



EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), designated as a "notified body" under the terms of the Merchant Shipping (Marine Equipment) Regulations 2016 (S.I. 2016 No.1025), did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Colreg72 equipment requirements of Marine Equipment Directive (MED) 2014/90/EU and Commission Implementing Regulation (EU) 2018/773 indicating design, construction and performance requirements and testing standards for marine equipment, subject to any conditions in the Design Appraisal Document attached hereto.

Manufacturer (Applicant)	Lopolight ApS
Address	Bakkegaardsvej 513 Humblebaek DK-3050 Denmark
Reference	Regulation (EU) 2018/773
Regulation Item (No & Item designation)	MED/6.1 NAVIGATION LIGHTS
Product Type	NAVIGATION LIGHTS
Product Description	Single and Duplex LED Masthead Navigation Lights - Types: "P/N 300-036/300-037/300-038/300-039/300-136/300-137/300-138/300-139"
Specified Standard	72 COLREGs - International Regulations for Preventing Collisions at Sea amended by IMO Resolution A.1004 (25) Annex I/14. EN60945 (2002) including Corrigendum 1 (2008) and EN14744 (2005) including AC (2006)

The attached Design Appraisal Document (schedule) forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Date of issue 25 July 2018 Expiry date 24 July 2023

Certificate No. MED 1850147

Signed

Sheet No. 1 of 5

Name

L. Thomas
For and on behalf of Lloyd's Register Verification
LRV EC Distinguishing No. 0038

Note:

This certificate is issued under the authority of the MCA.

This certificate is not valid for equipment; the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.

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Document number MED 1850147
Issue number 1

DESIGN APPRAISAL DOCUMENT

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The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

EXAMINED DOCUMENTATION

User manual Reference No. 300-036/300-037/300-038/300-039/300-138 & 300-139, Rev. No 1, dated 29.01.2013.

Installation instructions for Lopolight navigation lights 300-136 6nm masthead, horizontal mount, Part No 300-136, Rev 1.00 / 24. August 2016 (P/N 601-505)

Installation instructions for Lopolight navigation lights 300-137 6nm masthead, vertical mount, Part No 300-137, Rev 1.00 / 24. August 2016 (P/N 601-506)

DRAWINGS

Drawing No.

Drawing Title

300-036	300-036 5nm Masthead Horizontal mount
300-037	300-037 5nm Masthead Single, Vertical mount
300-038	300-038 5nm Masthead Double, Horizontal mount
300-039	300-039 5nm Masthead, Vertical mount
300-136	300-136 6nm Masthead Single, Horizontal mount
300-137	300-137 6nm Masthead Single, Vertical mount
300-138	300-138 6nm Masthead, Horizontal mount
300-139	300-139 6nm Masthead Vertical mount, Double W cable aft

TEST REPORTS

- Test Report performed at Delta Danak, Doc. No DANAK -19/12702 Rev.1 Delta-T203286 and dated 21st December 2012.
- Determination of the luminous intensity distribution and colour coordinates from navigation light model 300-138, Test Report performed at Delta Danak, Doc. No Delta-L102542-3909 and dated 6th July 2012.
- CB Svendsen A/S report Revision 1, dated 4th June 2013 for the bespoke software in accordance with EN60945.
- Assessment sheet no. 1713, for the acceptance of navigation lights 300-136 based on comparative assessment against model 300-138 by Force Technology, dated 07/05/2018.
- Assessment sheet no. 1721, for the acceptance of navigation lights 300-137 based on comparative assessment against model 300-138 by Force Technology, dated 04/07/2018.



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LIGHT DETAILS:

<u>Type:</u>	<u>Voltage:</u>	<u>Power:</u>	<u>Material:</u>
300-036	24VDC	7W	Anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-037	24VDC	7W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-038	24VDC	7W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-039	24VDC	7W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-136	24VDC	13W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-137	24VDC	13W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-138	24VDC	13W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane
300-139	24VDC	13W	Hard Cote anodised aluminium, PMMA lens, Stainless Steel, Epoxy & Polyurethane

<u>No.</u>	<u>Product Name</u>	<u>Model</u>	<u>Visibility Sector</u>	<u>Visibility</u>	<u>LED colour</u>	<u>Software Type</u>
1	Masthead Light	300-036	225°	5NM	White	1.50
2	Masthead Light	300-037	225°	5NM	White	1.50
3	Masthead light	300-038	225°	5NM	White	1.50
4	Masthead light	300-039	225°	5NM	White	1.50
5	Masthead light	300-136	225°	6NM	White	1.50
6	Masthead light	300-137	225°	6NM	White	1.50
7	Masthead light	300-138	225°	6NM	White	1.50
8	Masthead light	300-139	225°	6NM	White	1.50

CONDITIONS OF CERTIFICATION

- The LED navigation lights type Masthead Light 300-036/300-037/300-038/300-039 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 lights type Masthead Light 300-136,300-137,300-138 & 300-139 may only be fitted to vessels of 50 metres or more in length as per 72 COLREGs Rule 22 as amended and IMO Res.MSC.253 (83)
- The LED navigation light types "P/N 300" range have been appraised against also the standards mentioned under;
 - IMO Resolution A.694 (17) - General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids
 - IMO Resolution MSC.253 (83) - Adoption of the Performance Standards for Navigation Lights, Navigation Light Controllers and Associated Equipment
- Installation on board:** The arrangements and installation of the light on board the vessel are 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
- The LED navigation light shall be marked externally accordingly to the requirements of Resolution A.694 (17) and Resolution 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)



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7. 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)
8. An installed software version for each type of lights should be included on the document and the data is to be advised by Lopolight if it is not declared in the manuals that have been examined
9. Instructions for installation, use and maintenance of the product are to be supplied to each purchaser
10. LEDs should only be used within the lifespan specified by the manufacturer to maintain the necessary luminous intensity of LEDs. The lifespan of LEDs should be determined and clearly notified to the manufacturer based on the appropriate test results on the decrease of luminous intensity of the LEDs under various temperature conditions of LEDs in the light during operation, taking the appropriate margin into the account
11. If the specified standards are amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply
12. Production items are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D) or product Quality Assurance (Module E) or Product Verification (Module F) of the Marine Equipment Directive
13. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81 (70), Part 2 and be recorded by the manufacturer in accordance with either the approved Production Quality Assurance system (Module D) or Product Quality Assurance (Module E) or witnessed by the Notified Body as required by the Product Verification (Module F) of the Marine Equipment Directive. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state) or those acting on behalf of that Administration
14. Each item, batch or lot of the equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity"
15. Should a change of Place of Production from that stated below be required, i.e. where the final stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained



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PLACE OF PRODUCTION

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