

SERENA COLLECTION, how it was born

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### **Who is CODEGA**

In the Venice of the fifteenth century there was a very particular profession that was proposed to poor people and without any kind of education or manual skills: it was that of the "còdega", that is, the "ruler of snot".

Who was this person and what did he do in Venice in the 1400s?

It should be remembered that in 15th-century Venice there was no lighting whatsoever and walking in the city at night could be dangerous and even life-threatening. This is how, since 1128, the Republic of Venice decided to implement preventive measures to avert the dangers for Venetians in the darkness of the night by inserting "cesendeli", that is, oil candles hanging on the walls of the city. Despite this progress in the nocturnal illumination of Venice, the murders and attacks continued to take place, indeed they increased until the government, in 1450, placed four large lamps under the Rialto arcades and a law was introduced that obliged anyone to have a lamp in the walks and trips after 3 am. It is precisely here that a figure is established to accompany the ladies and nobles who left the theater or conviviality at night, shedding light with a lamp up to their destination. Who was it? It was the Codega.

The etymology of the term còdega has not yet been ascertained but there are those who think it derives from the Greek *οδηγός*, (*odegus*) that is guide, driver and who thinks it derives from the name of the lamp hanging abroad of the gondola felze (the mobile cabin placed in the center) which was fed by the oil extracted from the pork rind, the "còdega".

### **Why CODEGA, a trademark**

The SERENA collection is the first step of this commercial brand which aims to produce "purpose lamps" for human well-being. Today there is nothing on the market that covers the sector of table work lamps in tunable white and in App control.

The idea was born in March 2020 in the middle of the COVID pandemic when the lockdown comes into force, and we are all forced into the house especially for those who carry out smart working. The light of the house is certainly not the most suitable for various and different activities; the graphic designer, the journalist, the writer, who reads a book or a rotogravure, everyone needs a different light. But at the same time the tables or desks in the house or in a co-working office situation could be contaminated by the virus which, as you know, can live on surfaces for up to 48 hours.

## **ELECTRONICS AND OPTICS illuminating soul**

The soul of the lighting body is a LED source, which can be dimmed and modulated from very warm 2700K to very cold 6500K tunable white.

The sanitization part takes place through LEDs that programmed to emit UV-C rays at a frequency of 275nm have the ability to break down the RNA of the Corona family virus as well as mites and all types of bacteria.

The above is scientifically proven and the UV-C sanitizing system has been used in the medical field for decades. UV-C rays have a dangerous component and damage the skin, if exposed for a long time to their action, as well as damage the cornea of the eye if you look directly at the beam for a long time. UV-C rays are emitted by the sun and are blocked by the ozone layer.

The insertion of UV-C rays to kill the Corona virus is normally used in devices that suck the air, convey it to a chamber where the UV-C ray acts and then recycled in the purified environment. This is the system also used by us in the version called SERENA PISANA. The use of these rays directly has never been used outside the medical sector and never in appliances for domestic use. Therefore, there is no standard, type CE or UL, that is applicable to lamps, but, given the times and the interest of the industry to exploit this possibility in the home, the Global Lighting Association (GLA) has issued guidelines temporary while working on a future standard. SERENA complies with these guidelines which suggest, in addition to a certain number of labels to be affixed to the appliance, 3 safety levels.

## **HOW TO USE**

- 1) - intentional activation of the sanitation function
- 2) - a visual or audible signal that warns that the function is in progress
- 3) - a sensor that prevents the operation if there is movement in the controlled area.

The microchip that is inserted in our LED module checks every second that the sensor is actually working and if it detects a fault, it will immediately interrupt the sanitization operation.

From a functional point of view, the lamp is controlled by two touches present on the cap and suitably signaled which have the function of switching on / off and dimming (the right touch), changing the tone of the light (left touch) and starting the phase. sanitization (intentional pressure of 4 seconds on the left button). This applies to floor and table lamps where the touches can be reached by a person of normal height, while for the suspension and the wall the command takes place through a Bluetooth App for Android that simulates the functions of the two touches.

The possibility of the command being carried out via a WIFI connection is now being studied to ensure that multiple lamps can be controlled simultaneously from a single App. From the visual point of view, the module looks like a white disk where 120 LEDs are installed for the illuminating part, in the center 9 UV-C LEDs surrounded by 7 LEDs that emit a blue light.

## **STANDARD LIGHTING**

The operating function, the lighting part, starts with a touch on the right button for switching on and off and pressing it for dimming. The change of color temperature takes place continuously by holding down the left touch. When the lamp is switched on again, the memory reports the level and color of the light at the time it was switched off.

## **THE "CIRCADIAN" SOUL OF SERENA COLLECTION**

The world is dominated by time, ranging from the rhythm of human breathing, to the heartbeat, to the sleep wake cycle, to the life of plants with the cycle of chlorophyll photosynthesis. All the plant and the animal world beats for a "rhythm". Natural light is the mechanism for regulating this rhythm. What about artificial light? If artificial light comes into strong contrast with the human rhythm (which is different for each of us) then health problems arise. The entire human race could not live in 24 continuous hours of artificial light. Respect for one's own rhythm, whose emblematic event is sleep-wakefulness, is fundamental for human health. In 2017 the Nobel Prize for Medicine is awarded for the "discovery of the molecular mechanisms that regulate the circadian rhythm. The most important protein discovered was "PER" which is accumulated during sleep and degraded during wakefulness. This biological clock does not only concern humans but also all animal and plant species. Serena was born in response to this. Serena can be programmed automatically, with programs that can be considered as accessories of the lamp itself, which are dedicated to places where artificial light could be used in a discriminatory way, hotel lobbies, restaurants, bars, hospitality, hospitals, museums, waiting rooms, and everywhere the steady and static light can interfere with health. The collection has an intelligent system, manageable directly by the user who operates it at his own discretion by choosing the more or less warm color of the white light in the entire range, (from 2700 Kelvin to 6500 Kelvin), of this warm or more or less cold color. It is also possible to define an intensity, alternatively Serena has an automatic program.

## **SANITATION FUNCTION**

The sanitization function starts with the intentional 4sec pressure on the left touch. After 4 sec. an intermittent beam of blue light comes on to warn those present of the possible start of the sanitation phase. This intermittent beam lasts about 30 sec. at the end of which the sensor checks that there are no movements (the person's breath is already evaluated as a movement) within the controlled area. The sensor can be adjusted between a minimum of 1m to a maximum of 10m. We will set by default 5/6 mt.

Once the absence of movement has been verified, that intermittent blue ray becomes fixed, and this indicates that from that moment there is emission of UV-C ray. The sanitizing cycle lasts 12 minutes. If a detected movement occurs during the operating phase, the function stops, and the intermittent

blue light resumes which will repeat the cycle of 30 sec. + Check + start of sanitization for another 12 minutes.

If even during this second phase the sensor detects a movement, then the function switches off definitively and will eventually have to be reset manually.

A reflector cone is placed in the center of the diffuser and the 9 UV-C LEDs are positioned in the center of that cone (except the Pisana model which has 6 and the Ministerial model which does not). The UV-C rays emitted, therefore, will hit a surface that is determined by the angle of the reflector and the height of the light module.

**INFO:** the Convivio model covers a diameter of about 1.5m, while for the table versions about 1.2m, therefore the surface of a normal desk. The management of all these "rules" is done by a microchip on the LED module itself, the driver and the sensor are in the half-moon box located on the base. This half-moon container is held in position by magnets to avoid the presence of closing screws. The lamp is powered by a 220 / 240V driver with 24V output which serves both to power the sensor and to drive all the electronics and the LEDs on the module.

### **THE OPTICAL DIFFUSER**

The design created on the diffuser with the lamp on deserves particular attention. This particular effect has been the subject of a significant number of positive reviews. The screen is suitable for refracted light, follows the geometry of the Led PCB and is able to strongly cut any type of glare, even from the top. This particular shape, which is unique on the market, is obtained through the use of a polycarbonate disc with optical micro-spheres. UGR degree suitable for use in the workplace.

### **SERENA'S DESIGN**

Sociology teaches us that in post-war times (post-war, post-pandemic) the human seeks reassuring shapes and colors. Then the curved shapes and pastel colors with the addition of retro design details (see joints) and with these the diffuser becomes an integral part of it.

The reflector dome recalls a 1950s table model and in particular a lamp photographed on the desk of Adriano Olivetti, patron of Olivetti in those years. The chromatic choice of the collection, like its shape, rides on the latest design trends that propose "Nostalgia" as a reading of the present.

### **THE DESIGNERS**

Consuline is formed by the architects Francesco Iannone and Serena Tellini. At a young age Francesco was already a well-known graphic designer and designer while Serena was a young designer in companies in the lighting sector.

Consuline was born with the aim of studying and using light as an essential component in our life and then using it to the fullest for our benefit. Both are well known as Lighting Designers rather than architects. Both were among the 10 founders of the PLDA (Professional Lighting Designer Association) which has 5,000 registered architects and Francesco was president of this professional association for three terms. Consuline has designed the lighting of the Shanghai F1 circuit, the Green Lighting Masterplan of the Beijing Olympic Games, and works all over the world. Consuline has defined the Monza Method, (from which this collection of lamps is born) suitable for the conservation and reintegration of the human circadian rhythm. The lamp is a candidate with the implementations that are in progress to be a Circadian tool for Human Centric Lighting.

### **NOTES TO KNOW**

Among the models in the collection, the SERENA PISANA version, on the other hand, works on sanitizing the air. In fact, a fan in the lower part of the cone sucks and conveys the air upwards. The air hits the set of 6 UV-C LEDs is sanitized and released clean into the environment. If you place a tray with a perfume between the base and the fan, the air is also scented.