

# Bat lamp

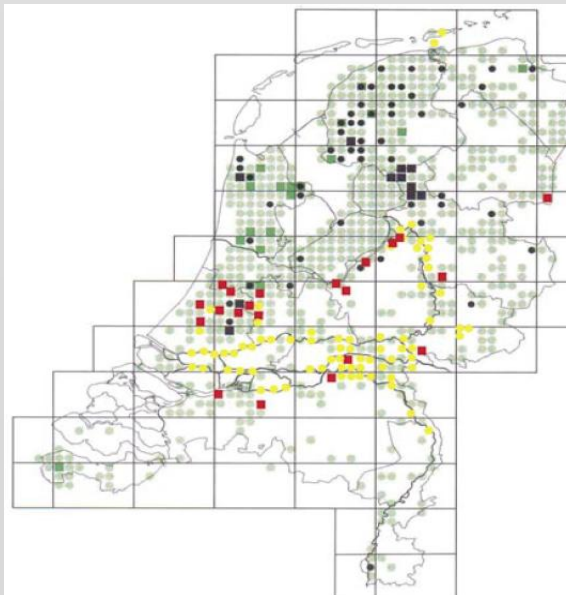
Innolumis constantly strives to improve its products and applications to sustainably improve our environment and offer convenience.

In the European Union, all bat species are protected by law. Disruption of their permanent residence, routes and hunting areas, threatens the bat groups. This disturbance in the Netherlands under the Flora and Fauna considered a violation.



Bats are sensitive to light disturbance. Both in their habitats, air routes and in their hunting area. Especially street lighting can lead to painful glare in these nocturnal animals. Research by Rijkswaterstaat (2012) showed that bats eyes are especially sensitive to blue and ultraviolet light. Much less orange and red. On this basis, we developed an amber-colored, UV free LED luminaire: the "Bat lamp".

In the Netherlands officially 21 species of bats. Seven species are threatened. Two are so rare that they are regarded as extinct.



Bat distribution over The Netherlands

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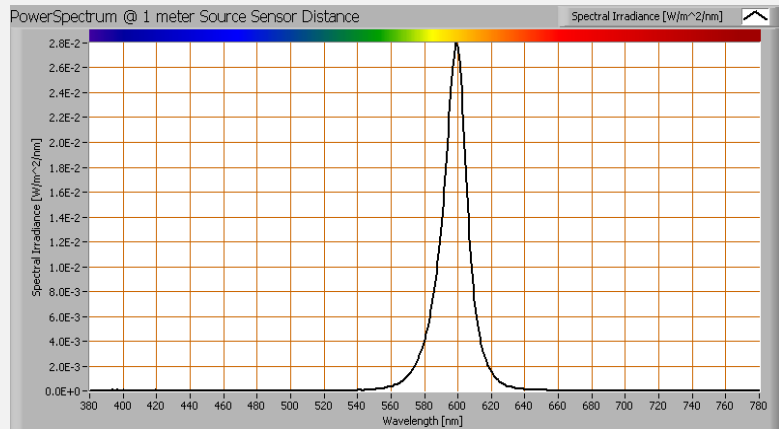
Fitting material Aluminium, LM6 quality  
 Finishing Antifouling powder coating (dirt repellent)  
 Fitting colour All RAL colours available, RAL 7035 standard  
 Optics materials Safety glass and aluminium (miro6)

Driver MeanWell® / CLQ Quad Output  
 Dimmable Yes, 0 - 10 V (from 14 W)  
 Recommended dimmers Dynadimmer, Liandimmer, SDU, OLC, PLM  
 Power 9 to 31 W  
 Power factor > 0.95  
 Connector Connector for a 3 or 5 conductor cable  
 Protection class I and II  
 Source 100 - 240 VAC 50/60Hz  
 Ambient temperature -40 to +50 °C

Number of light compartments 4  
 LEDs per compartment 10 x amber

Light current	9 W: 760 lumen	System power	9 W
	14 W: 1020 lumen		16 W
	22 W: 1300 lumen		24 W
	31 W: 2000 lumen		33 W

Colour point x/y = 0.6004 / 0.3956  
 Wavelength 592-594 nm



The Nicole luminaire has been developed in accordance with

- IEC 60598-1: Luminaires - Part 1: General requirements and tests
- IEC 60598-2-3: Requirements -Luminaires for road and street lighting
- IEC 62031: LED modules for general lighting - Safety specifications
- IEC 62471: Photobiological safety of lamps and lamp systems
- IEC 55015: Radio disturbance characteristics of electrical lighting
- IEC 61547: EMC immunity requirements
- IEC 61000-3-2: Limits for Harmonics
- IEC 61000-3-3: Limits for Voltage Fluctuations and Flicker

RoHS: The products meet the RoHS standard, based on the European RoHS Directive 2002/95/EC.

KEMA certification is comparable to TÜV, ENEC and VDE.