



NORDIC N220 LED

Introducing the all new N220 LED heavy duty worklamp; the future of worklamp technology.

Utilising high output LEDs with an unrivalled lifespan of 50,000hrs ensures continual performance even when operating in the harshest of environments.

A housing constructed from heavy duty aluminium coupled with Nordic's proven shock resistant mount guarantees the N220 LED worklamp will withstand the highest levels of shock and vibration.

50,000 HOURS Latest LED technology with a life-span of up to 50,000 hours

Heavy duty anti-vibration mounting system

Over voltage, over temp, spike & polarity protected

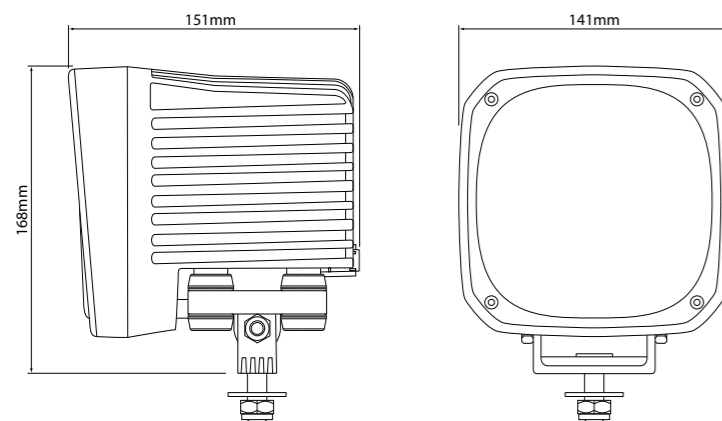
60G Extreme shock resistance

Deutsch DT series 2 pin connector encapsulated in lamp body

IP68 RATED Environmentally sealed cast alloy body IP68

5500 K Equal to daylight colour temperature 5500K

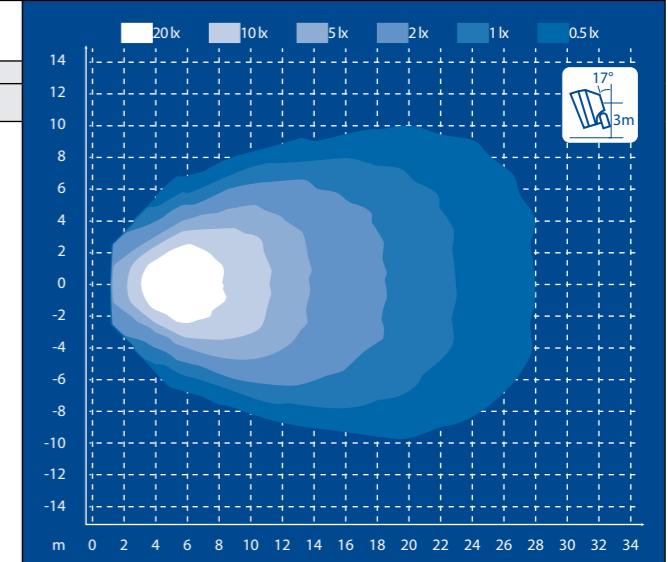
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Nordic N220 LED Specifications

Voltage :	24V
Input Current :	2.2 Amps
Max Power Consumption :	55 Watts
Lifetime :	50 000 Hrs
Connector :	Deutsch DT Series 2 Pin
Mount :	Single Bolt M10
Shock :	60 G
Vibration :	8 G _{rms} 24 - 2000 Hz
Lens :	Hardened Glass
Body :	Aluminium
Weight :	3.3 kg
IP Rating :	IP68
Salt Mist :	ASTM B117 (96h)
EMC :	ISO 13766
Operating Temperature :	-40°C to + 50°C
Colour Temperature. :	5500 K
Light Source :	14 x XLamp® XR-E LED

Nordic N220 LED - Flood	
Part No.	Voltage
982-001	24V



LIGHT SOURCE COMPARISON

LED - 5500K



Colour temperature (measured in K - Kelvin) is an important aspect in the usefulness of a worklamp.

The higher the colour temperature the 'whiter' the light and the less strain placed upon the eyes, making night work safer and more productive.

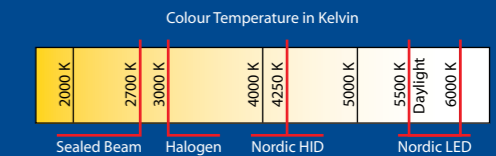
A worklamp with a lesser lux value but a higher colour temperature can be a better light under which to work in many applications.

HID - 4250K



To the left are photos taken of the same surface illuminated from a height of 3m and taken with identical settings on a digital SLR camera. The images are cropped but are otherwise unaltered.

HALOGEN - 3000K



Worklamps used:

- Nordic N220 LED
- Nordic N400 HID
- Nordic N200 Halogen

Images taken with:

- NIKON D200
- ISO 800
- Aperture F5.0
- Shutter Speed 1/10 sec

NORDIC N25 LED



The Nordic N25 LED is designed for heavy duty applications requiring a powerful LED worklight in a compact and robust body.

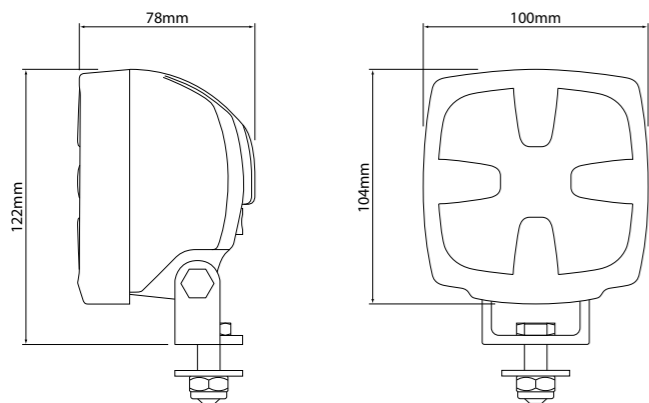
Housed within the uniquely designed aluminium body are 5 high output LEDs. These powerful LEDs produce a colour temperature higher than that of sunlight, reducing eye strain and operator fatigue.

The N25 LED worklight incorporates fully encapsulated electronics and has an operating range of 10 to 80 volts.

Along with the extremely tough, compact design, the N25 LED worklight is sealed to IP68 making it suitable for almost any application.

- Latest LED technology with a life-span of up to 50,000 hours
- Heavy duty anti-vibration mounting system
- 10-80V operation
- Extreme shock resistance
- Ultra low current draw
- Environmentally sealed cast alloy body IP68
- Over voltage, over temp, spike & polarity protected
- Whiter than daylight colour temperature 6000K
- Deutsch DT series 2 pin connector on fly lead

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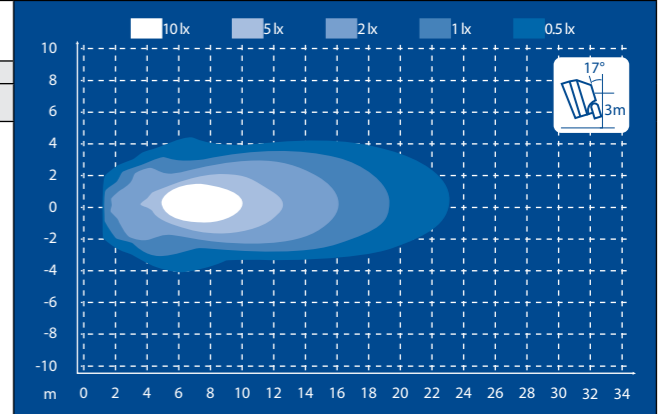


Nordic N25 LED Specifications

Voltage :	10-80V
Input Current :	0.7 Amps @ 24V
Max Power Consumption :	17 Watts
Lifetime :	50,000 Hrs
Connector :	Deutsch DT Series 2 Pin
Mount :	Single Bolt M10
Shock :	60 G
Vibration :	8G _{rms} 24 - 2000 Hz
Lens :	PMMA
Body :	Aluminium
Weight :	0.9 kg
IP Rating :	IP68
Salt Mist :	ISO 9227 NSS 240 h
EMC :	ISO 13767, ISO 14982
Operating Temperature :	-40°C to +50°C
Colour Temperature. :	6000 K
Light Source :	5 x Luxeon® K2 LED

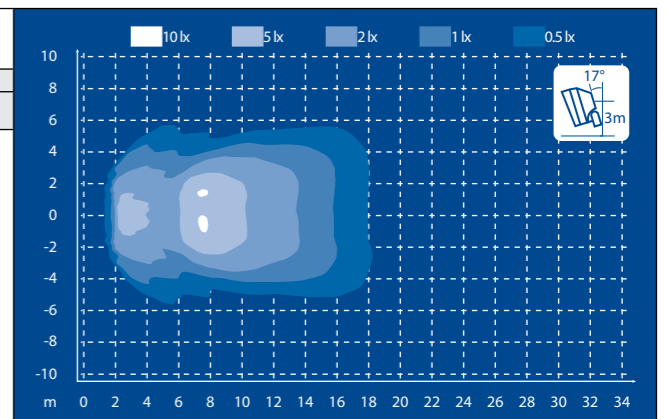
Nordic N25 LED - Flood

Part No.	Voltage
981-001	10-80V



Nordic N25 LED - Wide Flood

Part No.	Voltage
981-006	10-80V



LED TECHNOLOGY FOR WORKLAMPS

Why LED?

Their brilliance and colour have made light emitting diodes a prime contender in all aspects of vehicle lighting. Today's LED are small, highly powerful, and use a fraction of the energy of standard incandescent and halogen light bulbs, and often last the life of the vehicle.

One of the advantages of LED products is their low power consumption. A standard H3 worklamp with a 55W bulb can be adequately replaced by a 30W LED worklamp. This places less load on the vehicle's power system enabling more productive usage of the available power.

The LED's luminous efficiency is increasing rapidly. Currently about 40 lumens per Watt can be generated from a single LED. There are prototypes in research laboratories with outputs of approximately 130 lm/W. (The luminous efficiency of xenons are approximately 90 lm/W, and 20 lm/W for halogen).

The newer the technology the greater the frequency of confusing and misleading information in the market. This is especially true with LED technology. One of the main pieces of misleading information concerns light output.

LED component manufacturers' publish lumen output information based on a trigger pulse measurement - which has

nothing to do with the real light output of the finished LED light.

The light output claims made by LED worklamp manufacturers and suppliers should be questioned in detail because often they quote a calculated lumen figure that has no relation to a product's actual light output, but more a theoretical lumen rating that cannot actually be achieved in real world conditions.

The disparity between calculated lumen and measured (real) lumen is mainly caused through heat build up which reduces the LEDs output.



The real output depends on how effective the lamp body is at dissipating this heat, plus the quality and the efficiency of the lens.

Nordic Lights Worklamps and Headlamps

Nordic Lights is one of the first companies to use the advantages of LEDs combined with superior technical design, and has extended it's already successful halogen and xenon worklamp range to include LED worklamps.

As no bulb change is necessary the lights can be designed to be totally sealed and offer full functionality regardless of weather conditions or high-pressure cleaning.

The electronics of the Nordic LED Worklight range have over-voltage, reverse-polarity, over temperature and spike protection which further ensure the exceptional lifetime of the worklamps.