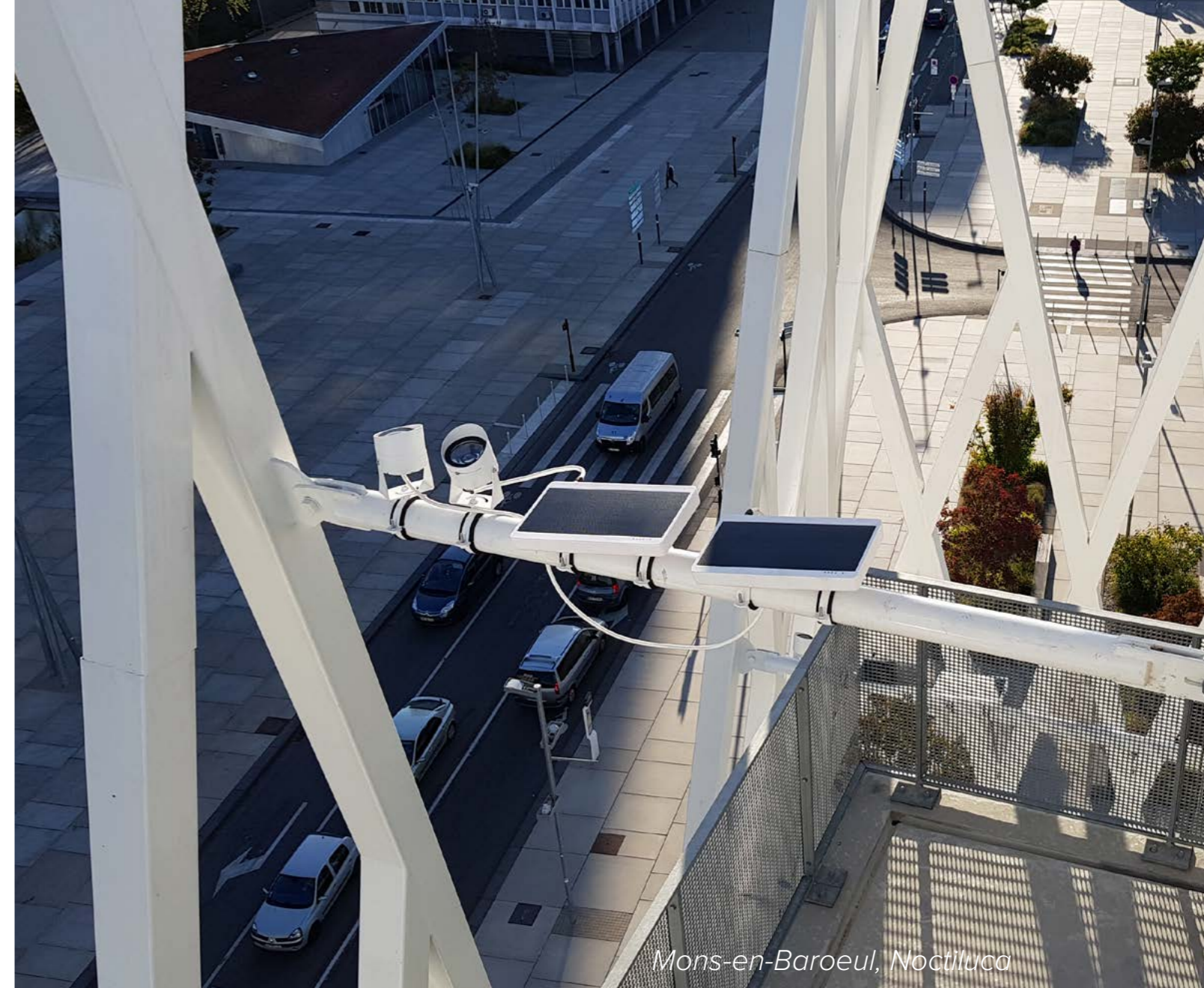
Fastening devices: graphite

Other colors on demand

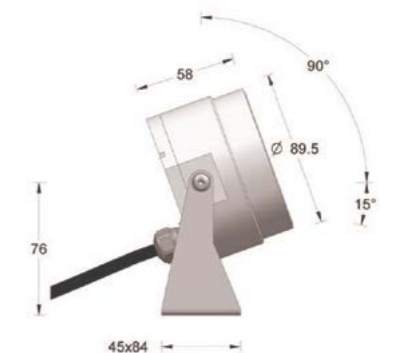
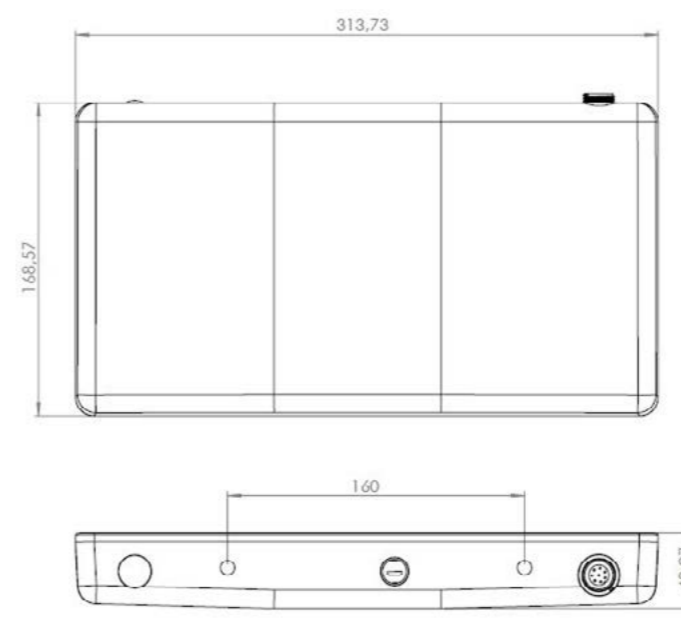
# DATASHEETS

## E-ONYX POWER & REMOTE PROJECTOR

- Solar autonomous powering fixture.
- Led projector in anodized aluminum on bracket.
- Body-dyed moulded polyurethane frame.
- Battery LiFePO4 20 Ah.
- Solar panels Sunpower Back Contact.
- 8-wire connection cable IP 67, length 1.50 m.
- 2 M6 inserts for fixing the device.
- Weight: 3 kg.
- Classe III - IP67 - IK07 - CE.
- Bluetooth connection to remotely control the product via the smartphone app.
- Standard scenarios:
  - 6 h from sunset,
  - 4 h from sunset and 2 h before sunrise.



Mons-en-Baroeul, Noctiluca



Graphite color  
Interpon Futura Black  
2100 Sand-blasted  
Code YW359 F

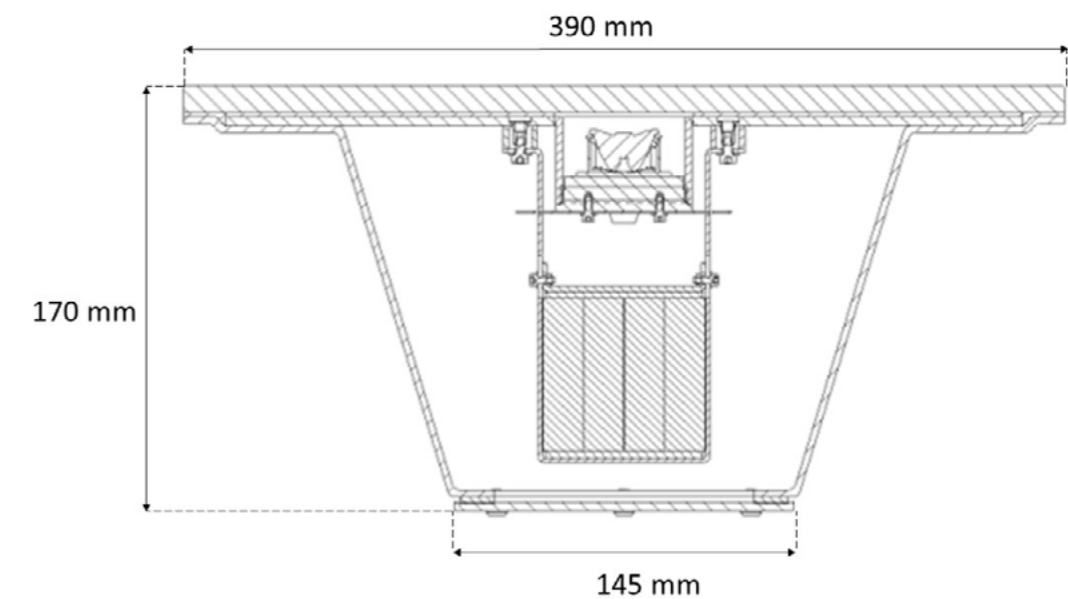
Other colors on demand



# DATASHEETS

## E-ONYX STUD

- Solar outdoor light fixture with Led.
- Built in stainless steel, screen printed tempered glass 12 mm thick.
- Battery LiFePO4 18 Ah.
- Solar panels Sunpower Back Contact.
- Weight: 8 kg.
- Classe III - IP67 - IK08 - CE.
- Color temperatures: 3000 K / 4000 K.
- Bluetooth connection to remotely control the product via the smartphone app.
- Standard scenarios:
  - 6 h from sunset,
  - 4 h from sunset and 2 h before sunrise.



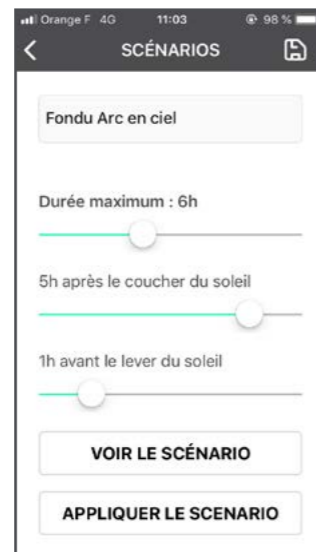
CE IK IP

# NOWATT LIGHTING APPLICATION

Control your devices simply thanks to the Nowatt Lighting application available for free on your smartphone.



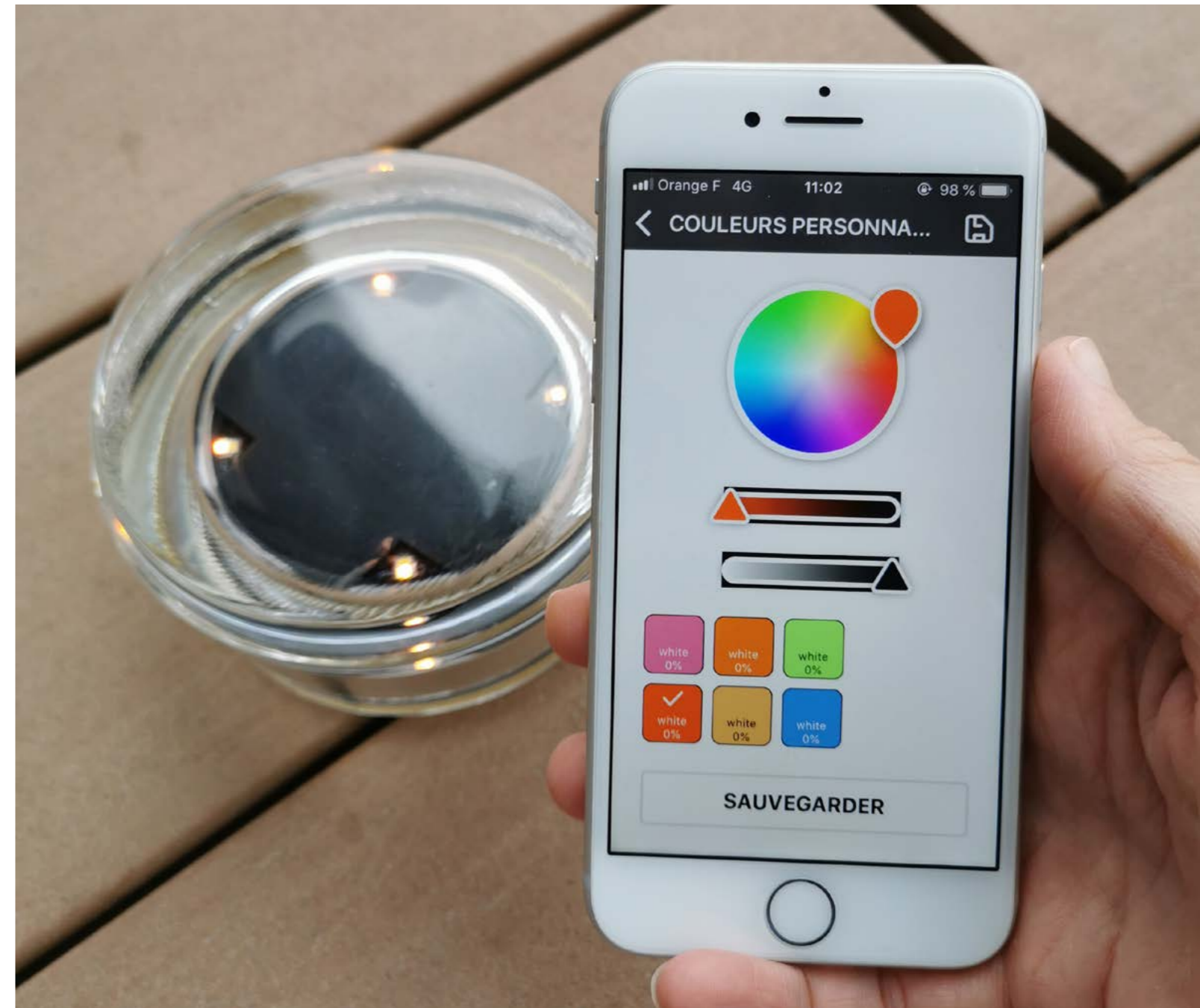
Secure connection via Bluetooth



Control of operating time



Select and save a million of colors



# INTERNATIONAL **PROJECTS**



# FAQ

## BATTERIES LITHIUM IRON PHOSPHATE

### Lifespan

More than 2000 cycles. One cycle is a full charge followed by a full discharge. The Nowatt Lighting devices are equipped with a charge management system by microprocessor which allows the battery to operate only at the top. Full discharges are minimal. Half charges increase the lifespan of Lithium-Iron-Phosphate batteries. The lifespan can be estimated at 20/25 years.

### Recycling

Same as solar cells.

### Battery change

Back to the workshop.

### Power reserve

The power reserve is integrated into our sun power calculation algorithm. We guarantee the operating time for every day of the year (even if it rains more than a week). It's the light intensity that varies.



## SOLAR CELLS

### Lifespan

More than 25 years.

Beyond that, the panel continues to operate, but its productivity gradually decreases.

### Recycling

Return of products to Nowatt Lighting. The products are taken back and repackaged by Nowatt Lighting. We respect the normative framework: <https://www.photovoltaique.info/fr/exploiter-uneinstallation/exploitation-technique/demontage-et-recyclagedes-installations-photovoltaiques/#tab-content>

## ORIGIN OF MATERIALS

**Designed and assembled in France.**

## GUARANTEES

**Our products are guaranteed in accordance with the guarantees of the French Lighting Association (Syndicat de l'éclairage).**

# PROJECT REFERENCES

## THE CYCLE PATH OF THE THAU LAGOON

- Lighting designer: Aurélie Legougouec, Agence ILEX.
- Products: 337 PLRE2 ambre et 3000 K.
- Photo credits: Jean-François Merle.
- Pages 1, 7, 8, 32, 40.

## LA POSSESSION, LA REUNION

- Lighting designer: Agathe Argod, Scène Publique.
- Landscaper: Leu Réunion.
- Products: 160 PLR1.
- Photo credits: Adrien Diss.
- Pages 9, 10.

## THE LUMINOUS RIVER OF CLERMONT-FERRAND

- Project owner: Clermont-Ferrand City Hall.
- Lighting design: Dominique Colinot.
- Installation: Nicolas Bostmembrun, L'Entreprise électrique.
- Products: 200 PLRE5-MESH.
- Photo credits: Noël Gautier.
- Pages 11, 12, 53, 63.

## LA PLACE DES PRÊCHEURS, AIX EN PROVENCE

- Lighting design: Atelier Jéol.
- Products: 279 PLRE2 4000 K.
- Photo credits: Vincent Laganier.
- Pages 13, 14.



*La Ciotat - Gares et connexions*

## THE ISLE RIVER BANKS, LIBOURNE

- Lighting designer: Florian Colin, Atelier Coup d'éclat.
- Installer: SOBACA.
- Products: 10 Onyx bollards, 4 Onyx columns.
- Photo credits: Gilles Gouteyron, Marion Cambron.
- Pages 21, 22, 24.

## RURAL PATH, LE BROC

- Project management: SEMELEC 63.
- Installer: VB Energie Clermont-Ferrand.
- Products: 4 E-Onyx Bollards.
- Photo credits: Denis Grimaud.
- Page 23.

## PIGNA, CORSICA

- Installer: Balagne Elec.
- Products: 3 Onyx bollards, 5 Onyx projectors.
- Photo credits: Jacques Gouteyron.
- Pages 25, 26, 29.





### **PEPITE, MONS-EN-BAROEUL**

- Lighting designer: Rozenn Lecouillard, Noctiluca.
- Products: 75 kits E-Onyx Power + Projecteur Lumteam.
- Photo credits: Romain Manzini.
- Pages 32, 33, 34, 52.

### **COURBEVOIE**

- Lighting design: Agathe Argod, Scène Publique.
- Products: 21 PLRE5-MESH.
- Photo credits: Christophe Blanc.
- Page 42.

### **SNCF STATION, LA CIOTAT**

- Project owner: Gares et connexions.
- Products: 18 PLRE4.
- Photo credits: Lucas Saintot.
- Page 62.

### **PRODUCTS PHOTO CREDITS**

- Fred Raynaud.
- Léa Gouteyron.
- Rémi Negrel.

### **CATALOGUE LAYOUT**

- Marion Cambron.

# NOTES AND **COMMENTS**

A sustainable lighting that lasts all year long, even in winter.

**NOWATT  
LIGHTING**  

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**SUSTAINABLE LIGHTING**

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