GLARE FREE LED WORK LAMP

DarkLicht Mini



Shown: DarkLicht Mini, 4,800 lm, cut off set to 69°.

CE · ENEC · IP69K · IK08 · Class II · Vibration 6 G · C5 ISO 9223 · Ta −45 … +50 °C · 10–50 VDC · ULOR 0 % · DarkSky DS-1 · cut off 63–75° · 5-year warranty

4,800 lumens with no glare at all. The DarkLicht Mini is the compact cut off work lamp for machines and vehicles working where people are: the light reaches the work and not the operator, the driver behind, or the people standing next to the machine.

LUMINOUS FLUX	POWER	EFFICACY
4,800 lm	30 W	160 lm/W
ULOR	**CUT OFF**	**SUPPLY**
0 %	63–75°	10–50 VDC

Values apply to the standard version at 4000 K, Ta 25 °C, including reflector losses and driver consumption, with the cut off set to the standard position.

WHY IT IS SPECIFIED

A work lamp that does not blind the person next to it. Conventional work lamps scatter light upwards and sideways, which is why a machine working at night is unpleasant to stand near and dangerous to drive past.

Legal exposure on public work. Road maintenance, municipal work and night work in a residential area is where a complaint becomes a stopped job. A cut off lamp settles that before it is raised.

10 to 50 V DC on one part number. 12, 24 and 36 volt machines take the same lamp, with the connector in the housing and no cable tail to route or damage.

WHERE IT IS USED

- Service and maintenance vehicles
- Forklifts and reach trucks
- Asphalt machines and paving trains
- Small excavators and loaders
- Sweepers and winter service vehicles
- Mobile crane booms, on the Crane Light Director
- Municipal and utility vehicles
- Airport and terminal ground support equipment
- Work zones alongside public roads
- Night work near housing
- Agricultural machines working close to dwellings
- Rail maintenance vehicles

VERSIONS

	DarkLicht Mini
Article base code	DRKM01
Luminous flux	4,800 lm
Power	30 W
Efficacy	160 lm/W
Supply	10–50 VDC, 12, 24 or 36 V nominal
Dimensions	179 × 120 × 95 mm
Weight	1.0 kg

The manufacturer calls this type DL M30. JEL sells it as the Mini so that a customer sees at once that it is the smaller model. For more output with the same cut off, see the **DarkLicht S** at 10,260 and 12,825 lm.

Light output and optics

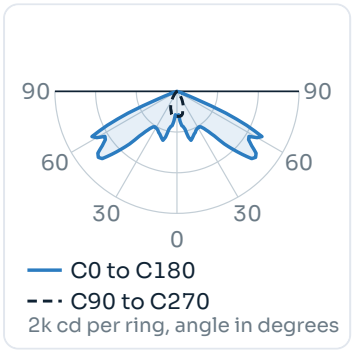
Values apply at Ta 25 °C with the cut off in the standard position. The whole DarkLicht line shares one light distribution, so the diagrams below apply to every type in the range at its own luminous flux.

BEAM CHARACTERISTICS

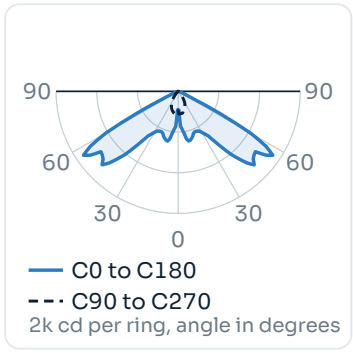
Setting	Distribution	Cut off	Beam angle 50 % of peak	Typical use
63°	Full cut off, asymmetric	63°	–	Tight boundaries, a site directly against housing or a carriageway
66° and 69°	Full cut off, asymmetric	66° and 69°	–	The usual settings for a yard or a car park
72°	Full cut off, asymmetric	72°	123°	Wider cover where the boundary allows it
75°	Full cut off, asymmetric	75°	132°	Maximum reach, sites without a sensitive boundary

The DarkLicht does not use lenses. A patented parabolic reflector throws the light forward and down and cuts it off completely above the set angle, which is set at the factory to the shield position given on the order, between 63 and 75 degrees. The two diagrams show the two shielding positions of the reflector. The whole DarkLicht line shares one light distribution, so one measured set covers every type in the range and a lighting designer works with one photometric behaviour at every mounting height.

LIGHT DISTRIBUTION



Shielding position 1



Shielding position 2

OBTRUSIVE LIGHT

ULOR at 0° tilt	**0 %**
Cut off angle	Factory set, shield position S1 to S5, 63° to 75°
Standards	NSVV guideline · DarkSky DS-1 · EN 12464-2 · EN 12193

A conventional floodlight lights everything in front of it, including the sky, the neighbour and the driver approaching the site. The DarkLicht range is built the other way around: a patented parabolic reflector, not a lens, cuts the light off completely above an angle that is set at the factory between 63 and 75 degrees and specified with the order. Upward light output ratio is 0 %, and the luminaires have been third party tested against the DarkSky DS-1 requirements at colour temperatures between 1700 and 2200 K.

COLOUR AND CONSISTENCY

Colour temperatures	5700 K, 5000 K, 4000 K, 3000 K, 2700 K, amber 2200 K, 1800 K, 1700 K
Tuneable white	4000 K with 2200 K and 1700 K, switchable in operation
DarkSky DS-1	Met at 1700 to 2200 K, third party tested
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 103,500 h

Full specification

All values apply to the standard configuration at 25 °C ambient, including lens losses and driver consumption. A hyphen means the entry does not apply to that version.

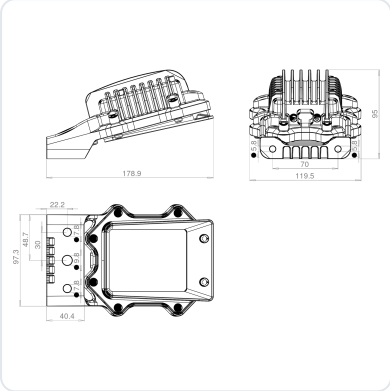
	DarkLicht Mini
PERFORMANCE	
Luminous flux	4,800 lm
Power consumption	30 W
Efficacy	160 lm/W
Upward light output ratio	0 % at 0° tilt
Cut off angle	63°, 66°, 69°, 72° or 75°, factory set, shield position S1 to S5
ELECTRICAL	
Supply voltage range	10–50 VDC
Nominal voltage	12, 24 or 36 V
Current draw	2.5 A at 12 V · 1.3 A at 24 V · 0.8 A at 36 V
Driver	DC drivers on board, no external box
Dimming	On request
CONSTRUCTION	
Housing	Cast aluminium, less than 0.08 % copper
Optic	Patented parabolic reflector, no lens
Bracket	Fixed bracket, aluminium, less than 0.08 % copper
Front	Impact resistant glass, IK08
Protection class	Class II
Ingress protection	IP66, IP67, IP68 and IP69K, each class tested separately
Impact resistance	IK08 (IEC 62262)
Corrosion class	C5 industrial and marine (ISO 9223)
DURABILITY AND DIMENSIONS	
Ambient temperature	−45 to +50 °C
Vibration	6 G at resonant frequency (IEC 60068-2-6)
LED service life	TM-21 L90B05 > 103,500 h
Termination	Deutsch DTP04 two pole connector fitted in the housing. There is no cable
Mating connector	Available as an accessory, not supplied as standard
Dimensions	179 × 120 × 95 mm
Weight	1.0 kg
Certification	CE, ENEC, IEC 60598
Warranty	5 years on the complete luminaire

The cut off angle is a mechanical setting made at the factory to the ordered shield position. It changes where the light lands, not how much of it there is.

Mechanics, mounting and driver

All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

HOUSING AND BRACKET



Dimensions	179 × 120 × 95 mm
Weight	1.0 kg
Bracket	Fixed, aluminium
Front	Impact resistant glass, IK08
Optic	Patented parabolic reflector
Larger version	DarkLicht S, 260 × 200 × 130 mm, 3.3 kg

CUT OFF SETTING

Range	63°, 66°, 69°, 72° or 75°
Set where	On site, on the machine
Effect	Where the light stops, not how much there is
When it is set	At the factory, to the shield position S1 to S5 given on the order
ULOR	0 % at every setting

MOUNTING AND ACCESSORIES

Fixed bracket	Aluminium, supplied as standard
Mating connector	Deutsch DTP04, available as an accessory
Crane Light Director	Steerable boom system for mobile cranes. Separate datasheet
More output, same cut off	DarkLicht S at 10,260 and 12,825 lm
Rugged alternative	Piranha, where the position is mechanically punished
Maximum spread instead	Goby Mini, without cut off

DRIVERS ON BOARD

Type	DC drivers on the board inside the housing
External box	None
Supply range	10 to 50 V DC
Nominal	12, 24 or 36 V
AC version	Not available
Certification	CE, ENEC, IEC 60598

One component instead of three. Drivers on board and the connector in the housing, so a machine builder fits a DarkLicht Mini with one plug.

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
Cut off on a crane	Keeps the beam off the operator as the boom comes down
Other luminaires	Goby Mini, Goby, Piranha, DarkLicht S and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch

Ordering, standards and documents

ORDER CODE

Example **DRKM01-40K**

DarkLicht Mini, 4000 K

DRKM01	DarkLicht Mini, 10–50 VDC, drivers on board
57K · 50K · 40K · 30K · 27K	5700 K · 5000 K · 4000 K · 3000 K · 2700 K
22K · 18K · 17K	Amber 2200 K · 1800 K · 1700 K, DarkSky DS-1 range
TW	Tuneable white, 4000 K with 2200 K and 1700 K
Cut off	Shield position S1 to S5, specified with the order

The cut off angle is a factory setting: give the shield position S1 to S5 with the order. The mating connector is ordered separately.

COMBINATIONS

Tuneable white with DS-1 colours	Possible
Cut off at any setting	Standard
Crane Light Director	Standard
AC supply	Not available
High temperature	Not available
316L housing	Not available

STANDARDS AND VERIFICATION

Subject	Standard	Verification
Luminaire safety	IEC/EN 60598-1, -2-5	In-house test
EMC emission and immunity	EN 55015, EN 61547	Third party test
Ingress	IEC 60529 and ISO 20653. IP66, IP67, IP68, IP69K	In-house test
Impact	IEC 62262 IK08	In-house test
Corrosion	ISO 9223 class C5, industrial and marine	In-house test
Obtrusive light	NSVV guideline · DarkSky DS-1 at 1700 to 2200 K · EN 12464-2 · EN 12193	Third party test
Photometry	IES LM-79, IES files per optic	In-house test
Substances	RoHS, REACH	Self-declaration

BEFORE YOU ORDER

A sample luminaire to hang before you commit to a project quantity.

Five years warranty on the complete luminaire.

A DIALux calculation from our engineers, on your site drawing.

PRODUCT PAGE

IES files and revision history, DXF and STEP on request, and project references.
jelproducts.nl/en/products/darklicht-mini

WHERE IT EARNS ITS PLACE

The DarkLicht Mini earns its place on machines that work where people are. A sweeper on a city street, an asphalt train on a live carriageway or a forklift in a yard next to housing is not lighting an empty field. Everything the lamp throws past the work lands on somebody, and that is what turns night work into a complaint.

Notes. Values are for the standard configuration. The cut off angle is a factory setting and does not change the luminous flux, only where the light lands. The stated LED service life of L90B05 > 103,500 hours is the figure for the DarkLicht range and is lower than the 360,000 hours of the floodlight range; that is a property of this reflector platform. The JEL range is not ATEX or Ex certified.