

COLLECTED TECHNICAL DATASHEETS

LED Work Lamps

Machine and vehicle lighting from 2,300 to 8,400 lumens on 9 to 32 volts DC, with the connector in the housing and the drivers on board. Including the glare free DarkLicht types. The 316L and high temperature versions have their own collections.

LUMINAIRES

5

OUTPUT RANGE

2,300 to
12,825_{lm}

SUPPLY

9–50_{VDC}

INGRESS

IP69K



Piranha

Goby

Goby Mini

DarkLicht S

DarkLicht Mini

Contents

Five work lamps, grouped by what they are chosen for. The page numbers run through the whole document.

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3	Piranha	8,400 lm. The rugged one, IK10 and a bracket from -45° to +90°
VERSATILE WORK LAMPS		
8	Goby	4,600 to 8,200 lm in four output levels on one housing
13	Goby Mini	2,300 lm in 112 × 70 × 60 mm
GLARE FREE WORK LAMPS		
18	DarkLicht S	12,825 lm with a full cut off reflector
23	DarkLicht Mini	4,800 lm with a full cut off reflector
RELATED DOCUMENTS		
	Crane Light Director	Steerable boom lighting that carries five of these luminaires
	Marlin	18,000 lm, where a work lamp is no longer enough

HOW TO READ THIS DOCUMENT

Every luminaire in this document has the same five sections: what it is and where it is used, the light output and the optics, the full specification, the mechanics and the driver, and the ordering information. The page numbers below run through the whole document.

The selection table on the next page is the fastest route. It puts the luminaires side by side on the figures that actually decide a specification: output, mass, impact class, supply and what the housing is made of. The individual datasheets follow in the same order.

Selection table

The figures that decide a specification, side by side.

Luminaire	Flux lm	W	kg	Impact	Supply	Housing	High temp	Chosen for
HEAVY DUTY								
Piranha 9	8,400	70	3.1	IK10	12 · 24 V DC and AC	Aluminium	No	Rugged
Piranha 9 SS	8,400	70	5.0	IK09	12 · 24 V DC and AC	316L	No	Rugged, corrosion
VERSATILE								
Goby Ultra	8,200	65	1.8	IK10	9–32 V DC	Aluminium	No	General purpose
Goby Pro	7,200	55	1.8	IK10	9–32 V DC	Aluminium	No	General purpose
Goby 6	4,600	35	1.8	IK10	9–32 V DC	Aluminium	No	General purpose
Goby Mini	2,300	18	1.1	IK10	9–32 V DC	Aluminium	No	Smallest position
GLARE FREE								
DarkLicht S75	12,825	75	3.3	IK08	20–32 V DC	Aluminium	No	No glare, 0 % ULOR
DarkLicht Mini	4,800	30	1.0	IK08	10–50 V DC	Aluminium	No	No glare, 0 % ULOR

Impact class is stated with the front cover that is supplied as standard. All of these luminaires share the same corrosion class C5, the same operating range from -45 °C and the same 6 G vibration rating. The choice between the Piranha and the Goby is not about light output, it is about how the position treats the lamp; the choice for a DarkLicht type is about who is standing in front of it.

HEAVY DUTY LED WORK LAMP

Piranha



Shown: Piranha 9 DC, titanium-based e-coating, 14° lens, high tensile 316L bracket.

CE	IP69K	IK10	Class II	C5 ISO 9223
Ta -45 ... +50 °C		90-305 / 180-528 VAC		
12 and 24 VDC		Deutsch DT04-2P	Vibration 6 G	
Crane Light Director		5-year warranty		

The indestructible work lamp of the range. 8,400 lumens, IP69K, IK10 and a 316L bracket that swings from -45 to +90 degrees without a stop, for machines, cranes and heavy plant.

LUMINOUS FLUX	POWER	WEIGHT
8,400 lm	70 W	3.1 kg
INGRESS	IMPACT	SUPPLY
IP69K	IK10	12 and 24 VDC

Values apply to the standard version at 6500 K, Ta 25 °C, including lens losses and driver consumption. 6500 K delivers the same luminous flux as 4000 K.

WHY IT IS SPECIFIED

IK10 and IP69K where things actually hit. A work lamp on a haul truck or a crane cab is struck by material, by tools and by a pressure washer every week. The Piranha is rated for all three.

A bracket with a range no other work lamp has. The 316L bracket rotates without limit from -45 to +90 degrees, so the mounting position can be decided by the structure instead of by the lighting.

Built heavier than its size suggests. At 3.1 kg the Piranha weighs almost as much as the far larger Snapper. That is not an accident, it is the reason it lasts.

WHERE IT IS USED

Mining haul trucks and excavators	Ship gangways and mooring stations
Loaders, dozers and rough terrain machines	Engine rooms and pump rooms
Crane cabs, booms and service positions	Walkways, stairs and access platforms
Service and maintenance vehicles	Conveyor and transfer point lighting
Grinding, digging and material handling zones	Vehicle inspection pits and wash bays
Machine and process area task lighting	

VERSIONS

	Piranha 9 AC	Piranha 9 DC	Piranha 6 DC
Code	PIAC01	PIDC02	PIDC01
Flux	8,400 lm	8,200 lm	6,300 lm
Power	70 W	70 W	55 W
Supply	90-305 / 180-528 VAC	20-32 VDC	9-35 VDC, 12 or 24 V
Driver	Remote BLD075	On board	On board
Weight	3.1 kg	3.1 kg	3.1 kg

There is no Piranha 6 in AC and there will not be one. For 316L see the **Piranha SS**, for high ambient temperatures the **Goby HT** or the **Snapper HT**.

Light output and optics

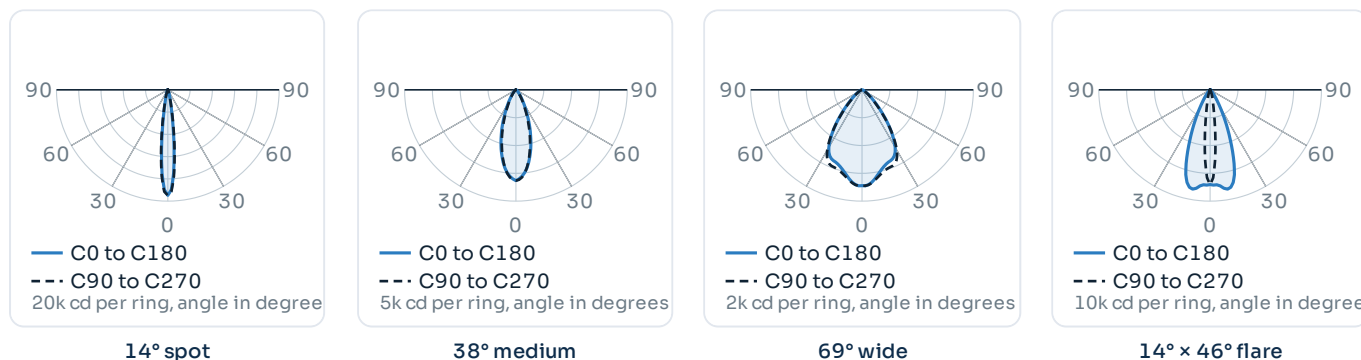
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Long throw from a machine or a boom onto a distant work point
38°	Medium, symmetric	37°	69°	The general purpose choice: machine areas, decks, platforms
69°	Wide, symmetric	72°	103°	Close range over a wide field: cabs, walkways, engine rooms
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: haul roads, gangways
No lens (.NOP)	Very wide, symmetric	136°	168°	Very close range, machine interiors and confined spaces

The beam angle is the full angle between the two directions where the intensity has fallen to 50 % of the peak. The field angle uses 10 %. Both are read from the IES files, available per optic on the product page. Lens combinations within one luminaire are possible, and the optic is part of the order code as a suffix, for example .38.

LIGHT DISTRIBUTION



OBTRUSIVE LIGHT

ULOR at 0° tilt	0 %
Amber 2200 K	Available on every optic, for light sensitive surroundings
Bi-colour 4000 K with amber 2200 K	Switchable in operation, for fog, dust and night regimes

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a site borders a residential area or a protected zone, and it is the starting point for any assessment against NEN-EN 12464-2 and the NSVV guidance on obtrusive light. Where the site condition demands a cut off optic rather than a controlled floodlight, see the DarkLight range.

COLOUR AND CONSISTENCY

Colour temperatures	6500 K, 5000 K, 4000 K, 2700 K, amber 2200 K
Flux at 6500 K	Identical to 4000 K
Bi-colour	4000 K with amber 2200 K, switchable in operation
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 360,000 h at 50 °C

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.

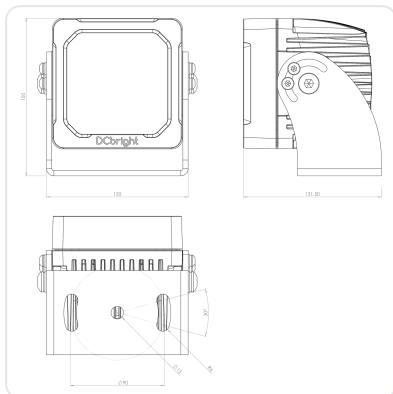
	Piranha 9 AC	Piranha 9 DC	Piranha 6 DC
PERFORMANCE			
Luminous flux	8,400 lm	8,200 lm	6,300 lm
Power consumption	70 W	70 W	55 W
Efficacy	120 lm/W	117 lm/W	115 lm/W
ELECTRICAL AND DRIVER			
Supply voltage range	90–305 or 180–528 VAC	20–32 VDC, 24 V nominal	9–35 VDC, 12 or 24 V nominal
Current draw	0.6 A at 120 V · 0.3 A at 220 to 277 V · 0.2 A at 380 to 480 V	2.9 A at 24 V	2.3 A at 24 V · 4.6 A at 12 V
Power factor at full load	> 0.9 at 65 to 100 % load	–	–
Inrush current at 220 V	66 A peak, T50 170 µs	–	–
Luminaires per MCB	B16 11 · C16 19 · C25 30 · D16 32	–	–
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000–4–5)	–	–
Dimming	0–10 V, PWM, DALI–2, or over NFC	On request	On request
Driver	Remote BLD075, 131 × 68 × 33.5 mm, 650 g. Fits the DRB–1	DC drivers on board	DC drivers on board
Reverse polarity and surge	–	Protected	Protected
CONSTRUCTION			
Housing	Cast aluminium, less than 0.08 % copper		
Surface finish	Conversion layer plus 2-layer titanium-based e-coating		
Colour	Titanium Black		
Bracket	High tensile 316L stainless steel, unlimited rotation from –45° to +90°		
Front	Polycarbonate IK10 as standard, chemically hardened glass IK09 on request		
Protection class	Class II		
Ingress protection	IP66, IP67, IP68 and IP69K, each class tested separately		
Impact resistance	IK10 with polycarbonate, IK09 with glass (IEC 62262)		
Corrosion class	C5 industrial and marine (ISO 9223)		
Vibration and shock	6 G at resonant frequency (IEC 60068–2–6), shock tested to IEC 60068–2–27		
DURABILITY AND DIMENSIONS			
Ambient temperature	–45 to +50 °C		
LED service life	TM–21 L90B05 > 360,000 h at 50 °C		
Cable and termination	H07BQ–F, 4 cores (2 × 1.5 mm² + 2 × 0.5 mm²), 0.3 m	H07BQ–F, 2 cores (2 × 1.5 mm²), 0.3 m	H07BQ–F, 2 cores (2 × 1.5 mm²), 0.3 m
Dimensions	150 × 122 × 115 mm including bracket		
Weight	3.1 kg incl. bracket		
Warranty	5 years on the complete luminaire		

Power is a driver setting. Every AC version can be ordered programmed to a lower wattage by adding the wanted power as a suffix to the article code. DC versions run at a fixed constant current, so another power level there is a custom build. High voltage DC between 250 and 740 V is available on request.

Mechanics, mounting and driver

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

BRACKET AND ROTATION



Incl. bracket	150 × 122 × 115 mm
Weight	3.1 kg with bracket
Material	High tensile 316L stainless steel
Rotation	Unlimited from -45° to +90°
Why that range	On a machine the structure decides the position, not the lighting designer
316L version	166 × 166 × 102 mm, 5.0 kg, see the Piranha SS

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Crane Light Director	On the DC versions, steerable boom system. Separate datasheet
Deutsch DT04-2P	Fitted on the 316L DC versions
Glass front	Chemically hardened glass instead of polycarbonate, IK09
Cable	Lengths beyond 0.3 m on request, same H07BQ-F type
316L housing	See the Piranha SS datasheet

DRB DRIVER BOX



Use	Optional housing for the remote driver on the AC version
DRB-1	One driver up to 320 W. 276 × 194 × 86.5 mm, 4.2 kg, IP66 and IP67
Ingress protection	IP66 and IP67
DC versions	Not applicable

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
Piranha on the system	8,400 lm per tilting module
Other luminaires	Goby Mini, Goby, DarkLicht S and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch
Supply	12 and 24 V DC from the machine, or 230 and 400 V AC from site power

REMOTE DRIVER, AC VERSION

Type	BLD075, 90–305 VAC or 127–420 VDC
Case temperature	Tc -40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
MTBF	≥ 320,000 h at 75 °C case
Size and weight	131 × 68 × 33.5 mm, 650 g
DC versions	Drivers on board, no external box

On DC there is nothing external at all. The DC versions run the drivers on the board inside the housing, with reverse polarity and surge protection, so a machine gets one component instead of three.

Ordering, standards and documents

ORDER CODE

Example **PIDC02-65K.38**

Piranha 9, DC, 6500 K, 38° optic

PIAC01	Piranha 9, AC, remote BLD075
PIDC02	Piranha 9, DC, 20–32 VDC
PIDC01	Piranha 6, DC, 9–35 VDC, 12 or 24 V
PISS01 · PISS02	316L stainless steel versions
65K · 50K · 40K · 27K · 22K	6500 K · 5000 K · 4000 K · 2700 K · amber 2200 K
.14 · .38 · .69 · .14x46 · .NOP	Optic suffix, .NOP is supplied without optics

The optic suffix follows the colour temperature. Front material, bracket and cable length are confirmed at order. The Piranha 6 in 316L does not yet have an article code.

COMBINATIONS

Amber 2200 K with any optic	Possible
Bi-colour with DALI-2	AC version
Crane Light Director	DC versions
Glass front, IK09	Any version
Piranha 6 in AC	Not available
High temperature	Not available, see the Goby HT

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 · IEC 60533 marine, bridge and open deck	TÜV
Ingress	IEC 60529 and ISO 20653. IP66, IP67, IP68, IP69K	In-house test
Impact and vibration	IEC 62262 IK10 with polycarbonate · IEC 60068-2-6 at 6 G	In-house test
Shock and corrosion	IEC 60068-2-27 · ISO 9223 class C5, industrial and marine	In-house 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.
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PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

The Piranha earns its place on the machine. A work lamp on heavy plant is not a light fitting, it is a component that has to survive the same duty cycle as the hydraulics around it. It is specified where the machine is expensive, the downtime is expensive, and nobody wants to talk about the lighting again.

Notes. Values are for the standard configuration; a bi-colour or high-CRI build changes the luminous flux and the quotation states the figure that applies. Luminaires per MCB is the manufacturer figure for ABB S200 at 220 V, a guide for engineering and not a substitute for the installation calculation. North American models on request. The JEL range is not ATEX or Ex certified.

PROFESSIONAL LED WORK LAMP

Goby



Shown: Goby Ultra, titanium-based e-coating, 14° lens, high tensile 316L bracket.

CE	IP69K	IK10	Class II	C5 ISO 9223
Ta -45 ... +50 °C	9-32 VDC	12 and 24 V		
Deutsch DTP04 in housing	Vibration 6 G			
Crane Light Director	5-year warranty			

The versatile professional work lamp of the range. Four output levels from 4,600 to 8,200 lumens on 9 to 32 volts DC, in a 1.8 kg housing rated IP69K and IK10, with the Deutsch connector fitted in the housing so there is no cable tail to route or damage.

LUMINOUS FLUX	POWER	WEIGHT
8,200 lm	65 W	1.8 kg
SUPPLY	INGRESS	IMPACT
9-32 VDC	IP69K	IK10

Values apply to the Ultra at 6500 K, Ta 25 °C, including lens losses. All four output levels share the same housing, bracket, connector and dimensions.

WHY IT IS SPECIFIED

Four output levels on one 1.8 kg housing. The Ultra, the Pro, the 9 and the 6 differ in lumen package and in price, not in mounting, connector, bracket or dimensions. One spare covers the fleet.

9 to 32 V DC on one part number. A 12 volt vehicle and a 24 volt machine take the same lamp, with the Deutsch DTP04 connector fitted in the housing and no cable to gland or shorten.

A European work lamp, built to the range standard. IP69K, IK10, corrosion class C5 and a 316L bracket. The Goby is the versatile one; where the position is punished, the Piranha is the rugged one.

WHERE IT IS USED

Machine and vehicle integration on 12 and 24 V DC

Mobile crane booms, on the Crane Light Director

Service and maintenance vehicles

Excavators, loaders and forklifts

Workstation and inspection positions

Engine rooms, pump rooms and switch rooms

Ship accommodation and working alleyways

Access platforms, ladders and stairs

Conveyor and transfer point lighting

Loading dock and shelter lighting

Agricultural and forestry machines

OEM integration on equipment

VERSIONS

	Ultra	Pro	9	6
Code	GODC07	GODC06	GODC05	GODC04
Flux	8,200 lm	7,200 lm	6,300 lm	4,600 lm
Power	65 W	55 W	55 W	35 W
Efficacy	126 lm/W	131 lm/W	115 lm/W	131 lm/W
Supply	20-32 V	9-32 V	9-32 V	9-32 V

The Pro and the 9 use different LEDs at the same wattage: the Pro is the preferred build, the 9 is there for a budget that can accept slightly less light. All four have the same size and weight, the HT version included.

Light output and optics

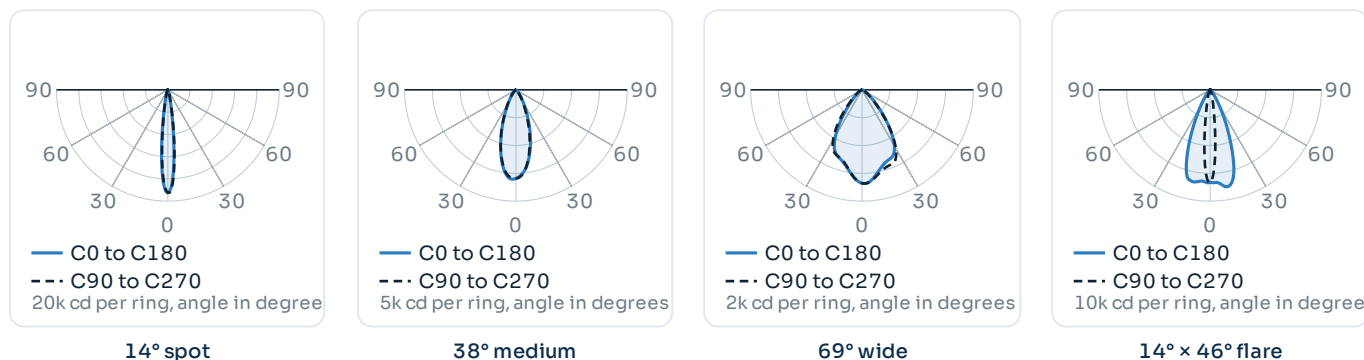
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Long throw from a machine or a boom onto a distant work point
38°	Medium, symmetric	37°	69°	The general purpose choice: machine areas, decks, platforms
69°	Wide, symmetric	72°	103°	Close range over a wide field: cabs, walkways, engine rooms
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: haul roads, gangways
No lens (.NOP)	Very wide, symmetric	136°	168°	Very close range, machine interiors and confined spaces

The beam angle is the full angle between the two directions where the intensity has fallen to 50 % of the peak. The field angle uses 10 %. On a work lamp the optic decides usability far more than the lumen package does: a 14° spot and a 69° wide from the same 8,200 lm housing are two different products in practice. Diagrams are shown for the Ultra; the other output levels have the same distribution.

LIGHT DISTRIBUTION



OBTRUSIVE LIGHT

ULOR at 0° tilt	0 %
Amber 2200 K	Available on every optic, for light sensitive surroundings
Bi-colour 4000 K with amber 2200 K	Switchable in operation, for fog, dust and night regimes

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a site borders a residential area or a protected zone, and it is the starting point for any assessment against NEN-EN 12464-2 and the NSVV guidance on obtrusive light. Where the site condition demands a cut off optic rather than a controlled floodlight, see the DarkLight range.

COLOUR AND CONSISTENCY

Colour temperatures	6500 K, 5000 K, 4000 K, 2700 K, amber 2200 K
Flux at 6500 K	Identical to 4000 K
Bi-colour	4000 K with amber 2200 K, switchable in operation
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 360,000 h at 50 °C

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.

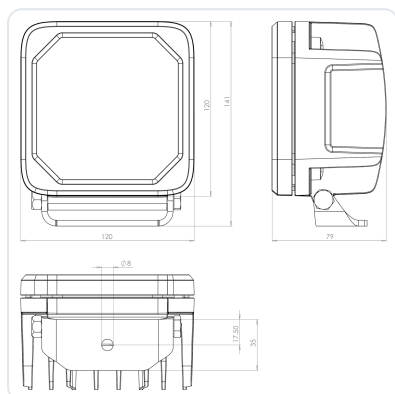
	Goby Ultra	Pro	9	6
PERFORMANCE				
Luminous flux	8,200 lm	7,200 lm	6,300 lm	4,600 lm
Power consumption	65 W	55 W	55 W	35 W
Efficacy	126 lm/W	131 lm/W	115 lm/W	131 lm/W
ELECTRICAL				
Supply voltage range	20–32 VDC	9–32 VDC	9–32 VDC	9–32 VDC
Nominal voltage	24 V	12 and 24 V	12 and 24 V	12 and 24 V
Current draw	2.7 A at 24 V	2.3 A at 24 V · 4.6 A at 12 V	2.3 A at 24 V · 4.6 A at 12 V	1.5 A at 24 V · 2.9 A at 12 V
Driver	DC drivers on board, no external box			
Reverse polarity and surge	Protected			
Dimming	On request			
CONSTRUCTION				
Housing	Cast aluminium, less than 0.08 % copper			
Surface finish	Conversion layer plus 2-layer titanium-based e-coating			
Colour	Titanium Black			
Bracket	High tensile 316L stainless steel, unlimited rotation from –60° to +30°			
Front	Polycarbonate IK10 as standard, chemically hardened glass IK09 on request			
Protection class	Class II			
Ingress protection	IP66, IP67, IP68 and IP69K, each class tested separately			
Impact resistance	IK10 with polycarbonate, IK09 with glass (IEC 62262)			
Corrosion class	C5 industrial and marine (ISO 9223)			
Vibration and shock	6 G at resonant frequency (IEC 60068-2-6), shock tested to IEC 60068-2-27			
DURABILITY AND DIMENSIONS				
Ambient temperature	–45 to +50 °C			
LED service life	TM-21 L90B05 > 360,000 h at 50 °C			
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	120 × 141 × 79 mm including bracket			
Weight	1.8 kg incl. bracket			
Warranty	5 years on the complete luminaire			

DC versions run at a fixed constant current, so a different power level is a custom build. A high temperature version to +120 °C is available and is covered by the Goby HT datasheet.

Mechanics, mounting and driver

All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request. All four output levels share these dimensions.

BRACKET AND ROTATION



Incl. bracket	120 × 141 × 79 mm
Weight	1.8 kg with bracket
Material	High tensile 316L stainless steel
Rotation	Unlimited from -60° to +30°
Mounting	One person, one hand, single fixing
Smaller version	Goby Mini, 112 × 70 × 60 mm, 1.1 kg

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Mating connector	Deutsch DTP04, available as an accessory
Crane Light Director	Steerable boom system for mobile cranes. Separate datasheet
Glass front	Chemically hardened glass instead of polycarbonate, IK09
Goby HT	High temperature version to +120 °C. Separate datasheet
Rugged alternative	Piranha, for positions with handling damage

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
Goby on the system	8,200 lm per tilting module
Other luminaires	Goby Mini, Piranha, DarkLicht S and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch

TERMINATION

Connector	Deutsch DTP04, two pole, fitted in the housing
Cable	None. There is no tail
Why	Nothing to route, nothing to shorten and nothing to damage on a machine
Mating connector	Available as an accessory, not supplied as standard
Same on	Goby Mini and DarkLicht Mini

DRIVERS ON BOARD

Type	DC drivers on the board inside the housing
External box	None
Reverse polarity	Protected
Surge	Protected
Supply range	9 to 32 V DC, or 20 to 32 V on the Ultra
AC version	Only in the HT build, see the Goby HT

One component instead of three. With the drivers on board and the connector in the housing, a machine builder fits a Goby with one plug. There is no external driver, no gland and no junction box.

Ordering, standards and documents

ORDER CODE

Example **GODC07-65K.38**

Goby Ultra, 6500 K, 38° optic

GODC07 · GODC06	Ultra 8,200 lm · Pro 7,200 lm
GODC05 · GODC04	9 at 6,300 lm · 6 at 4,600 lm
GOHT01 · GOHT02	High temperature, AC and DC
65K · 50K · 40K · 27K · 22K	6500 K · 5000 K · 4000 K · 2700 K · amber 2200 K
.14 · .38 · .69 · .14x46 · .NOP	Optic suffix, .NOP is supplied without optics

The optic suffix follows the colour temperature. Front material and the mating connector are confirmed at order and are not part of the code.

COMBINATIONS

Amber 2200 K with any optic	Possible
Bi-colour 4000 K with 2200 K	Possible
Crane Light Director	All DC versions
Glass front, IK09	Any version
AC supply	Only in the HT build
316L housing	Not available, see the Piranha SS

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 · IEC 60533 marine, bridge and open deck	TÜV
Ingress	IEC 60529 and ISO 20653. IP66, IP67, IP68, IP69K	In-house test
Impact and vibration	IEC 62262 IK10 with polycarbonate · IEC 60068-2-6 at 6 G	In-house test
Shock and corrosion	IEC 60068-2-27 · ISO 9223 class C5, industrial and marine	In-house 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.
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PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

The Goby earns its place at the working position. Most of the light a person actually works under is not the floodlight on the mast, it is the lamp two metres from the task, on the machine, in the engine room or over the bench. That position needs the right amount of light, a supply the machine already has, and a housing that lasts as long as the machine it serves.

Notes. Values are for the standard configuration. The AC version always delivers more light than the DC version of the same product. Power is a driver setting on AC and is ordered as a suffix; DC versions run at a fixed constant current. North American models on request. The JEL range is not ATEX or Ex certified.

COMPACT LED WORK LAMP

Goby Mini



Shown: Goby Mini, titanium-based e-coating, 14° lens, high tensile 316L bracket.

CE	IP69K	IK10	Class II	C5 ISO 9223
Ta -45 ... +50 °C	9-32 VDC	12 and 24 V		
Deutsch DTP04 in housing	Vibration 6 G			
Crane Light Director	5-year warranty			

2,300 lumens in 112 × 70 × 60 millimetres, at 1.1 kilograms. The Goby Mini is for machines, vehicles and mounting positions that have no room for a luminaire and still have to be lit to an industrial standard.

LUMINOUS FLUX	POWER	WEIGHT
2,300 lm	18 W	1.1 kg
SUPPLY	INGRESS	IMPACT
9-32 VDC	IP69K	IK10

Values apply at 6500 K, Ta 25 °C, including lens losses. The full JEL optic set is available, which is what decides whether a small lamp is usable at three metres or only at one.

WHY IT IS SPECIFIED

It fits where nothing else does. At 112 × 70 × 60 mm and 1.1 kg the Goby Mini goes into positions that are otherwise fitted with a consumer grade lamp or left dark. The size is the specification.

Full industrial class in the smallest housing. IK10 with the polycarbonate cover, IP69K, corrosion class C5 and the same 316L bracket as the rest of the range.

The same optic set as the large floodlights. 14°, 38°, 69° and 14° × 46°. On a small lamp the optic matters more than the lumen package, because the distance is what it is.

WHERE IT IS USED

Compact machinery and vehicle positions	Ladder, hatch and step positions
Mobile crane booms, on the Crane Light Director	Small pump and valve stations
OEM integration on equipment	Ship lockers, berths and store rooms
Service points and maintenance zones	Instrument and gauge positions
Forklifts, reach trucks and small plant	Marker and orientation lighting
Machine interiors and tool areas	Retrofit of small halogen work lamps

VERSIONS

	Goby Mini
Article base code	GODC02
Luminous flux	2,300 lm
Power	18 W
Efficacy	128 lm/W
Supply	9-32 VDC, 12 and 24 V nominal
Dimensions	112 × 70 × 60 mm
Weight incl. bracket	1.1 kg

There is one version. For more output in a slightly larger housing see the **Goby** at 4,600 to 8,200 lm, for a punished position the **Piranha**, and for glare control the **DarkLight Mini**.

Light output and optics

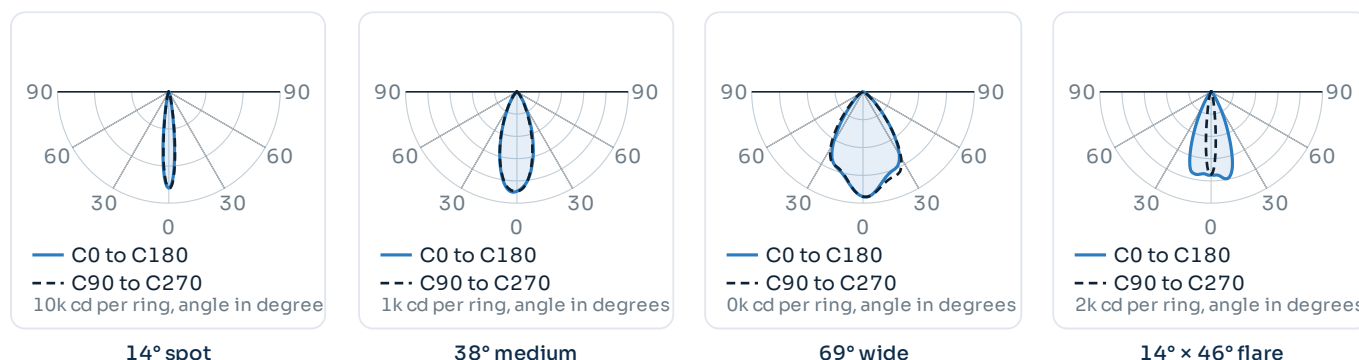
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Long throw from a machine or a boom onto a distant work point
38°	Medium, symmetric	37°	69°	The general purpose choice: machine areas, decks, platforms
69°	Wide, symmetric	72°	103°	Close range over a wide field: cabs, walkways, engine rooms
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: haul roads, gangways
No lens (.NOP)	Very wide, symmetric	136°	168°	Very close range, machine interiors and confined spaces

The beam angle is the full angle between the two directions where the intensity has fallen to 50 % of the peak. The field angle uses 10 %. On a lamp this size the optic is the whole specification: 2,300 lumens through a 14° spot reaches a target at twenty metres, and the same 2,300 lumens through a 69° wide lights a hatch at arm's length. Both are the same article with a different suffix.

LIGHT DISTRIBUTION



OBTRUSIVE LIGHT

ULOR at 0° tilt	0 %
Amber 2200 K	Available on every optic, for light sensitive surroundings
Bi-colour 4000 K with amber 2200 K	Switchable in operation, for fog, dust and night regimes

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a site borders a residential area or a protected zone, and it is the starting point for any assessment against NEN-EN 12464-2 and the NSVV guidance on obtrusive light. Where the site condition demands a cut off optic rather than a controlled floodlight, see the DarkLight range.

COLOUR AND CONSISTENCY

Colour temperatures	6500 K, 5000 K, 4000 K, 2700 K, amber 2200 K
Flux at 6500 K	Identical to 4000 K
Bi-colour	4000 K with amber 2200 K, switchable in operation
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 360,000 h at 50 °C

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.

Goby Mini

PERFORMANCE

Luminous flux	2,300 lm
Power consumption	18 W
Efficacy	128 lm/W

ELECTRICAL

Supply voltage range	9–32 VDC
Nominal voltage	12 and 24 V
Current draw	0.8 A at 24 V · 1.5 A at 12 V
Driver	DC drivers on board, no external box
Reverse polarity and surge	Protected
Dimming	On request

CONSTRUCTION

Housing	Cast aluminium, less than 0.08 % copper
Surface finish	Conversion layer plus 2-layer titanium-based e-coating
Colour	Titanium Black
Bracket	High tensile 316L stainless steel, unlimited rotation from –60° to +30°
Front	Polycarbonate IK10 as standard, chemically hardened glass IK09 on request
Protection class	Class II
Ingress protection	IP66, IP67, IP68 and IP69K, each class tested separately
Impact resistance	IK10 with polycarbonate, IK09 with glass (IEC 62262)
Corrosion class	C5 industrial and marine (ISO 9223)
Vibration and shock	6 G at resonant frequency (IEC 60068-2-6), shock tested to IEC 60068-2-27

DURABILITY AND DIMENSIONS

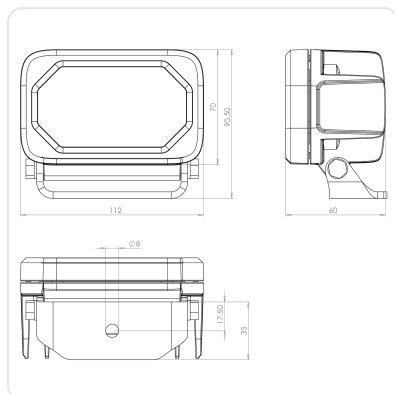
Ambient temperature	–45 to +50 °C
LED service life	TM-21 L90B05 > 360,000 h at 50 °C
Termination	Deutsch DTP04 two pole connector fitted in the housing. There is no cable
Mating connector	Available as an accessory, not supplied as standard
Dimensions	112 × 70 × 60 mm including bracket
Weight	1.1 kg incl. bracket
Warranty	5 years on the complete luminaire

DC versions run at a fixed constant current, so a different power level is a custom build. There is no high temperature and no 316L version of the Goby Mini; see the Goby HT and the Piranha SS.

Mechanics, mounting and driver

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

BRACKET AND ROTATION



Incl. bracket	112 × 70 × 60 mm
Weight	1.1 kg with bracket
Material	High tensile 316L stainless steel
Rotation	Unlimited from -60° to +30°
Mounting	One person, one hand, single fixing
Larger version	Goby, 120 × 141 × 79 mm, 1.8 kg

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Mating connector	Deutsch DTP04, available as an accessory
Crane Light Director	Steerable boom system for mobile cranes. Separate datasheet
Glass front	Chemically hardened glass instead of polycarbonate, IK09
More output	Goby, 4,600 to 8,200 lm in the same style
Glare control	DarkLicht Mini, 4,800 lm with a full cut off reflector

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
Goby Mini on the system	2,300 lm per tilting module, the lightest option
Other luminaires	Goby, Piranha, DarkLicht S and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch

TERMINATION

Connector	Deutsch DTP04, two pole, fitted in the housing
Cable	None. There is no tail
Why	On an OEM machine there is nothing to route, gland or shorten
Mating connector	Available as an accessory, not supplied as standard
Same on	Goby and DarkLicht Mini

DRIVERS ON BOARD

Type	DC drivers on the board inside the housing
External box	None
Reverse polarity	Protected
Surge	Protected
Supply range	9 to 32 V DC
AC version	Not available

One component instead of three. With the drivers on board and the connector in the housing, an OEM fits a Goby Mini with one plug. There is no external driver, no gland and no junction box.

Ordering, standards and documents

ORDER CODE

Example **GODC02-65K.38**

Goby Mini, 6500 K, 38° optic

GODC02	Goby Mini, DC, 9–32 VDC, drivers on board
65K · 50K · 40K · 27K · 22K	6500 K · 5000 K · 4000 K · 2700 K · amber 2200 K
BIC	Bi-colour 4000 K with amber 2200 K
.14 · .38 · .69 · .14x46 · .NOP	Optic suffix, .NOP is supplied without optics
Mating connector	Ordered separately as an accessory

The optic suffix follows the colour temperature. Front material and the mating connector are confirmed at order and are not part of the code.

COMBINATIONS

Amber 2200 K with any optic	Possible
Bi-colour 4000 K with 2200 K	Possible
Crane Light Director	Standard
Glass front, IK09	Possible
AC supply	Not available
High temperature	Not available, see the Goby HT

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 · IEC 60533 marine, bridge and open deck	TÜV
Ingress	IEC 60529 and ISO 20653. IP66, IP67, IP68, IP69K	In-house test
Impact and vibration	IEC 62262 IK10 with polycarbonate · IEC 60068-2-6 at 6 G	In-house test
Shock and corrosion	IEC 60068-2-27 · ISO 9223 class C5, industrial and marine	In-house 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.
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PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

The Goby Mini earns its place in the positions a lighting design never reaches. Machine interiors, hatches, small platforms and tight mounting points get whatever fits, and whatever fits is usually not built for the environment. This brings those positions inside the same specification as the rest of the machine.

Notes. Values are for the standard configuration. The AC version always delivers more light than the DC version of the same product. Power is a driver setting on AC and is ordered as a suffix; DC versions run at a fixed constant current. North American models on request. The JEL range is not ATEX or Ex certified.

GLARE FREE LED WORK LAMP

DarkLight S



Shown: DarkLight S75, 12,825 lm, cut off set to 69°.

CE	IP69K	IK08	Class II	C5 ISO 9223
Ta -45 ... +50 °C	9-32 VDC	ULOR 0 %		
DarkSky DS-1	cut off 63-75°	Crane Light Director		
5-year warranty				

12,825 lumens with a full cut off beyond the set angle. The strongest cut off work lamp in the range: floodlight output on a machine bracket, without the spill that makes a floodlight unusable on mobile plant.

LUMINOUS FLUX	POWER	EFFICACY
12,825 lm	75 W	171 lm/W
ULOR	CUT OFF	WEIGHT
0 %	63-75°	3.3 kg

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

The strongest cut off work lamp in the range. 12,825 lm at 171 lumens per watt with the reflector in place. That is floodlight output from a machine bracket.

The cut off angle is set in the field. Between 63 and 75 degrees, adjusted on the machine to match the mounting height and the work zone, by the person who knows where the light needs to stop.

One of the five luminaires the Crane Light Director carries. On a mobile crane it is tilted and switched from the cabin, so the boom is lit without anyone climbing it and without the beam swinging into the operator as the boom comes down.

WHERE IT IS USED

Mining and extraction equipment	Rail maintenance and tamping machines
Asphalt machines and paving trains	Harbour and terminal vehicles
Service and maintenance vehicles	Work zones alongside live traffic
Mobile crane booms, on the Crane Light Director	Sites bordering housing or protected nature
Excavators and loaders working at night	Machine positions where an operator faces the lamp
Drilling and foundation rigs	Mobile plant on 24 V DC

VERSIONS

	DarkLight S75	DarkLight S60
Article base code	DRKS02	DRKS01
Luminous flux	12,825 lm	10,260 lm
Power	75 W	60 W
Efficacy	171 lm/W	171 lm/W
Supply	20-32 VDC	9-32 VDC, 12 or 24 V
Dimensions	260 × 200 × 130 mm	260 × 200 × 130 mm
Weight	3.3 kg	3.3 kg

Both versions are DC. For a fixed installation on a mast or a light tower with the same cut off, see the **DarkLight M** at 25,700 and 51,300 lm.

Light output and optics

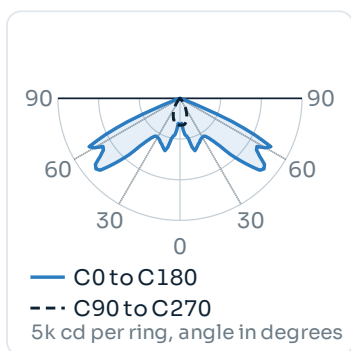
Values apply to the S75 at Ta 25 °C with the cut off in the standard position. The whole DarkLicht line shares one light distribution, so the diagrams below apply to every type at its own luminous flux.

BEAM CHARACTERISTICS

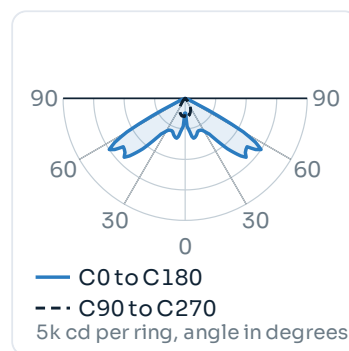
Setting	Distribution	Cut off	Beam angle 50 % of peak	Typical use
63°	Full cut off, asymmetric	63°	–	Tight boundaries, a site directly against housing or a carriageway
66° and 69°	Full cut off, asymmetric	66° and 69°	–	The usual settings for a yard or a car park
72°	Full cut off, asymmetric	72°	123°	Wider 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 adjusted on site between 63 and 75 degrees rather than chosen at order. 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	Adjustable in the field from 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 in the field between 63 and 75 degrees. 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.

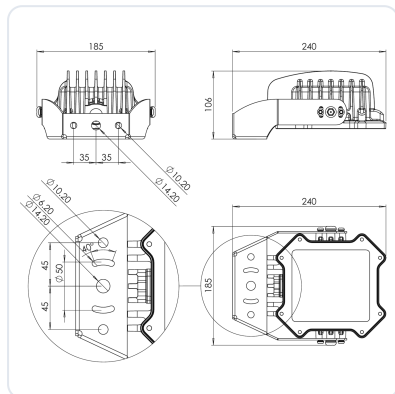
	DarkLicht S75	DarkLicht S60
PERFORMANCE		
Luminous flux	12,825 lm	10,260 lm
Power consumption	75 W	60 W
Efficacy	171 lm/W	171 lm/W
Upward light output ratio	0% at 0° tilt	
Cut off angle	63°, 66°, 69°, 72° or 75°, set in the field	
ELECTRICAL		
Supply voltage range	20–32 VDC	9–32 VDC
Nominal voltage	24 V	12 or 24 V
Current draw	3.1 A at 24 V	2.5 A at 24 V · 5.0 A at 12 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	High tensile 316L stainless steel, unlimited rotation from –20° to +20°	
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	
LED service life	TM-21 L90B05 > 103,500 h	
Cable and termination	H07BQ-F, 2 cores (2 × 1.5 mm²), 0.3 m	
Dimensions	260 × 200 × 130 mm	
Weight	3.3 kg incl. bracket	
Wind load, frontal	18,750 mm² at 0° tilt to 44,500 mm² at 20°. Side 26,800 to 33,000 mm². Cd 1.18	
Warranty	5 years on the complete luminaire	

Wind load data is from the DarkLicht wind rating report and applies to the S60. The cut off angle is a mechanical setting on the luminaire and 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	260 × 200 × 130 mm
Weight	3.3 kg incl. bracket
Bracket	High tensile 316L, unlimited from -20° to +20°
Front	Impact resistant glass, IK08
Optic	Patented parabolic reflector
Smaller version	DarkLight Mini, 170 × 120 × 70 mm, 1.0 kg

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard
Crane Light Director	Steerable boom system for mobile cranes. Separate datasheet
Smaller version	DarkLight Mini at 4,800 lm
Fixed installation	DarkLight M at 25,700 and 51,300 lm
Maximum spread instead	Goby, without cut off
Rugged alternative	Piranha, where the position is mechanically punished

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
DarkLight S on the system	12,900 lm per tilting module, the glare free option
Other luminaires	Goby Mini, Goby, Piranha and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch

WIND LOAD, S60

Frontal at 0°	18,750 mm²
Frontal at 10°	30,500 mm²
Frontal at 20°	44,500 mm²
Side, 0° to 20°	26,800 to 33,000 mm²
Drag coefficient	Cd 1.18
Source	DarkLight wind rating report

DRIVERS ON BOARD

Type	DC drivers on the board inside the housing
External box	None
Supply range	20 to 32 V on the S75, 9 to 32 V on the S60
Nominal	24 V, and 12 V on the S60
AC version	Not available, see the DarkLight M
Dimming	On request

Nothing external on the machine. Drivers on board means one component, one cable and no driver box to find a place for on a machine that is already full.

Ordering, standards and documents

ORDER CODE

Example **DRKS02-40K**

DarkLicht S75, 4000 K

DRKS02 · DRKS01	S75 at 12,825 lm · S60 at 10,260 lm
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	Set on site, not part of the order code

The cut off angle is not ordered, it is set on the machine. Cable length beyond 0.3 m is confirmed at order.

COMBINATIONS

Tuneable white with DS-1 colours	Possible
Cut off at any setting	Standard
Crane Light Director	Standard
AC supply	Not available, see the DarkLicht M
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 · IEC 60533 marine, bridge and open deck	TÜV
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.
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PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

The DarkLicht S earns its place on machines that work all night in places where somebody is watching. Asphalt work on a live carriageway, mining at the face and crane work on a construction site all need real light output, and all of them put an operator, a driver or a neighbour directly in front of the lamp.

Notes. Values are for the standard configuration. The cut off angle is set on site 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.

GLARE FREE LED WORK LAMP

DarkLight Mini



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

CE	ENEC	IP69K	IK08	Class II
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 DarkLight 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 VDC 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	Municipal and utility vehicles
Forklifts and reach trucks	Airport and terminal ground support equipment
Asphalt machines and paving trains	Work zones alongside public roads
Small excavators and loaders	Night work near housing
Sweepers and winter service vehicles	Agricultural machines working close to dwellings
Mobile crane booms, on the Crane Light Director	Rail maintenance vehicles

VERSIONS

	DarkLight 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	170 × 120 × 70 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 **DarkLight S** at 10,260 and 12,825 lm.

Light output and optics

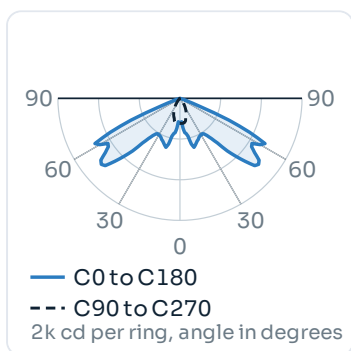
Values apply at Ta 25 °C with the cut off in the standard position. The whole DarkLight line shares one light distribution, so the diagrams below apply to every type in the range at its own luminous flux.

BEAM CHARACTERISTICS

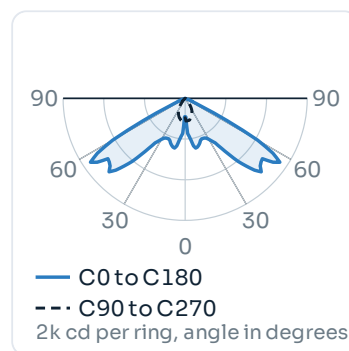
Setting	Distribution	Cut off	Beam angle 50 % of peak	Typical use
63°	Full cut off, asymmetric	63°	–	Tight boundaries, a site directly against housing or a carriageway
66° and 69°	Full cut off, asymmetric	66° and 69°	–	The usual settings for a yard or a car park
72°	Full cut off, asymmetric	72°	123°	Wider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

The DarkLight 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 adjusted on site between 63 and 75 degrees rather than chosen at order. The two diagrams show the two shielding positions of the reflector. The whole DarkLight 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	Adjustable in the field from 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 DarkLight 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 in the field between 63 and 75 degrees. 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.

DarkLight 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°, set in the field

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

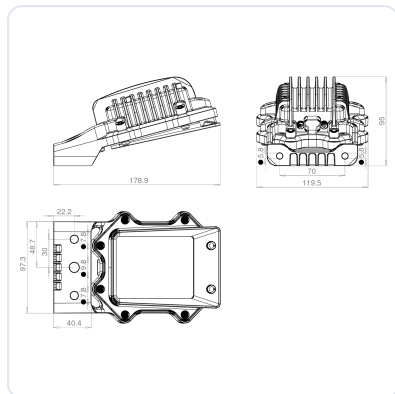
Ambient temperature	–45 to +50 °C
LED service life	TM-21 L90B05 > 103,500 h
Termination	Deutsch DTP04 two pole connector fitted in the housing. There is no cable
Mating connector	Available as an accessory, not supplied as standard
Dimensions	170 × 120 × 70 mm
Weight	1.0 kg
Certification	CE, ENEC, IEC 60598
Warranty	5 years on the complete luminaire

The cut off angle is a mechanical setting on the luminaire and is adjusted on site. 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	170 × 120 × 70 mm
Weight	1.0 kg
Bracket	Fixed, aluminium
Front	Impact resistant glass, IK08
Optic	Patented parabolic reflector
Larger version	DarkLight S, 260 × 200 × 130 mm, 3.3 kg

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	DarkLight 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

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, DarkLight S and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch

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
Why on site	The person who knows the work zone sets it, not the factory
ULOR	0 % at every setting

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 DarkLight Mini with one plug.

Ordering, standards and documents

ORDER CODE

Example **DRKM01-40K**

DarkLight Mini, 4000 K

DRKM01	DarkLight 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	Set on site, not part of the order code

The cut off angle is not ordered, it is set on the machine. 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 · IEC 60533 marine, bridge and open deck	TÜV
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.
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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 DarkLight 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 set on site 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 DarkLight 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.