INDUSTRIAL LED FLOODLIGHT

Orca SS



Shown: Orca SS, electrolytically polished 316L, 14° lens.

CE | IP69K | IK10 | Class II | 316L stainless steel | C5 and CX ISO 9223 | Ta −45 … +50 °C | 180–528 VAC | 48 VDC | DALI-2 · 0–10 V · PWM · NFC | Vibration 6 G | 20-year housing warranty

The Orca in solid 316L stainless steel: 111,300 lumens at 800 W, identical light and identical optics to the aluminium version, for offshore, chemical and permanently salt loaded positions where a coating is a wear part and the housing must not be.

LUMINOUS FLUX	POWER	HOUSING
111,300 lm	800 W	316L
CORROSION	**INGRESS**	**HOUSING WARRANTY**
C5 and CX	IP69K	20 yr

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

Twenty years of warranty on the housing. Solid 316L, electrolytically polished. Corrosion resistance is a material property here, not a coating thickness that can be scratched through.

Identical light to the aluminium Orca. Same optics, same photometry, same IES files, so a site can mix materials across positions without a second lighting calculation.

CRC III at a PREN of about 24. Classified to EN 1993-1-4 for structural stainless steel, which is the language an offshore or chemical specification is actually written in.

WHERE IT IS USED

- Offshore platforms and jack up rigs
- Chemical and fertiliser plant
- Splash zones and permanent salt spray
- Water and waste water treatment
- Food and beverage process areas
- Fish farms and aquaculture
- Desalination and brine handling
- Heavy lift vessels and dredgers
- Coastal terminals and quays
- Flue gas and scrubber areas
- Cleanrooms and washdown zones
- Any position where a coating cannot be repaired

VERSIONS

	Orca SS AC	Orca SS DC
Article base code	ORSS01	ORSS02
Luminous flux	111,300 lm	100,200 lm
Power	800 W	800 W
Supply	180–528 VAC	35–60 VDC, 24 V on request
Driver	Remote TLD800	On board
Weight incl. bracket	36.3 kg	36.3 kg
Warranty	20 years housing, 5 years electrical	20 years housing, 5 years electrical

Light output and optics

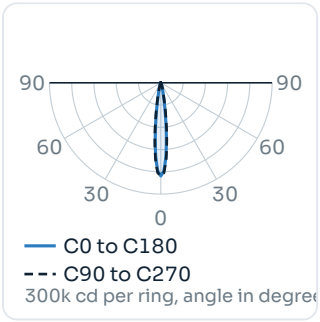
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

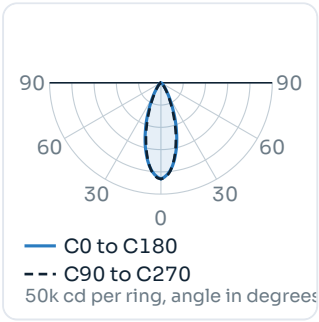
Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Very long throw, beyond 150 m: high masts, crane booms, stockpiles
38°	Medium, symmetric	37°	69°	Long throw, beyond 40 m: quays, decks, terminals
69°	Wide, symmetric	72°	103°	Up to around 45 m: decks, process areas, work areas
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: quay edges, jetties

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.

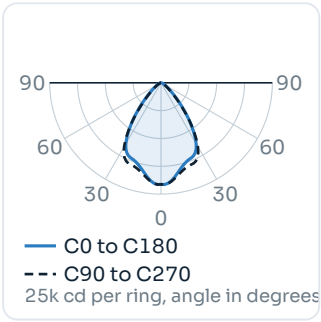
LIGHT DISTRIBUTION



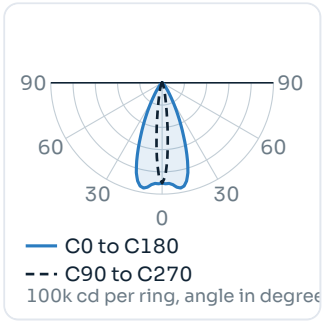
14° spot



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. 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 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

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.

	Orca SS AC	Orca SS DC
PERFORMANCE		
Luminous flux	111,300 lm	100,200 lm
Power consumption	800 W	800 W
Efficacy	139 lm/W	125 lm/W
LED count	156 lenses in one housing	
ELECTRICAL AND DRIVER		
Supply voltage range	180–528 VAC or 250–740 VDC via TLD800, 50/60 Hz	35–60 VDC, 48 V nominal. 24 V on request
Current draw	3.5 A at 277 V · 2.0 A at 480 V · 3.6 A at 220 V	16.7 A at 48 V · 13.4 A at 60 V
Power factor at full load	> 0.9 at 60 to 100 % load	-
THD at full load	< 15 % at 60 to 100 % load	-
Inrush current at 220 V	5.4 A peak, T50 8 ms	-
Luminaires per MCB	B16 2 · C16 2 · C25 4 · D16 3	-
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
Driver	Remote TLD800, 237 × 125 × 49 mm, 2,600 g. Bare, or in the DRB-2	DC drivers on board
Driver life	≥ 100,000 h at Tc 75 °C, MTBF ≥ 320,000 h. Replaced without opening the luminaire	-
CONSTRUCTION		
Housing	Solid 316L stainless steel	
Surface finish	Electrolytically polished	
Bracket	High tensile 316L stainless steel, fully rotatable through 360° in 30° steps	
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 and CX (ISO 9223). 316L is CRC III to EN 1993-1-4 at a PREN of approximately 24	
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	−45 to +50 °C
LED service life	TM-21 L90B05 > 360,000 h at 50 °C	
Cable and termination	H07BQ-F, 4 cores (2 × 2.5 mm² + 2 × 0.5 mm²), 2.0 m	H07BQ-F, 2 cores (2 × 2.5 mm²), 2.0 m
Dimensions	Luminaire with bracket 515 × 440 × 95 mm · housing without bracket 487.0 × 478.3 × 93.5 mm, mounting foot 394.7 mm with two Ø17.0 holes and one Ø20.5	
Weight	36.3 kg incl. bracket	36.3 kg incl. bracket
Warranty	20 years on the housing. 5 years on the electronics, the components and the seals	

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



Housing	484.0 × 441.2 × 93.5 mm
Incl. bracket	515 × 440 × 95 mm
Mounting foot	399.2 mm wide, 80.0 mm deep
Fixing holes	3 × Ø 16.5 mm
Hole centres	326.6 mm, 163.3 mm pitch
Adjustment	360° in 30° steps, twelve positions

SS REAR MOUNT BRACKET



Availability	AC version, flat against a structure
Material	316L stainless steel
Mounting plate	300 × 180 mm
Fixing holes	Ø 15.7 mm, pitch 100.0 and 120.0 mm
Cable entry	Ø 24.5 mm

MOUNTING AND ACCESSORIES

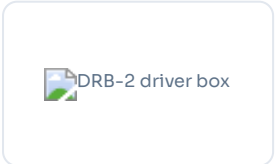
Standard bracket	High tensile 316L, supplied as standard
SS rear mount bracket	Option on the AC version
Crane Light Stabilizer	Holds the aim while the boom moves. Separate datasheet
Safety cable	Optional, supplied with the luminaire
Cable and retrofit brackets	Lengths beyond 2.0 m and structure specific brackets on request

REMOTE DRIVER

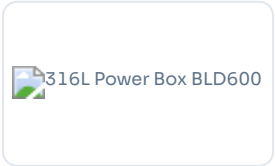
Type	TLD800, 180–528 VAC or 250–740 VDC
Case temperature	Tc −40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
MTBF	≥ 320,000 h at 75 °C case
Size and weight	237 × 125 × 49 mm, 2,600 g
Enclosure	Bare as standard, or in the DRB-2

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



Aluminium DRB



316L Power Box BLD600

Use	Optional housing for the remote driver, mounted outside the wash-down zone
DRB-1	One driver up to 320 W. 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
316L Power Box	Power Box BLD600, solid 316L, 390 × 225 × 100 mm. For the same driver as the DRB, chosen where the box sits in the same wash-down or salt zone as the luminaire
Ingress protection	IP66 and IP67
System weight	46.7 kg, luminaire with bracket and DRB-2

Ordering, standards and documents

ORDER CODE

Example **ORSS01-65K.38**

Orca SS, AC, 6500 K, 38° optic

ORSS01	316L, AC, 180–528 VAC, remote TLD800
ORSS02	316L, DC, 35–60 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	Optic suffix, selected from the light calculation

The optic suffix follows the colour temperature and a lower wattage is ordered as an extra suffix. 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
SS rear mount bracket	AC version only
24 V DC	On request
High temperature in 316L	See the Orca 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	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 · 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.

Twenty years warranty on the housing, five years on the electronics.

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


QR-code naar de productpagina van de Orca SS

PRODUCT PAGE

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

WHERE IT EARNS ITS PLACE

Sea water, chlorides and process chemistry do not attack a luminaire, they attack its coating. Where that coating cannot be inspected or repaired, the Orca SS removes the question entirely: the housing is solid 316L, electrolytically polished, with twenty years of warranty on the housing at the cost of thirteen kilograms over the aluminium version.

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.