

# Helling UV-Inspector 3000 N

---

## UV-LED hand light UV-Inspector 3000 N

**Risk classification 2 accord. To EM6 of DGZfP and BGFE**

### Helling UV-Inspector 3000 N

Article No. 142.200.511

### Operating Instructions



### Table of Contents

<b>Operating instructions (notes for the user)</b>	<b>Page: 2</b>
<b>Warranty and repair</b>	<b>Page: 2</b>
<b>Safety information</b>	<b>Page: 3</b>
<b>Description and use of the unit</b>	<b>Page: 4</b>
<b>Technical Data</b>	<b>Page: 5</b>
<b>Correct use of the unit</b>	<b>Page: 6</b>
<b>Disposal and environment protection</b>	<b>Page: 6</b>
<b>Spare parts and special accessories</b>	<b>Page: 6</b>
<b>Service Address</b>	<b>Page: 6</b>
<b>Spectral Emission data</b>	<b>Page: 7-8</b>
<b>Drawing with designation</b>	<b>Page :9</b>

**The lamp is patent-protected under patent No. 10 2004 043 295**

**Stand: 2010 Subject to alterations.**

**Page 1 von 8**

N. Riess, M. Loesener, A. Ivankov

HELLING GMBH • Spökerdamm 2 • 25436 Heidgraben (bei Hamburg) • Tel.: (04122) 922-0 • Fax: (04122) 922-201 • e-mail: info@HellingGmbH.de

# Helling UV-Inspector 3000 N

---

## 2 Operating Instructions (Notes for the user)

Read these instructions carefully and take special notice of the safety information and the instructions for correct use of the lamp, in order to avoid danger by electrical shock, fire and physical hurts. Make yourself familiar with the correct use and the control elements of the lamp by means of the operating instructions.

Keep these operating instructions carefully.

## 3 Warranty- and Repair Service

Careful manufacture of this quality product permits us to warrant a period of 1 year, beginning with the date of purchase. In case – contrary to all expectations – defects because of material flaws or bad workmanship should occur within this 1 year period, so we warrant the maintenance of the unit free of costs or, at our discretion, a cost-free exchange, provided that you have used the unit in accordance with the operating instructions.

Defects and damages, caused by improper use, are not covered by these warranty conditions. Our service department against payment can repair such defects or damages, which are either caused by improper use or occur after the time period of warranty.

The UV-LEDs are wearing parts and are therefore excluded from warranty demands.

# Helling UV-Inspector 3000 N

---

## 4 Safety Information

**Attention!** Do not look into the cone of light and do not focus the light beam onto persons!

**Attention!** Do not through the lamp onto the working surface, the filter inside the lamp may be damaged!

### The unit complies with the following European directives:

DGZfP Directive Nr. FA-EM-06-2001 v. 16.03.2001



# Helling UV-Inspector 3000 N

---

Description of the unit

## 5.1 Components of UV-Inspectors 3000 N

The inspector consist of the established aluminium housing as our power supplied UV-lamps. The necessary units such as NIMH-accumulator, UV-LEDs, relay, white-light LEDs, push button for white light and UV-light are all built-in.

## 5.2 Advantages of UV-Inspectors 3000 N

Immediate readiness for operation as no warm-up time is required. As the UV-lamp has no heat development it is a step forward against burning of the skin. The built-in white light LEDs enable the user to orientate even in dark rooms so that accidents can be avoided. The use of LEDs Warranty a very long life span of the lamp compared to traditional UV-lamps.

## 5.3 Field of application of the UV Inspector 3000 N

Type of application:	Example:
Magnetic particle inspection	Electric industry
Leak proof testing on weld seams	Clean room technique*
Leak proof testing on open and closed systems	Research Medical sphere*

# Helling UV-Inspector 3000 N

---

## 6 Technical Data

### 6.1 UV-Inspector 3000 N:

Weight of UV-lamp	approx. 850 g
Dimensions	230 x 135 x 270 mm
Voltage	24 V DC
Current	approx. 1,50 A
Type of protection	IP20
UV-emission intensity	4.000 $\mu\text{W}/\text{cm}^2$ at 400 mm distance
Ambient temperature	- 10°C to + 50°C

### 6.2 Mains Adapter:

Mains adapter with dual IEC 320 input  
Output voltage 18 V  
Protection against short-circuit and overload voltage  
Double insulation and type of protection IP40  
LED display (35W)

According to following requirements: TÜV, CE, CB, GS, cTlus  
EN 60950, EN 55011, EN 55022, EN 61000-3-2, EN 61000-3-3

## Technical Data

Input voltage:	100-240V AC
Output voltage:	24 V
Operating current:	max. 2,6 A
Frequency:	50-60 Hz
Residual ripple:	< 100 mV
Insulation:	3,75 kV (2s)
Operating temperature range:	0°C to 40°C
Dimension (mm):	220 x 80 x 110
Weight:	approx. 450 g

### Extend of delivery (Standard):

Ready for use UV-LED-lamp with mains adapter

# Helling UV-Inspector 3000 N

---

## 7 Correct Use

Put the UV-lamp into the working area.

Switch on the lamp with the front button.

Attention: Do not focus the light beam onto other persons; do not look into the light of the lamp.

The button for the white light is situated at the back of the handle. It activates 6 white light LEDs so that it is possible to use the UV-lamp as a normal mobile lamp.

The distance between UV-lamp and work piece should be 40 cm.

## 8 Disposal and environment protection

The UV-lamp and the accessories consist of various materials such as metal and synthetic material. Dispose defective components at appropriate collection points for special garbage.

**Do not dispose it via household-garbage!**

## 9 Spare parts and special accessories

UV-filter glass

No. 142.000.333

## 10 Service

**Helling GmbH**

**Tel.: +49 (0) 4122 922-0**

**Spökerdamm 2**

**Fax: +49 (0) 4122 922-201**

**D- 25436 Heidgraben**

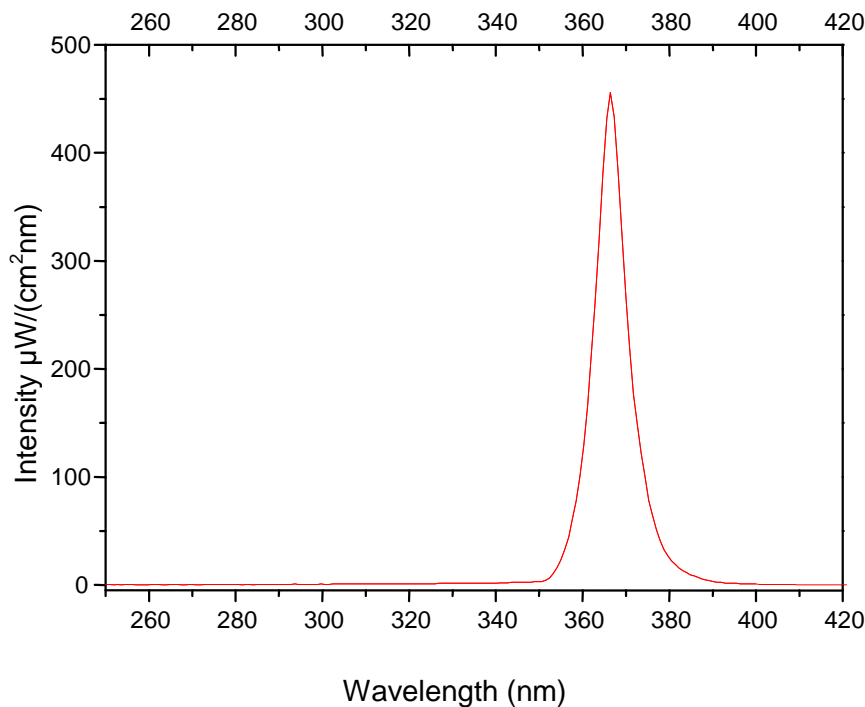
# Helling UV-Inspector 3000 N

Declaration of the manufacturer accord. to EM 6 of DGZfP and BGFE \*

## UV-Inspector 3000 N

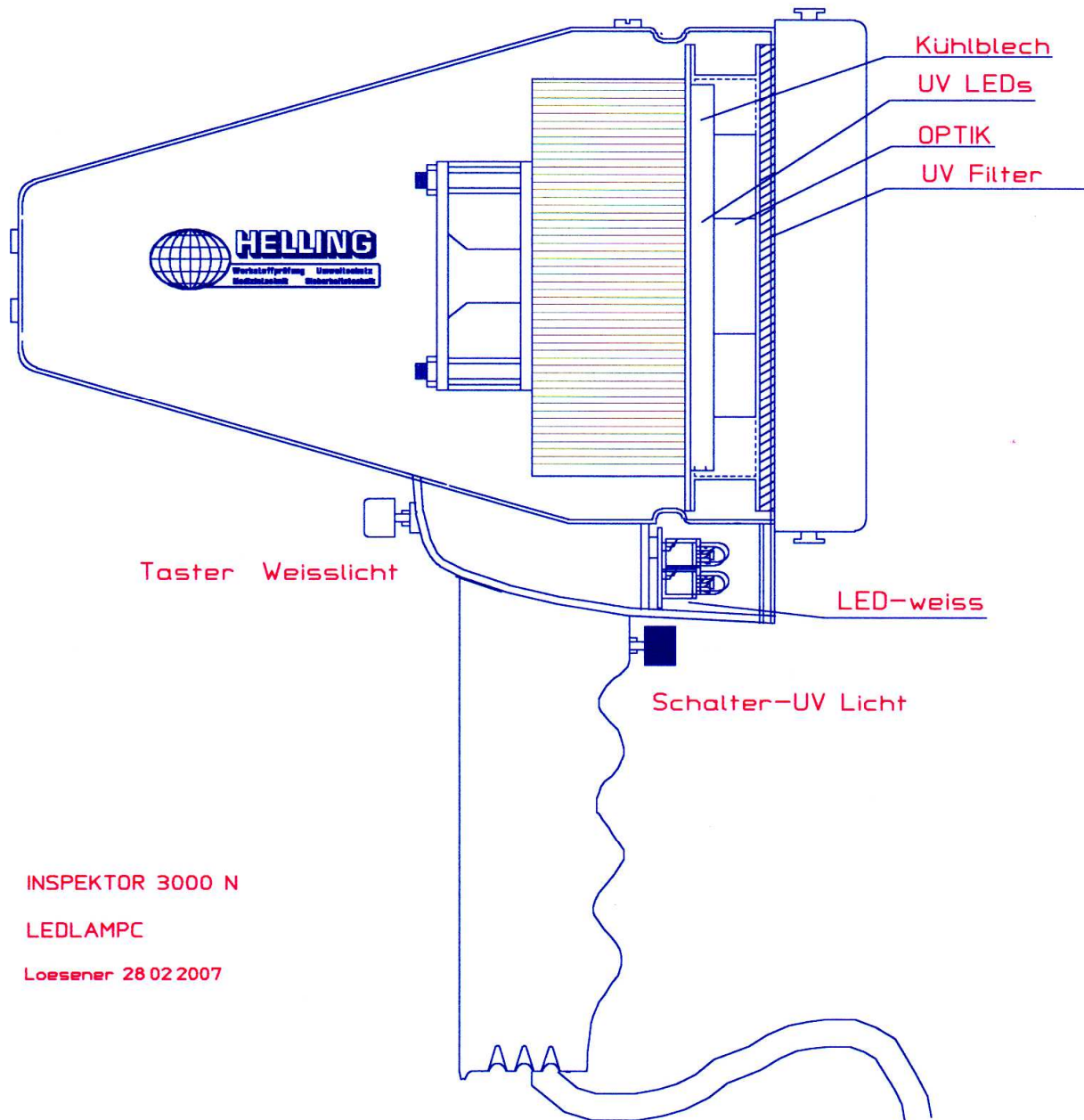
- UV-Emitter, risk classification: 2
- Max. value of  $E_{eff}$  accord. to DIN EN 14255-1  $2,65 \cdot 10^{-3} \text{ W/m}^2$
- $$E_{eff} = \int_{200}^{400} E_{\lambda}(\lambda) \cdot S(\lambda) d\lambda$$
 (40 cm distance)
- Max. value of E accord. to DIN EN 14255-1  $2800 \mu\text{W/cm}^2$
- $$E = \int_{200}^{400} E_{\lambda}(\lambda) d\lambda$$
 (40 cm distance)
- Nominal value of emission intensity  $E_e$  accord. to EN ISO 3059  $2800 \mu\text{W/cm}^2$
- $$E_e = \int_{315}^{400} E_{\lambda}(\lambda) d\lambda$$
 (40 cm distance)
- Area, illuminated with 50%  $E_e$  at 40 cm distance  $110 \text{ cm}^2$
- Used UV-Source UV-LED
- Used Filter Helling UV-Band pass filter
- Spectral distribution of UV-Emission (Complete system) see figure 1

Figure 1: Spectral Emission Intensity  $E_{\lambda}(\lambda)$  of UV-Inspector 3000 N



- For calibration of the spectral measuring systems within the wavelength range of 200 nm to 800 nm, two lamps from L.O.T.- Oriel have been used: range of  $200 \text{ nm} < \lambda < 350$  - a 30 W deuterium lamp (Oriol, Type 6316); range  $350 \text{ nm} < \lambda < 400$  - a 100 W halogen lamp (Oriol, Type 6333). According to Oriol-declarations, the tolerance of intensity is about 15 %.

# Helling UV-Inspector 3000 N



INSPEKTOR 3000 N

LEDLAMPC

Loesener 28.02.2007