INDUSTRIAL LED FLOODLIGHT

Shark



Shown: Shark AC, 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 | 24 and 48 VDC | DALI-2 · 0–10 V · PWM · NFC | Vibration 6 G | Shock 200 G | ULOR 0 %

The second generation of the JEL heavy duty line. Built on more than thirteen years of Barracuda experience in mining, and more efficient at 156 lm per watt and lighter per lumen at 9.2 kg. Available in AC and in 24 and 48 V DC, with a mounting bracket rated to 200 G.

LUMINOUS FLUX	POWER	EFFICACY
50,000 lm	320 W	156 lm/W
INGRESS	**IMPACT**	**SHOCK**
IP69K	IK10	200 G

Values apply to the AC 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

A bracket rated to 200 G. A haul truck and a crawler crane do not vibrate, they hit. The mounting bracket absorbs shocks to 200 G, which is what decides service life on mobile plant.

48 V DC, which almost nothing else offers. Large electric cranes run at 35 to 60 V DC. The Shark delivers 46,000 lm on that supply directly, with no inverter in the chain.

More light per kilogram than the Barracuda. 50,000 lm against 44,100 lm, 156 lm per watt against 138, and 9.2 kg against 10.1 kg.

WHERE IT IS USED

- Mining haul trucks, excavators and loaders
- Large electric cranes on a 35 to 60 V DC supply
- Crane booms, with the Crane Light Stabilizer
- Mobile light towers, including the 2Axle
- Reach stackers and straddle carriers
- Mobile crushing and screening plant
- Vessels and workboats with a DC supply
- Offshore installations, in Marine White
- Forestry, agricultural and winter service machines
- Drilling rigs and workover units
- Battery and solar powered temporary lighting
- Standby and emergency circuits on a DC supply

VERSIONS

	Shark AC	DC 24 V	DC 48 V
Article base code	SHAC01	SHDC01	SHDC02
Luminous flux	50,000 lm	46,000 lm	46,000 lm
Power	320 W	320 W	320 W
Supply	90–305 / 180–528 VAC	20–35 VDC	35–60 VDC
Driver	Remote BLD320	On board	On board
Weight incl. bracket	9.2 kg	9.2 kg	9.2 kg

There is no stainless steel and no high temperature version of the Shark. That is deliberate: the **Barracuda** fills both, in 316L and to +120 °C, on the same accessory line.

Light output and optics

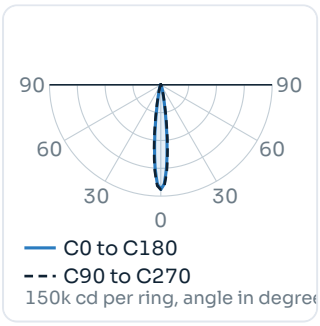
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

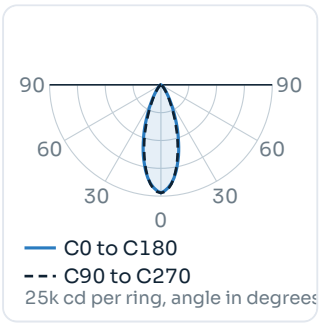
Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Very long throw, beyond 100 m: high masts, crane booms, stockpiles
38°	Medium, symmetric	37°	69°	Long throw, beyond 30 m: yards, benches, haul roads
69°	Wide, symmetric	72°	103°	Up to around 35 m: decks, machine areas, work zones
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: haul roads, quay edges
No lens (.NOP)	Very wide, symmetric	120°	–	Close range over a very wide field, machine mounted

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. The suffix .NOP is the version supplied without optics.

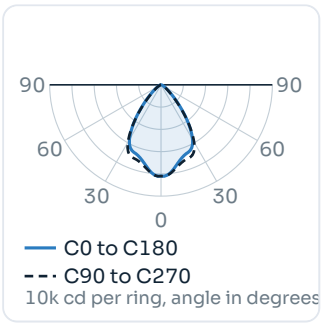
LIGHT DISTRIBUTION



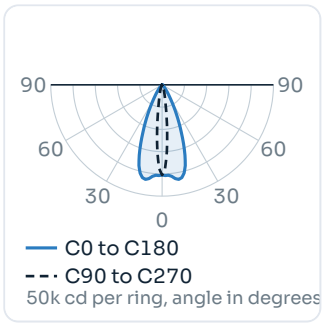
14° spot



38° medium



69° wide



14° × 46° flare

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. On mobile plant the relevant question is usually not the permit but the operator: the bi-colour version switches to amber 2200 K in operation, which carries through fog, rain and dust far better than cold white. Where the site itself has an obtrusive light condition, see the DarkLicht 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
Housing colour	Titanium Black, or Marine White on request

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.

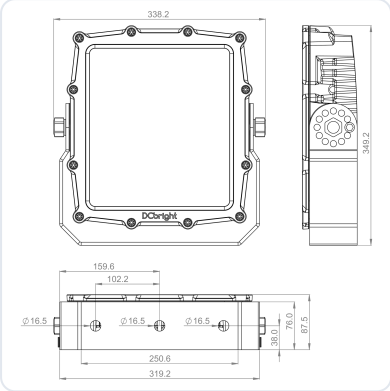
	Shark AC	Shark DC 24 V	Shark DC 48 V
PERFORMANCE			
Luminous flux	50,000 lm	46,000 lm	46,000 lm
Power consumption	320 W	320 W	320 W
Efficacy	156 lm/W	144 lm/W	144 lm/W
ELECTRICAL AND DRIVER			
Supply voltage range	90–305 VAC via BLD320, or 180–528 VAC via TLD320, 50/60 Hz	20–35 VDC, 24 V nominal	35–60 VDC, 48 V nominal
Current draw	2.9 A at 110 V · 1.5 A at 220 V · 0.9 A at 380 V	13.4 A at 24 V	6.7 A at 48 V
Power factor at full load	> 0.95 with BLD320 · > 0.9 with TLD320	-	-
THD at full load	< 15 % at 60 to 100 % load	-	-
Inrush current at 220 V	BLD320: 31.2 A peak, T50 1.3 ms · TLD320: 64 A peak, T50 400 µs	-	-
Luminaires per MCB	BLD320: B16 2 · C16 4 · C25 7 · D16 8. TLD320: B16 4 · C16 7 · C25 11 · D16 8	-	-
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000-4-5)	-	-
Leakage current	0.7 mA max (IEC 60598-1)	-	-
Dimming	0–10 V, PWM, DALI-2, or over NFC	On request	On request
Driver	Remote BLD320 or TLD320, 225 × 68 × 38.5 mm, 1,120 or 1,150 g	DC drivers on board	DC drivers on board
Driver life	≥ 100,000 h at Tc 75 °C, MTBF ≥ 280,000 h, Tc −40 to +90 °C. Replaced without opening the luminaire	-	-
CONSTRUCTION			
Housing	Cast aluminium, less than 0.08 % copper		
Surface finish	Conversion layer plus 2-layer titanium-based e-coating		
Colour	Titanium Black, or Marine White on request		
Bracket	High tensile 316L stainless steel, fully rotatable through 360° in 30° steps, shock rated to 200 G		
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, so IP69K does not imply IP68		
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. Bracket rated to 200 G		
DURABILITY AND DIMENSIONS			
Ambient temperature	−45 to +50 °C	−45 to +50 °C	−45 to +50 °C
LED service life	TM-21 L90B05 > 360,000 h at 50 °C, so the driver is the wear part		
Cable and termination	H07BQ-F, 4 cores (2 × 2.5 mm² + 2 × 0.5 mm²), 2.0 m, pre-fitted with free wire ends	H07BQ-F, 2 cores (2 × 2.5 mm²), 2.0 m	H07BQ-F, 2 cores (2 × 2.5 mm²), 2.0 m
Dimensions	Luminaire 335 × 350 × 90 mm · with standard bracket 349.2 × 338.2 × 102.2 mm		
Weight	9.2 kg incl. bracket · 10.35 kg with loose driver · 13.4 kg with DRB-1	9.2 kg incl. bracket	9.2 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

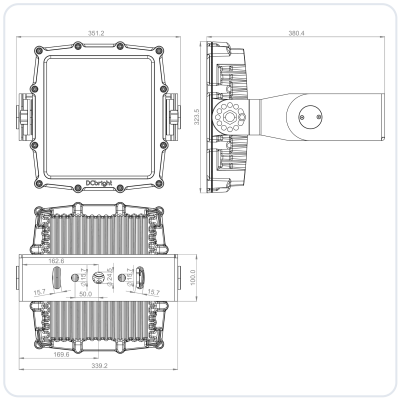
All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

STANDARD BRACKET



Luminaire	335 × 350 × 90 mm
Incl. bracket	349.2 × 338.2 × 102.2 mm
Mounting foot	319.2 × 87.5 mm
Fixing holes	3 × Ø 16.5 mm
Hole centres	250.6 mm between outer holes
Adjustment	360° in 30° steps, twelve positions, shock rated to 200 G

SWING BRACKET



Use	Boom and structure mounting, absorbs movement
Overall	380.4 × 351.2 × 323.5 mm
Mounting centres	339.2 mm, 169.6 mm from centre
Fixing holes	Ø 15.7 mm at ± 50.0 mm from centre
Cable entry	Ø 24.5 mm central
Related	Crane Light Stabilizer, separate datasheet

MOUNTING AND ACCESSORIES

Standard bracket	High tensile 316L, supplied as standard, shock rated to 200 G
Rear mount bracket	Option on the AC version
Crane Light Stabilizer	AC and DC. Holds the aim while the boom moves. Separate datasheet
Safety cable	Optional, supplied with the luminaire
Cable and retrofit brackets	Lengths beyond 2.0 m and structure specific brackets on request
Marine White	Housing colour option, not a separate version

REMOTE DRIVER

Type	BLD320 for 90–305 VAC · TLD320 for 180–528 VAC
Case temperature	Tc −40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
MTBF	≥ 280,000 h at 75 °C case
Size and weight	225 × 68 × 38.5 mm, 1,120 or 1,150 g
Enclosure	Bare as standard, or in the DRB-1

The LEDs outlive three drivers. The driver sits outside the luminaire and is replaced without opening the housing, so a driver fault is a ground level job instead of a lift and a dismantled luminaire.

DRB DRIVER BOXES



Use	Optional housing for the remote driver, outside the wash-down zone
DRB-1	One driver, up to the 320 W TLD320. 276 × 194 × 86.5 mm, 4.2 kg, IP66 and IP67
DRB-2	Systems up to 2,000 W. 441 × 290 × 145 mm, 10.4 kg, IP66 and IP67
Ingress protection	IP66 and IP67
System weight	13.4 kg, luminaire with bracket and DRB-1

Ordering, standards and documents

ORDER CODE

Example **SHAC01-65K.38**

Shark, AC, 6500 K, 38° optic

SHAC01	AC, 90–305 or 180–528 VAC, remote driver
SHDC01 · SHDC02	DC 24 V, 20–35 V · DC 48 V, 35–60 V, 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

The optic suffix follows the colour temperature, so one project can carry several beam angles, and a lower wattage is ordered as an extra suffix. Marine White, bracket, control protocol and cable length are confirmed at order.

COMBINATIONS

Optics within one luminaire	Possible
Amber 2200 K with flare optic	Possible
Bi-colour with DALI-2	Possible
Marine White with any optic	Possible
Crane Light Stabilizer	AC and DC
316L or high temperature	See the Barracuda
DC with dimming or lower wattage	On request

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 and vibration	IEC 62262 IK10 with polycarbonate · IEC 60068-2-6 at 6 G	In-house test
Shock and corrosion	IEC 60068-2-27, bracket to 200 G · ISO 9223 class C5	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.

PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

The Shark earns its place on machines. A haul truck, a crawler crane or a workboat has a DC supply, a shock profile and a mounting position that a building never has. This is thirteen years of Barracuda experience in mining, rebuilt around a shock bracket and a DC front end. Where 316L or +120 °C is required, choose the Barracuda.

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.