DNV·GL

Certificate No:
MEDB000079F

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Navigation lights

with type designation(s)
Single and Duplex LED Navigation Lights, Rating IP 67, Lopolight Part Numbers: 101-001, 301-001, 301-001ST, 301-101, 301-101ST, 301-008, 301-008ST, 301-108, 301-108ST, 101-002, 301-002, 301-002ST, 301-102, 301-102ST, 301-009, 301-009ST, 301-109, 301-109ST, 101-004, 201-004, 101-003, 201-003, 101-005, 201-005, 101-009S, 201-007S, 301-006, 301-006ST, 301-106, 301-106ST, 301-005, 301-005ST, 301-105, 301-105ST, 201-013V,301-107, 301-107ST, 201-013, 201-013ST, 301-113, 301-113ST, 201-010, 201-011, 301-011, 201-010KL, 201-011KL201-011KLST, 301-011KL, 301-011KLST,201-020, 201-021, 201-030, 300-116, 300-116ST, 300-118 and 300-118ST

Issued to
Lopolight ApS
Humlebæk, Hovedstaden, Denmark

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 **2026-02-09**.
Issued at **Hamburg** on **2021-02-10**

DNV GL local station:
Denmark CMC

Approval Engineer:
Nicolay Horn

Notified Body
No.: **0098**

for **DNV GL SE**
Digitally Signed By: Mydlak-Röder, Christine
Location: DNVGL SE Hamburg

Christine Mydlak-Roeder
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 SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

Product description

Single and Duplex LED Navigation Lights, Rating IP 67, Lopolight Part Numbers:
101-001, 301-001, 301-001ST, 301-101, 301-101ST, 301-008, 301-008ST, 301-108, 301-108ST, 101-002, 301-002, 301-002ST, 301-102, 301-102ST, 301-009, 301-009ST, 301-109, 301-109ST, 101-004, 201-004, 101-003, 201-003, 101-005, 201-005, 101-009S, 201-007S, 301-006, 301-006ST, 301-106, 301-106ST, 301-005, 301-005ST, 301-105, 301-105ST, 201-013V,301-107, 301-107ST, 201-013, 201-013ST, 301-113, 301-113ST, 201-010, 201-011, 301-011, 201-010KL, 201-011KL201-011KLST, 301-011KL, 301-011KLST,201-020, 201-021, 201-030, 300-116, 300-116ST, 300-118 and 300-118ST

Application/Limitation

The LED navigation lights type Masthead Light 301-011/301-0011KL/301-011KLST may only be fitted to vessels of 12 metres or more in length but less than 50 metres as per COLREGSs Rule 22 as amended and IMO Res.MSC.253 (83)

The LED navigation light shall be delivered complete with their technical documentation and User's manual accordingly to the requirements of Resolution A.694 (17) and Resolution MSC.253 (83)

The navigational light controller does not form a part of this design appraisal document. The lights certified herein are to be used in conjunction with an appropriate navigation light controller approved in accordance with MSC.253 (83)

Installation on board: The arrangements and installation of the light on board the vessel is not part of this design appraisal or certificate. All such arrangements are to be to the satisfaction of the Surveyors attending on board; the fitting of the light to be in accordance with the manufacturer's instructions and the requirements of COLREGs 72, as amended, and any additional requirement of the State whose flag the vessel is entitled to fly.

Instructions for installation, use and maintenance of the product are to be supplied to each purchaser.

Type Examination documentation

Maintenance, Operation and Service Manuals:

Document Number	Document Title	Date
600-322 rev 1.00	Installation instructions for Lopolight horizontal mount navigation lights	2019-03-29
600-326-1 rev 1.0	Installation instructions for Lopolight navigation lights for connector equipped lights	2019-03-29
600-321-1 rev 1.00	Installation instructions for Lopolight vertical mount navigation lights	2019-03-29

LED datasheets, Driver and Firmware documents:

Cree J series 3030 LEDs, CLJ-DS7 Rev 2D

Osram Oslon Signal LV CQBP version 1.0

Osram Oslon Signal LJ CKBP version 1.2

Osram Oslon Signal LUW CRBP version 1.2

Osram Oslon Signal GY CS8PM1.23

Lopolight statement regarding LED degradation dated 29th March 2019 including documents A, B, C and D mentioned therein

Lopolight LGD driver drawing number 3-4095-2 dated 18 May 2018

Firmware version LGD102.x

CB Svendsen statement dated 09 May 2019

CB Svendsen ISO 9001:2008 certificate number CVR 82508414 dated 18 May 2017

CB Svendsen A/S Quality Management System (Process Manager) revision 02 dated 9th May 2019
12-24 Volt DC Power Supply

Lopolight Testing March 2019 – Overview & Relationships between Products

Drawings:

Part Number	Product	Data Sheet
101-001	Single Green 1nm Starboard sidelight, vertical mounting	X01-X01
301-001	Single Green 2nm Starboard sidelight, vertical mounting	X01-X01
301-001ST	Double Green 2nm Starboard sidelight, vertical mounting	301-X01ST
301-101	Single Green 3nm Starboard sidelight, vertical mounting	X01-X01
301-101ST	Double Green 3nm Starboard sidelight, vertical mounting	301-X01ST
301-008	Single Green 2nm Starboard sidelight, horizonal mounting	301-008
301-008ST	Double Green 2nm Starboard sidelight, horizonal mounting	301-008ST
301-108	Single Green 3nm Starboard sidelight, horizonal mounting	301-108
301-108ST	Double Green 3nm Starboard sidelight, horizonal mounting	301-108ST
101-002	Single Red 1nm Port sidelight, vertical mounting	X01-X02
301-002	Single Red 2nm Port sidelight, vertical mounting	X01-X02
301-002ST	Double Red 2nm Port sidelight, vertical mounting	301-X02ST
301-102	Single Red 3nm Port sidelight, vertical mounting	X01-X02
301-102ST	Double Red 3nm Port sidelight, vertical mounting	301-X02ST
301-009	Single Red 2nm Port sidelight, horizonal mounting	301-009
301-009ST	Double Red 2nm Port sidelight, horizonal mounting	301-009ST
301-109	Single Red 3nm Port sidelight, horizonal mounting	301-109
301-109ST	Double Red 3nm Port sidelight, horizonal mounting	301-109ST
101-004	Single Green/Red 1nm Combined sidelights, vertical mounting	X01-004
201-004	Single Green/Red 2nm Combined sidelights, vertical mounting	X01-004
101-003	Single Green/Red 1nm Combined sidelights, horizontal mounting	X01-003
201-003	Single Green/Red 2nm Combined sidelights, horizontal mounting	X01-003
101-005	Single Green/Red/White 1nm Tricolour light, horizontal mounting	X01-005
201-005	Single Green/Red/White 2nm Tricolour light, horizontal mounting	X01-005
101-009S	Single Green/Red/White/White 1nm Tricolour/Anchor light, horizontal mounting	X01-007-9S
201-007S	Single Green/Red/White/White 2nm Tricolour/Anchor light, horizontal mounting	X01-007-9S
301-006	Single White 2nm Stern light, vertical mounting	301-X06
301-006ST	Double White 2nm Stern light, vertical mounting	301-X06ST
301-106	Single White 3nm Stern light, vertical mounting	301-X06
301-106ST	Double White 3nm Stern light, vertical mounting	301-X06ST
301-005	Single White 2nm Stern light, horizontal mounting	301-005
301-005ST	Double White 2nm Stern light, horizontal mounting	301-005ST
301-105	Single White 3nm Stern light, horizontal mounting	301-105

Part Number	Product	Data Sheet
301-105ST	Double White 3nm Stern light, horizontal mounting	301-105ST
201-007S	Single Green/Red/White/White 2nm Tricolour/Anchor light, horizontal mounting	X01-007-9S
301-006	Single White 2nm Stern light, vertical mounting	301-X06
301-006ST	Double White 2nm Stern light, vertical mounting	301-X06ST
301-106	Single White 3nm Stern light, vertical mounting	301-X06
301-106ST	Double White 3nm Stern light, vertical mounting	301-X06ST
301-113	Single Yellow 3nm Stern Towing light, horizontal mounting	301-113
301-113ST	Double Yellow 3nm Stern Towing light, horizontal mounting	301-113ST
201-010	Single White 2nm Masthead light, vertical mounting	X01-010-011
201-011	Single White 3nm Masthead light, vertical mounting	X01-010-011
301-011	Single White 5nm Masthead light, vertical mounting	X01-010-011
201-010KL	Single White 2nm Masthead light, horizontal mounting	201-010KL-11KL
201-011KL	Single White 3nm Masthead light, horizontal mounting	201-010KL-11KL
201-011KLST	Double White 3nm Masthead light, horizontal mounting	201-011KST
301-011KL	Single White 5nm Masthead light, horizontal mounting	301-011KL
301-011KLST	Double White 5nm Masthead light, horizontal mounting	301-011KLST
201-020	Single White 2nm Combined Masthead/Stern/Anchor light, vertical mounting	201-02X
201-021	Single White 3nm Combined Masthead/Stern/Anchor, vertical	201-02X
201-030	Single White 2nm Combined Masthead/Stern/Anchor, vertical	201-030
300-116	Single Red 3nm 180-degree Signal light, vertical mounting	X00-X16
300-116ST	Double Red 3nm 180-degree Signal light, vertical mounting	301-116ST
300-118	Single Green 3nm 180-degree Signal light, vertical mounting	300-118
300-118ST	Double Green 3nm 180-degree Signal light, vertical mounting	300-118ST

Test reports:

Test House	Number	Issue	Title	Date
Force Technology	118-20800-1	1	Marine Type Testing of Navigation Light – Test Specification	2018 -10-15
Force Technology	118-26781-1	Rev 1	Marine Type Testing of Navigation Light – Environmental and EMC Tests	2019-03-05
QinetiQ	QINETIQ/D&TS/SS/CR0600363	1.0	Type Testing Report to Selected clauses of UK Marine Shipping Notice -1781 being the UK implementation of COLREG 72	2005-12
Delta	118-323-196	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 1nm 112,5° Green light - A	2019-02-08
Delta	118-323-195	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 1nm 112,5° Red light – B	2019-02-08
Delta	118-323-189	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 2nm 135° White Stern light - C	2019-02-08
Delta	118-323-204	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 2nm 112,5° Green light - E	2019-03-04
Delta	118-323-205	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 2nm 112,5° Red light - F	2019-03-04

Test House	Number	Issue	Title	Date
Delta	118-323-197	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 2nm 225° White light - G	2019-02-08
Delta	118-323-198	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 3nm 225° White light - H	2019-01-24
Delta	118-323-192	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 2nm 135° Yellow light - I	2019-03-04
Delta	118-323-193	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 3nm 112,5° Green light - K	2019-03-04
Delta	118-323-199	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 3nm 112,5° Red light - L	2019-02-08
Delta	118-323-162	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 3nm 135° Yellow light	2018-10-18
Delta	119-323-008	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 3nm 180° Green light – O	2019-02-08
Delta	119-323-006	-	Determination of (x, y) chromatic colour coordinates and luminous intensity for 5nm 225° White light - R	2019-03-05
Delta	119-323-057	-	Determination of (x,y)chromatic Colour Coordinates and luminous intensity for 3 nm 180° Red Light. N.	2019-03-14

Tests carried out

EN 14744:2005 incl. AC:2006 and EN 60945:2002 including IEC 60945:2002 Corrigendum 1:2008

Marking of product

The LED navigation light shall be marked externally accordingly to the requirements of Resolution A.694 (17) and Resolution MSC.253 (83)

END OF CERTIFICATE