



NOTIFIED BODY
No 0191

CERTIFICATE OF TYPE APPROVAL

(EC Certificate of Type Examination - Module B)

(Marine Equipment Directive - 96/98/EC, as amended*1)

Applicant:-
Lopolight ApS
Ved Klaedebo 12B
DK-2970 Hoersholm
Denmark

Manufacturer:-
Lopolight ApS
Ved Klaedebo 12B
DK-2970 Hoersholm
Denmark

This is to certify that the applicant has submitted details of a:-

MARINE NAVIGATION LIGHTS (Commission Directive 2009/26/EC – Item A.1/6.1)

Of a type known and designated as:-

LOPOLIGHT, - Series 300 LED Navigation Lights for vessels of 50 meter length or greater
(Production lights from Serial Number 60003000)

(Details for individual models of lights included are described in schedule 1 attached)

and that these have been assessed and tested, and are CERTIFIED as complying with:-

BS EN 14744 :2005, "Inland Navigation and Sea-going Vessels – Navigation Lights" (inc Corr'g'm 1)

BS EN 60945 : 2002 "General Requirements for Marine Navigation Equipment"

(being testing standards listed in column 5 of Annex A.1 of Directive 2009/26/EC for Item 6.1).

It is also RECOGNISED that the equipment conforms to navigation light performance standards not inferior to those adopted by the International Maritime Organisation, and which are contained in the Convention on the International Regulations for preventing Collisions at Sea (COLREG), 1972 as relevant to navigational light assemblies before fitment to vessels, Resolution MSC.253(83), as appropriate and in the relevant parts of Resolution A694(17).

The items listed are a family of navigation lights for a range of ship sizes and the exact selection and installation of lights for any specific vessel is outside the competence of this certification. Light selection & mounting arrangements can also affect final COLREG compliance, and may be subject to individual ship approval.

SIGNED:

R A Sharp

Authorised Signatory

DATE of ISSUE:

7th October 2010

DATE of EXPIRY :

6th October 2015

Certificate Number:

QQ-MED-15/09-04

EU/USCG Mutual Recognition Agreement
Council Decision 2004/425/EC

This item is not currently included in the MRA

This certificate is valid until expiry date shown, subject to the standard conditions of issue printed on page 3. Lopolight ApS are currently establishing Module D registration with QinetiQ in accord with standard condition 3. Certificate to be issued.

QinetiQ
Cody Technology Park
Ively Road, Farnborough
Hampshire. GU14 0LX



Maritime and Coastguard Agency

The MCA is an Executive Agency of
the Department for Transport

*1 Commission Directives 2009/26/EC, 2008/67/EC & 2002/84/EC

Under the terms of the United Kingdom Statutory Instrument, No 1957 : 1999, QinetiQ Ltd has been Notified to the European Commission by the Maritime and Coastguard Agency as a Body authorised to conduct Conformity Assessment procedures under the provisions of the European Council Directive 96/98/EC (as amended) on Marine Equipment and issue Certificates of Type Approval.

Certificate of Type Approval - Schedule 1

LOPOLIGHT, - Series 300 LED Navigation Lights

(As appropriate for vessels of 50 metre length or greater)

The applicant declared that the following are operational Marine Navigation Lights suitable*¹ for usage on appropriate vessels. The units below have been assessed & tested and satisfactory details of these units were included in the technical file.

Description	Product Number (Aluminum) (Stainless Steel)	Colour * ²	Light Angle	Vertical Sector	Visibility * ^{3,4} Range (Min)	Mounting	
Starboard Sidelight	300-101	300-203	Green	112.5°	±25°	3nm	Vertical
Starboard Sidelight	300-108		Green	112.5°	±25°	3nm	Horizontal *5
Port Sidelight	300-102	300-204	Red	112.5°	±25°	3nm	Vertical
Port Sidelight	300-109		Red	112.5°	±25°	3nm	Horizontal *5
Stern light	300-106	300-205	White	135°	±25°	3nm	Vertical
Stern light	300-105		White	135°	±25°	3nm	Horizontal *5
All-round light	300-112		White	360°	±25°	3nm	Horizontal
All-round light	300-114		Red	360°	±25°	3nm	Horizontal
All-round light	300-115		Green	360°	±25°	3nm	Horizontal
Masthead light	300-111		White	225°	±25°	6nm	Vertical
Masthead light	300-131		White	225°	±25°	6nm	Horizontal

----- End of List -----

NOTES:-

- Suitable installation & alignment is required for all lights to ensure COLREG 'abaft of beam' and 'Forward cut-off of sidelights' requirements relative to ship heading are met. Matt black side screens may be required for all types of light, to control reflections from nearby structures and/or help define COLREG alignment and should be considered in installation plans.
- The Colour was measured for chromaticity co-ordinates according to the CIE 1931 chromaticity diagram and these lie within the appropriate corner co-ordinates published in Table 2, of EN 14744:2005.
- The Range of Visibility is assessed according to the measured luminous intensity equalling or exceeding the Candela rating published in Table 1, of EN 14744:2005.
- The choice of navigation lights for any specific ship may require installation approval by the Administration concerned, for this reason only the visibility range is shown in the listing above. MSC.253(53) requires installations light failure or degradation monitoring system reporting to bridge indicators. Lopolight ApS are developing a Navigation Light Controller (P/N 400-018) for ship applications where bridge indication of Navigation Light status and failure alarm is required. Will also indicate 'near' end-of-service life and end-of-service life.
- These vertical mounting lights can be "Double Stacked" for applications where primary and emergency lights are required, all components are duplicated and failure of one light cannot compromise the other.

Technical Characteristics

*Note:- Where appropriate results taken from Type Approval Test Report.

Parameter	Measured*	Comment
Luminous Intensity	3nm =>12cd, (>15cd at test) 6nm =>94cd, (>118cd at test)	The minimum candela reading is maintained to ±5° vertical sector
Light Source Technology	Light Emitting Diode (Multi LED Cluster design)	Manufacturer specified lifespan (MSC.253(83), 4.3.2 Service life 50,000 Hrs with DCLD (Degradation Compensating LED Driver) to maintain cd rating. Built in end of service life, light indication.
Colour Specification – Red LED	'x' = 0.702 'y' = 0.298	Averaged value
Colour Specification – Green LED	'x' = 0.078 'y' = 0.594	Averaged value
Colour Specification – White LED	'x' = 0.318 'y' = 0.315	Averaged value
Temperature Range & IEC 945 Class	-25°C to +55°C (+70°C storage)	Exposed - Operational
Power Source	12V or 24V DC, Nominal	Internal DC to DC PSU can accept 10v to 32V input variation and provides a constant current to the LED elements.

Conditions of Issue of this certificate are printed on Page3

QinetiQ
Cody Technology Park
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Hampshire. GU14 0LX

Certificate Number **QQ-MED-15/09-04**

Certificates of Type Approval
Conditions of Issue

1. Each Certificate will be used in its entirety and not reproduced in part.
2. This certificate remains valid until the date shown (normally 5 years) unless cancelled or revoked, provided:-
 - i) The design and manufacture remain unmodified from the specimen tested and recorded in the Technical Construction File;
 - ii) Any conditions contained in the schedule are complied with;
 - iii) Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply;
 - iv) And, the equipment remains satisfactory in service.
3. The mark of conformity may only be affixed to the equipment listed on this certificate and a manufacturer's Declaration of Conformity issued when the production Quality Assurance requirements laid down in Annex B, of the Directive (96/98/EC) is fully complied with and controlled by a written inspection agreement with a Notified Body. The use of the QinetiQ Notified Body Number (0191) in combination with the Wheelmark implies that the manufacturer is Registered with the QinetiQ Quality Assurance Scheme. A Certificate of Registration is issued to the manufacturer and should be made available on request. The manufacturer is responsible for ensuring that certification renewal and periodic surveillance are maintained.
4. USCG Approval Number, A Mutual Recognition Agreement (MRA) on marine equipment exists between the European Commission and the US Coastguard but only applies to equipment types included in the listing of marine equipment annexed to the MRA. For included equipment a USCG Approval number may be issued. If Issued this can be found under the MED certificate number on the first page and should be used on the main identity label of the equipment. Radio and Radar equipment continues to need separate or additional approval by the USA FCC.
5. This certificate does not confer any approval status to this equipment other than defined by, and tested according to the specifications listed on sheet 1.
6. The labeling requirements of IMO Resolution A694(17) shall be met. Descriptions of each unit of apparatus forming part of the equipment will be as given on this Certificate. Each unit of equipment will be marked with the minimum safe distance at which it should be mounted from a standard and steering magnetic compass.
7. No unit of apparatus shall be advertised or labeled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency, the Department of Transport or the QinetiQ Group in any sense other than that it is a type that has been assessed as satisfactory against the specification;
8. The manufacturer must advise QinetiQ of any intended changes to the design or production of the equipment which might affect the equipment performance.
9. Minor Modifications to the equipment will be considered on a case-by-case basis. QinetiQ will review any factory test results, in consultation if necessary, with the test facility that conducted the original Type Approval testing on the equipment. QinetiQ will advise the manufacturer if any further testing is required to maintain valid certification.
10. If an equipment manufacturer wishes to have the type approved equipment designated under alternative names (e.g. agent/distributor's name and model number), a separate application should be completed and sent to QinetiQ.

QinetiQ Ltd
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