QinetiQ

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 200 & 300 LED Navigation Lights for vessels of 12 to 20 metre length
(Production lights from Serial Number 60003000)

(Details for individual models of lights included are described in schedules 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 Corrg'm 1)
BS EN 60945 : 2002 "General Requirements for Marine Navigation Equipment" (inc Corrg'm 1)
(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: ***9th November 2010***
DATE of EXPIRY: ***6th October 2015***

Certificate Number: ***QQ-MED-15/09-02***

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 registeration with QinetiQ in accord with standard condition 3, Certificate to be issued

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

mca
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 200 & 300 LED Navigation Lights

(As appropriate for vessels 12 to 20 metre length)

The applicant declared that the following are Marine Navigation Lights suitable*1 for usage on appropriate vessals . The units below has been assessed & tested and satisfactory details of these units were included in the technical file. Combination lights are assessed by analogy to individual lights.

Description	Product Number (Aluminum)	Product Number (Stainless Steel)	Colour *2	Light Angle	Vertical Sector	Visibility *3,4 Range (Min)	Mounting
Combined Bow	200-003	200-203	Red/Green	112.5°+112.5°	±25°	2nm	Horizontal
Combined Bow	200-004	200-204	Red/Green	112.5°+112.5°	±25°	2nm	Vertical
Tricolour	200-005		R/G/W	112.5°+112.5°+135°	±25°	2nm	Horizontal
Tricolour with Anchor	200-007		R/G/W	112.5°+112.5°+135°	±25°	2nm	Horizontal
Starboard Sidelight	300-001	300-201	Green	112.5°	±25°	2nm	Vertical
Port Sidelight	300-002	300-202	Red	112.5°	±25°	2nm	Vertical
Stern light	300-005		White	135°	±25°	2nm	Horizontal
Stern light	300-006	300-206	White	135°	±25°	2nm	Vertical
Starboard Sidelight	300-008	300-208	Green	112.5°	±25°	2nm	Horizontal
Port Sidelight	300-009	300-209	Red	112.5°	±25°	2nm	Horizontal
Anchor light	200-012 (*6)	200-212	White	360°	±25°	2nm	Horizontal
All-round light	200-014 (*6)	200-214	Red	360	±25°	2nm	Horizontal
All-round light	200-015 (*6)	200-215	Green	360°	±25°	2nm	Horizontal
Masthead light	200-011		White	225°	±25°	3nm	Vertical
Masthead and Anchor	200-021	200-221	White	225°/360°	±25°	3/2nm	Horizontal
Masthead/Stern/Anchor	200-019	200-219(*7)	White	225°/360°/135°	±25°	3/2nm	Horizontal

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

NOTES:-

1 Suitable installation & alignment is required for all lights to ensue 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 sectoral lights, to control reflections from nearby structures and/or help define COLREG alignment and should be considered in installation plans.

2 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.

3 Visibility range is assessed according to the measured luminous intensity equalling or exceeding the Candela rating published in Table 1, of EN 14744:2005.

4 The choice of navigation lights for any specific size ship is a matter for the installation approval of the Administration concerned, for this reason only the visibility range is shown in the listing above. Administration and or classification rules may also require light failure or degradation monitoring system reporting to bridge indicators.

6 These lights are also available as pairs (2 x 180°) as part numbers 200-024(White), 200-016(Red) and 200-018(Green) respectivly for situations where mounting requires this.

7 These lights have restricted application on vessels where the normal vertical separate requirement cannot be achieved.

Notified Body 0191

Technical Characteristics

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

Parameter	Measured*	Comment
Luminous Intensity	2nm =>4.3cd, (>5.4cd at test) 3nm =>12cd, (>15cd 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, constant current PSU can accept 10v to 32V input variation.

Conditions of Issue of this certificate are printed on Page3

QinetiQ
Cody Technology Park
Ively Road, Farnborough
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Certificate Number ***QQ-MED-15/09-02***

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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