

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No: **MERB00007V8 Revision No:** Λ

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify: That the Navigation lights

with type designation(s) 2 NM and 3 NM light series

Issued to Lopolight ApS Humlebaek, Denmark

is found to comply with the requirements in the following Regulations/Standards: Regulation MSN 1874 Amendment 6, item No. UK/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 2027-03-28.

Issued at London on 2023-03-21

DNV local unit: **Denmark CMC**



for DNV UK Ltd.

Approval Engineer: Jörg Rebel

Approved Body No.: 0097

Christine Mydlak-Röder MER Service Responsible

<u>koš</u> Maritime & Coastguard Agency

by the MCA

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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. The product liability rests with the manufacturer or his representative in accordance with the Merchant Shipping (Marine Equipment) Regulations 2016.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV UK I to of any changes to the approved equipment. Should the specified regulations or standards be amended during the validity of this certificate, UK Approved Body Authorised the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply. This certificate remains valid unless suspended, withdrawn, re-called, or cancelled,

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.





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Product description

LED Navigation lights:

| Model | Description | Vessel size | |
|-------------|-----------------------------------|-------------|--|
| 200-012G2 | 360° all-round white, single, 2NM | <50m | |
| 201-012 | 360° all-round white, single, 2NM | <50m | |
| 200-012G2ST | 360° all-round white, double, 2NM | <50m | |
| 201-012ST | 360° all-round white, double, 2NM | <50m | |
| 200-014G2 | 360° all-round red, single, 2NM | <50m | |
| 201-014 | 360° all-round red, single, 2NM | <50m | |
| 200-014G2ST | 360° all-round red, double, 2NM | <50m | |
| 201-014ST | 360° all-round red, double, 2NM | <50m | |
| 200-015G2 | 360° all-round green, single, 2NM | <50m | |
| 201-015 | 360° all-round green, single, 2NM | <50m | |
| 200-015G2ST | 360° all-round green, double, 2NM | <50m | |
| 201-015ST | 360° all-round green, double, 2NM | <50m | |
| 300-112G2 | 360° all-round white, single, 3NM | >50m | |
| 301-112 | 360° all-round white, single, 3NM | >50m | |
| 300-112G2ST | 360° all-round white, double, 3NM | >50m | |
| 301-112ST | 360° all-round white, double, 3NM | >50m | |
| 300-114G2 | 360° all-round red, single, 3NM | >50m | |
| 301-114 | 360° all-round red, single, 3NM | >50m | |
| 300-114G2ST | 360° all-round red, double, 3NM | >50m | |
| 301-114ST | 360° all-round red, double, 3NM | >50m | |
| 300-115G2 | 360° all-round green, single, 3NM | >50m | |
| 301-115 | 360° all-round green, single, 3NM | >50m | |
| 300-115G2ST | 360° all-round green, double, 3NM | >50m | |
| 301-115ST | 360° all-round green, double, 3NM | >50m | |

Application/Limitation

- The above navigation lights to be installed in accordance with the Convention on the International Regulations for Preventing Collisions at Sea, 1972 as amended, and maker's instructions.
- Installation for power driven and sailing vessels.
- For compliance with requirements in EN 14744 clause 4.10, an interface navigation light controller fulfilling the following requirements is required:
 - The navigation light controller is to have the ability to correctly present lifespan and status signals from the lights in accordance with MSC.302(87) and MSC.253(83).
 - The navigation light controller must monitor the light current for detection of partial failure and presentation of alerts.
- For monitoring of navigation light lifespan condition the light have to be switched off and back on.

| DNV No. | Document No. | Rev. | Title |
|------------|--------------|------------------|---|
| 61 | 118-323-193 | 4. March 2019 | Report: Delta, EN 14744: Determination of (x,y(chromatic Colour Coordinates and luminous intensity 3 nm green |
| 60 | 118-323-190 | 5. March 2019 | Report: Delta, EN 14744: Determination of (x,y) chromatic Colour Coordinates and luminous intensity 2 nm green |

Type Examination documentation



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| DNV No. | Document No. | Rev. | Title |
|------------|--|-------------|---|
| 59 | 118-323-194 | 8. February | Report: Delta, EN 14744: Determination of (x,y) chromatic Colour |
| | | 2019 | Coordinates and luminous intensity 3 nm red |
| 58 | 118-323-191 | 5, March | Report: Delta, EN 14744: Determination of (x,y) chromatic Colour |
| | | 2019 | Coordinates and luminous intensity 2 nm red |
| 57 | | Rev.1 | Datasheet: 360 all-round green, double, horizontally mounted, 3 |
| | | | NM, 301-115ST and 300-115G2ST (>50m) |
| 56 | | Rev.1 | Datasheet: 360 all-round green, single, horizontally mounted, 3 NM, 301-115 and 300-115G2 (>50m) |
| 55 | | Rev.1 | Datasheet: 360 all-round red, double, horizontally mounted, 3 NM, 301-114ST and 300-114G2ST (>50m) |
| 54 | | Rev.1 | Datasheet: 360 all-round red, single, horizontally mounted, 3 NM, |
| 0. | | | 301-114 and 300-114G2 (>50m) |
| 53 | | Rev.1 | Datasheet: 360 all-round white (anchor light), double, horizontally |
| 00 | | | mounted, 3 NM, 300-112G2ST and 301-112ST (>50m) |
| 52 | | Rev.1 | Datasheet: 360 all-round white (anchor light), single, horizontally |
| 52 | | | mounted, 3 NM, 300-112G2 and 301-112 (>50m) |
| 51 | | Rev.1 | Datasheet: 360 all-round green, double, horizontally mounted, 2 |
| 51 | | 1.60.1 | NM, 201-015ST and 200-015G2ST (<50m) |
| 50 | | Rev.1 | Datasheet: 360 all-round green, single, horizontally mounted, 2 |
| 50 | | 1.60.1 | NM, 201-015 and 200-015G2 (<50m) |
| 49 | | Rev.1 | Datasheet: 360 all-round red, double, horizontally mounted, 2 NM, |
| 49 | | Nev. I | 201-014ST and 200-014G2ST (<50m) |
| 48 | | Rev.1 | Datasheet: 360 all-round red, single, horizontally mounted, 2 NM, |
| | | | 201-014 and 200-014G2 (50m) |
| 47 | | Rev.1 | Datasheet: 360 all-round white (anchor light), double, horizontally mounted, 2 NM, 200-012G2ST and 201-012ST (<50m) |
| 46 | | Rev.1 | Datasheet: 360 all-round white (anchor light), single, horizontally mounted, 2 NM, 200-012G2 and 201-012 (<50m) |
| 42 | 122-22728-1 | Ed. 1.0 | Report: Force IEC 60945 Conducted and Radiated EMC. 300- 112G2 LED Lamp with one LED driver. |
| 23 | 601-324 | Rev 1.01 | Manual: Lopolight - Installation guide |
| 20 | | Rev.1 | Datasheet:360 all-round white (anchor light), double, horizontally mounted, 3 NM, 300-112G2ST 301-112ST (<50m) |
| 19 | | Rev.1 | Datasheet:360 all-round white (anchor light), single, horizontally mounted, 3 NM, 300-112G2ST, 301-112ST (<50m) |
| 18 | | Rev.1 | Datasheet:360 all-round white (anchor light), double, horizontally mounted, 2 NM, 200-012G2ST, 201-012ST (<50m) |
| 17 | | Rev.1 | Datasheet:360 all-round white (anchor light), single, horizontally mounted, 2 NM, 200-012G2, 201-012 (<50m) |
| 16 | 0800S3- 454.NL/Lopolight 301-112/2 | | Report: BSH EN 14744, Navigation Light 301-112 All-round light 3nm |
| 14 | 118-20800-1 | Rev. 1 | Report: IEC 60945 and EN 14744 FORCE Lopolight ApS - Marine type testing of navigation light |
| 11 | 118-26781-1 | Rev. 1 | Report: IEC 60945 and EN 14744 FORCE Lopolight ApS - Marine type testing of navigation light |

Tests carried out

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Performance: • Environmental: EN 14744 (2005) incl. AC 2006, tested for COLREG Lights IEC 60945 (2002) incl. IEC 60945 Corr. 1:2008.



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Marking of product

According to EN14744.

END OF CERTIFICATE