

## Warranty Applicable to Solar Public Lighting Material

The warranty herein is applicable to street lights, supports, electric lights and accessories, referred to as "the material". The term during which the various performances of the material are warranted does under no circumstances augur their average, maximum or real lifetime.

## Contents

I.	PERIOD OF WARRANTY .....	2
II.	CONDITIONS OF WARRANTY .....	2
1.	General Conditions .....	2
2.	Specific Conditions .....	2
3.	Environment categories atmospheric and pollution characteristics for the warranty. ....	3
4.	Lifetime .....	4
5.	Specific Warranties .....	4
6.	Starting Point .....	4
7.	Procedure .....	4
8.	Damages .....	5
9.	Restrictions .....	5
III.	Instructions: .....	5
1.	Storage* .....	5
2.	Verification and Maintenance** .....	6
3.	Cleaning*** .....	6

## Warranty Applicable to Solar Public Lighting Material

### **I. PERIOD OF WARRANTY**

- Solar panel: 10-year warranty.
- Electronic control board: 10-year warranty.
- Lithium battery Endurance+ Technology (LiFePO4): 10-year warranty.
- LED luminaire from the Novea and Ragni range: 10-year warranty.
- Mechanical structure: 10-year warranty.
- Other additional components: presence detector, Novcom communicating node, remote management solution: 5-year warranty
- Lum'Park : 5-year warranty

### **II. CONDITIONS OF WARRANTY**

#### **1. General Conditions**

Novéa Energies commits to remedy any defectiveness coming from a defect in the material, provided it was transported, stored, installed, used and maintained according to the rule book, in compliance with the instructions and by skilled professionals.

The length and the benefit of the warranty can only be accepted by Novéa Energies if the purchaser can prove that the storage, operation, servicing and maintenance conditions defined by Novéa Energies were complied with.

The material replaced under the warranty is itself warrantied for the term that remains on the initial warranty. If necessary, the warranty of other parts and elements of the initial supplies is only extended by the length of immobilization due to the replacement or the repair.

#### **2. Specific Conditions**

The Ri4 corrosion warranty is verified according to the ISO 4628-3 norm with an intervention level at 5%

The paint resistance warranty: adherence class 0 to 2 is verified according to the NF EN ISO 24-09 norm.

The warranty of the LED module is applied in the case where 10 % or more of the number of LED are defective.

The material is sized according to EN40 norm, it is not considered as installed in a particular wind area (corridor of wind, altitude, unusual exposure ...).

## Warranty Applicable to Solar Public Lighting Material

### 3. Environment categories atmospheric and pollution characteristics for the warranty.

Cat.	Zone	Atmospheric conditions	Pollution	For example	Coastal area	Corrosion	Adherence
C1	Dry or cold	Very low periods of humidity	Very low level	Some deserts, center of the Arctic and Antarctica		10 years	10 years
C2	Temperate	Short period of humidity	Low ( $\text{SO}^2 < 5\mu\text{g}/\text{m}^3$ )	Deserts, subarctic areas rural area	> 5 000 m of the sea front		
C3	Temperate	Average period of humidity	Average ( $5\mu\text{g}/\text{m}^3 < \text{SO}^2 < 30\mu\text{g}/\text{m}^3$ ) Or chlorides influence	Urban area, subtropical and tropical area with low pollution	Between 1 500 and 5 000 m of the sea front		
C4	Temperate	Average period of humidity	High ( $30\mu\text{g}/\text{m}^3 < \text{SO}^2 < 90\mu\text{g}/\text{m}^3$ ) Or substantial influence of chlorides Or severe exposition to de-icing salts.	Industrial area, coastal area without salt spray, urban area, subtropical and tropical area with average pollution	Between 500 and 1 500 m of the sea front	2 years	3 years
C5	Temperate and Subtropical	Long period of humidity	Strong ( $90\mu\text{g}/\text{m}^3 < \text{SO}^2 < 250\mu\text{g}/\text{m}^3$ ) or high chlorides influence	Industrial area, coastal area, sheltered coastal area	< 500 m of the sea front	1 year	-
C5M	Tropical and Subtropical	Very long period of humidity	High $\text{SO}^2 > 250\mu\text{g}/\text{m}^3$ and/or high chlorides influence	Severe industrial area, coastal area and at sea, occasional contact with salt spray		1 year	-

For the installation areas defined in the context below, the guarantees on corrosion and adhesion of the powder coating are excluded:

- Installation less than 10 meters from the sea on the horizontal axis in relation to the maximum level of high tide
- Installation less than 10 meters on the vertical axis in relation to high sea level (ex: cliff top)
- Island < 5 Km<sup>2</sup>
- Dykes, bridges

## Warranty Applicable to Solar Public Lighting Materials

### 4. Lifetime

- Solar panel
  - > 25 years
  - Guarantee of proper operation 10 years at 90 % of the power
    - 25 years at 80 % of the initial power
- Batteries
  - > 20 years (at 80 % of initial capacity) and for a daily discharge < 30 % at 25°C
- Luminaire
  - > 20 years
  - Guarantee of property operation >100 000h at 80% flux
- Electronic board
  - > 20 years
- Poles
  - 30 years

### 5. Specific Warranties

In the scope of a precise operation, specific warranties are added to the general conditions and must be subject to a written agreement between Novéa Energies and the purchaser.

Imposed by the purchaser, they are only applicable by Novéa Energies accompanied by a technical definition of the risks under warranty and the specific conditions in which the material to be warrantied shall be destined to be implemented, to operate, to be maintained and kept in good working order. Given by Novéa Energies, it is up to it to define their limits and take full responsibility.

### 6. Starting Point

The warranty period starts on the date of billing. If, at the purchaser's request, the shipping of the material already completely manufactured is postponed for a reason beyond Novéa Energies' control, the extension of the warranty period cannot exceed three months beyond the date of delivery originally defined.

### 7. Procedure

In order to benefit from the warranty, the purchaser must, in writing and without delay, inform Novéa Energies of the defects it attributed to the material and give a detailed description of the alleged defects. It must give to the seller all options to proceed to the recording of the defects and to remedy them. Except when there is a written agreement by Novéa Energies, the purchaser must abstain from carrying out repairs or have them carried out by third parties. Any breaches to these provisions would lead to the cancellation of the warranty, unless there is a recognized case of force-majeure, involving the security of people.

Once informed and as soon as possible, Novéa Energies must remedy it or have it remedied, at its expense, in the sole purpose of satisfying with its obligations, reserving the possibility to modify the system of the material to obtain the performances and guarantees initially expected.

In the case where the restoration of the material must be made on location, Novéa Energies undertakes the cost of the replacement of the material, except for the installation and removal expenses. The parts replaced for free are returned to the disposal of Novéa Energies and become its property again.

## Warranty Applicable to Solar Public Lighting

### 8. Damages

The responsibility of Novéa Energies is strictly limited to the obligations defined hereabove.

Novéa Energies cannot be held liable for any compensations aiming at consequential or non-consequential material or immaterial damages.

### 9. Restrictions

The warranty cannot cover the defects created by the non-compliance with the instructions for transport, storage\*, installation, use, orientation, maintenance\*\* and cleaning\*\*\* of the material or by the non-compliance with the applicable standards or the state of the art.

Are not taken into account by the warranty, the consequences of micro-environment and lack of sunlight.

Are not taken into account by the warranty, the defects of installation in the shade of obstacles creating a solar mask, during all or part of the day, and all year long.

Are not taken into account by the warranty, the consequences of the exposure to temperatures  $\leq -20^{\circ}\text{C}$  and  $> 55^{\circ}\text{C}$

Are not taken into account by the warranty, the disturbances originating from the buried part of the parts.

No warranty shall be applicable on defects made by a cause foreign to the material such as -the list is not exhaustive:

- installation by the purchaser of a component not approved by Novéa Energies or by a modification made by the purchaser to the material, the factory parameters or the initial wiring,
- material subject to mechanical assaults such as sandblastings, scratching, piercing, impact, mooring,
- material subject to chemical assault; projection of a product with a  $\text{pH} > 8$  or  $\text{pH} < 6$  or containing chlorides,
- start-up of the installation more than 6 months after delivery date.
- disturbances of the twilight threshold for switching on and off due to parasitic external lighting (nearby public lighting, commercial sign lighting, any other source of intense artificial light nearby).

## III. Instructions:

### 1. Storage\*

It is recommended to avoid storing street lamps directly on the ground and near zones where pulverulent materials are stored.

It is advised against storing public lighting street lamps for a long period without adequate ventilation.

Manipulate the street lamps with non-metallic slings, or with a protected forklift, in order to avoid scratches. The lifting of the street lamps must be made only by the shaft.

The products must be installed within 6 months from delivery, beyond this period, the warranty on the batteries is no longer applicable.

## Warranty Applicable to Solar Public Lighting

### 2. Verification and Maintenance\*\*

Any addition of material not specified on order can alter the resistance of the street lamp and cancels the warranty, including the replacement of fastening screws and bolts by elements not validated by the manufacturer.

The following recommendations condition the enforcement of the warranty.

Verify once a year:

- **Street lamp**

The presence of the screws

The tightening and adjustment of the sticks, lamps and accessories

The fitting of the sticks, lamps and accessories

- **Inspection door (if applicable)**

The adjustment and the presence of the door

The condition of the moveable bolt screws and their lubrication

The evacuation of stagnant waters. Cleaning of the bottom of the pole

- **The base**

Visualization of the base. Perpendicularity of the base with the ground.

Compaction of the ground around the base. Cracking.

- **Foundation bolts**

Lubrication of the threads. Verification of the tightening.

Unclogging of the drain hole.

Verification of the presence of the insulating rod/sole

- **Replacement**

Before the replacement of the damaged street lamp, verify the state of the fastenings, and stability of the anchoring base.

### 3. Cleaning\*\*\*

The aspect of the painted element shall determine the frequency of the cleaning and the inspections. In the areas where the products, because of their geographical location, are exposed to sandstorms and/or salt spray (near a quarry...), the inspection, the cleaning and the possible repair of the deteriorations (scratches or cracks on the surface) shall be made at a minimum interval of 2 months.

Regularly clean the steel and aluminum alloy surfaces with soapy water for the raw poles and with a polish product for the painted poles.

Means used: Make sure of the non-aggressiveness of the products used: neutral pH. Never use any corrosive products or scouring pads. The HP cleaning is completely prohibited.

Solar panels: They must be verified and cleared regularly to avoid any loss of production connected with fouling by dust in particular in zones more exposed to this pollution. A cleaning is recommended every 6 months for the zone with a high foiling potential.

Base pole luminaire bracket: Clean regularly the steel and aluminum alloy surfaces with soapy water for row poles and a polish product for the painted poles.