

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Navigation lights

with type designation(s)

Oceanic-LED, Oceanic-LED-F, Oceanic-LED-H and S-50-LED Navigation Lights

Issued to

UNILUX GEOMAR, S.A.
Alcobendas, Madrid, Spain

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2020/1170,**

item No. MED/6.1. COLREG 72 as amended, Annex I/14, IMO Res. A.694(17), IMO Res. MSC.253(83)

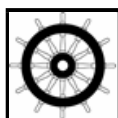
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-10-05.**

Issued at **Høvik** on **2020-10-06**

DNV GL local station:
Area NB/CMC Iberia

Approval Engineer:
Frederik Tore Elter



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **344.1-004397-4**
Certificate No: **MEDB0000731**

Product description

Navigation lights series; Oceanic LED, Oceanic LED-F (friendly), Oceanic LED-H (heating) and S-50 LED, with listed type designations:

Oceanic LED Lights

Light Type	Type Designation	Ref. number
PORT SIDE	OCEANIC-LED-BR	278-BR
STARBOARD SIDE	OCEANIC-LED-ER	278-ER
MASTHEAD	OCEANIC-LED-TP	278-TP
STERN	OCEANIC-LED-PP	278-PP
TOWING	OCEANIC-LED-RQ	278-RQ
ALL ROUND WHITE	OCEANIC-LED-THB	278-THB
ALL ROUND RED	OCEANIC-LED-THR	278-THR
ALL ROUND GREEN	OCEANIC-LED-THV	278-THV
ALL ROUND YELLOW	OCEANIC-LED-THAm	278-THAm
PARTIALLY SCREENED	OCEANIC-LED-180	278-180
FLASHING	OCEANIC-LED-FL	278-FL
HOISTABLE	OCEANIC-LED-C	278-C

Oceanic LED Friendly Lights

Light Type	Type Designation	Ref. number
PORT SIDE	OCEANIC-LED-F BR	278-F-BR
STARBOARD SIDE	OCEANIC-LED-F ER	278-F-ER
MASTHEAD	OCEANIC-LED-F TP	278-F-TP
STERN	OCEANIC-LED-F PP	278-F-PP
TOWING	OCEANIC-LED-F RQ	278-F-RQ
ALL ROUND WHITE	OCEANIC-LED-F THB	278-F-THB
ALL ROUND RED	OCEANIC-LED-F THR	278-F-THR
ALL ROUND GREEN	OCEANIC-LED-F THV	278-F-THV
ALL ROUND YELLOW	OCEANIC-LED-F THAm	278-F-THAm
PARTIALLY SCREENED	OCEANIC-LED-F 180	278-F-180
FLASHING	OCEANIC-LED-F FL	278-F-FL

Oceanic-LED Lights with Heating

Light Type	Type Designation	Ref. number
PORT SIDE	OCEANIC-LED-H BR	278-H-BR
STARBOARD SIDE	OCEANIC-LED-H ER	278-H-ER
MASTHEAD	OCEANIC-LED-H TP	278-H-TP
STERN	OCEANIC-LED-H PP	278-H-PP
TOWING	OCEANIC-LED-H RQ	278-H-RQ
ALL ROUND WHITE	OCEANIC-LED-H THB	278-H-THB
ALL ROUND RED	OCEANIC-LED-H THR	278-H-THR
ALL ROUND GREEN	OCEANIC-LED-H THV	278-H-THV
ALL ROUND YELLOW	OCEANIC-LED-H THAm	278-H-THAm
PARTIALLY SCREENED	OCEANIC-LED-H 180	278-H-180
FLASHING	OCEANIC-LED-H FL	278-H-FL

S-50-LED Lights

Light Type	Type Designation	Ref. number
PORT SIDE	S-50-LED BR	272-BR
STARBOARD SIDE	S-50-LED ER	272-ER
MASTHEAD	S-50-LED TP	272-TP
STERN	S-50-LED PP	272-PP
TOWING	S-50-LED RQ	272-RQ
ALL ROUND WHITE	S-50-LED THB	272-THB
ALL ROUND RED	S-50-LED THR	272-THR
ALL ROUND GREEN	S-50-LED THV	272-THV
ALL ROUND YELLOW	S-50-LED THAm	272-THAm
PARTIALLY SCREENED	S-50-LED 180	272-180
FLASHING	S-50-LED FL	272-FL

Application/Limitation

- All above LED light series are certified for a limited burning time of 50.000 hours.
- All navigation light series mentioned above are for installation in exposed location.
- OCEANIC-LED-H light series with heating are tested for de-icing to a low temperature of -10°C and operational low temperature of -40°C.
- OCEANIC and S-50 lights are tested for IP68.

Type Examination documentation

DNV GL No.	Document No.	Title
84	00 04-2015	Manual: Navigation Lights S50-LED Instruction Manual
83	00 04-2015	Manual: Navigation Lights OCEANIC-LED Instruction Manual
75	2015010037B1	Report: Em14744 and IEC60945 - OCEANIC-LED
74	2015900065-AMB-1	Report: Environmental tests, ice, vibration and shock - OCEANIC-LED
72	2015010037B1_A2	Report: EN14744 and IEC 60945 - OCEANIC-LED-F
71	2015010037B1_A1	Report: EN14744 and IEC60945 testing S-50 LED

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DNV GL No.	Document No.	Title
70	2014901124-02EMC	Report: EMC test - S-50 LED
69	2014901124-02AMB	Report: Environmental test - S-50 LED
67	2014901124-01EMC	Report: IEC60945 EMC - Oceanic LED
66	2014901124-01AMB	Report: Environmental Test - Oceanic LED

Tests carried out

- Performance testing, EN14744 (2005+ AC 2006)
- Environmental testing, IEC60945 (2002)

Note: Additional environmental testing, cold temperature and de-icing – see limitations.

Marking of product

Navigation lights shall be marked permanently in a position clearly visible even after installation on board with the following information: Zero signal by a mark on the reference circle lights; range in nautical miles; origin mark (manufacturer's identification mark); approval mark; type designation; nominal wattage of the light source in watts, if different values lead to different ranges; three bladed propeller for navigation lights that have vertical light distribution only for motor boats (COLREG Annex I, 10(a)).

END OF CERTIFICATE