



### GENERAL:

Luminosnuclear® SIRIUS/GAMMA LED Lights are in category with the most efficient LED products. They are developed and produced by the company NANOCUT co.ltd. in Slovenia, EU. The LED panels are of our own design with efficiency of 210 - 220 lm/W. By using high quality components throughout the whole light, we achieve overall efficiency of over 160 lm/W. Housing is from aluminium, colored with quality UV resistant powder coatings. The montage systems of the lights are made from stainless steel. The LED DRIVER is also of our own design and is the key component of Radiation Resistant LED Lights. It is encapsulated in a stainless steel box with neutron absorbing and shielding material.

### GAMMA RADIATION TESTING

|                  |           |
|------------------|-----------|
| GAMMA dose speed | 3,3 kGy/h |
| Total GAMMA dose | 156 kGy   |

### RESISTANCE ON GAMMA RADIATION:

The complete LED light was tested up to a GAMMA dose of 156 kGy at GAMMA dose speed 3,3 kGy/h. At the end of testing, the LED light was still working properly. Exposure to GAMMA radiation was tested in ENEA - Italian National Agency for New Technologies, Energy and Economic Development.

### TECHNICAL DATA

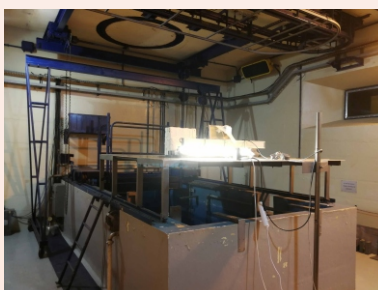
|                          |  |
|--------------------------|--|
| Type                     | LED Reflector SIRIUS                           |
| Nominal power            | 60 - 120 W                                     |
| Overall luminous flux    | 16.000 lm (at 100W)                            |
| Overall light efficiency | > 160 lm/W (at 4000K(80))                      |
| CCT                      | 3000K-6000 K                                   |
| Ra                       | > 70 - 90                                      |
| Nominal AC voltage       | AC 230V <sup>+20%</sup> <sub>-10%</sub> , 50Hz |
| El. Consumption          | 100 kWh/1000h(at 100 W)                        |
| Min working voltage      | AC 24V, DC 35V                                 |
| Max survival voltage     | AC 360V, DC 510V                               |
| Power factor (cos fi)    | > 0,9  |
| Inrush current           | 16A max. / 0,05 ms                             |
| Housing                  | extruded aluminium                             |
| Optic [°]                | 15,30,45,60,90,120,ASIM                        |
| Diffuser                 | PMMA   |
| IP protection            | IP 65  |
| IK protection            | IK 07  |
| Ambient temperature      | -20 to +50 °C                                  |
| Weight                   | 3 kg   |
| Lifetime (L80/B10)       | 70.000 h                                       |
| Energy efficiency        | A++, EEI<0,1                                   |
| Warranty                 | 5 years  |
| Certificate              | CE, RoHS, SIQ, ENEA                            |

### MODELS AND POWER

| Model       | El. Power  | Luminous Flux | Overall Dimensions | Mounting System               |
|-------------|------------|---------------|--------------------|-------------------------------|
| LN-SIRIUS/G | 60 - 120 W | 160 lm/W      | 360x145x105 mm     | U bracket<br>Size: 345x105 mm |

Rated Luminous Flux is at 4000K and Ra 80

### COMPLETE LED LIGHT GAMMA RESISTANCE TESTING IN ENEA



### Our lights can be used in:

- Military areas,
- Nuclear Power Plants,
- Containment building in Nuclear PP,
- Medical facilities,
- Nuclear testing facilities,
- WMB (waste management building),
- SFDS (spent fuel dry storage area),
- LILRW (low and intermediate level radioactive waste building),
- Fusion Reactors,
- NEUTRON and PROTON accelerators,
- INDUSTRIAL radiography detection areas.

### OPTIONS ON CUSTOMERS REQUEST:

- NOMINAL AC VOLTAGE 120V 60Hz for US market,
- DIFFERENT NOMINAL AC OR DC VOLTAGE,
- CUSTOMISED MOUNTING SYSTEM,
- LOWER INRUSH CURRENT (2A / 0,1ms)

Seismic tested on IEC 60980-344

TESTED ON GAMMA RADIATION BY:

**ENEA**

EMC, SAFETY TEST ON CE-EN NORMS BY:



DEVELOPED AND MANUFACTURED BY:

**NANOCUT d.o.o.**  
LED LIGHTING

### ORDERING CODE

**LN-SIRIUS/G-xxxW-xxxxK(xx)-Rxxx-(D150kGy)**

|                 |              |                                |  |                   |  |   |
|-----------------|--------------|--------------------------------|--|-------------------|--|---|
| LUMINOS NUCLEAR | SIRIUS/GAMMA | EL. POWER [W]<br>60, 90 or 120 | CCT [K]<br>3000, 3500,<br>4000, 4500,<br>5000, 5500,<br>6000 | CRI ><br>70,80,90 | DISTRIBUTION ANGLE [°]<br>15, 30, 45, 60,<br>90, 120, ASIM | GAMMA RESISTANCE<br>max. GAMMA DOSE 150 kGy |
|-----------------|--------------|--------------------------------|--|-------------------|--|---|



**WARRANTY: 5 YEARS**  
**LIFETIME : > 20 YEARS**