



CERTIFICATE NUMBER	20-2067759-PDA
EFFECTIVE DATE	14-Jan-2021
EXPIRY DATE	13-Jan-2026
ABS TECHNICAL OFFICE	London Engineering Department

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **LOPOLIGHT APS**

located at

**BAKKEGAARDSVEJ 513, HUMLEBAEK, Denmark, 3050**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Navigation and Signal Light Control Panel  
**Model:** Navigation Lights and Control System  
**Endorsements:**  
**Tier:** 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 13/Jan/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

  
Steve A.A.P Brincat, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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**Product:** Navigation and Signal Light Control Panel  
**Model:** Navigation Lights and Control System

**Endorsements:**

**Intended Service:**

For use on ABS classed vessels and offshore facilities in accordance with the listed ABS Rules and International standards

**Description:**

System consists of range of LED Navigations lights and Navigation Light Controller (NLC) and Control panel. The Navigation Light Controller can control and monitor up to 28 individual lights simultaneously. The system can be supplied by both main and emergency sources of power and provided with an automatic change-over switch. Automatic visual and audible warning will be provided in the event of failure of a navigation light, power supply. An indicator for each navigation light is provided in control panel. All navigation lights (mast head, side and stern lights) are designed with separate circuits, light sources and connections.

For details of single and duplex LED navigation lights including Maneuvering lights, Towing lights, please see the attached document : "overview and relationships between products" .

**Rating:**

Power Supply: 100-240V AC  
Frequency: 50/60Hz,  
Power: 100W  
Ingress Protection: IP66  
Operation Temperature: -20C to +55C  
15 ppm, Fluid temperatures up to 29°C

**Service Restriction:**

Unit Certification is not required for this product.  
If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) Unless specially directed by Administration, this approval is not to be construed as a substitute for flag Administration's approval for the purpose of SOLAS (Consolidated Edition 2020) as amended.
- 3) This approval only covers suitability of the navigation lights and control panel for their intended place of installation.
- 4) A masthead light, sidelights and a sternlight installed on board a ship not less than 50 m in length should be duplicated or be fitted with duplicate lamps.
- 5) LEDs should only be used within the lifespan specified by the manufacturer to maintain the necessary luminous intensity of LEDs. Application and use are to be in accordance with the manufacturer's instructions.

**Notes/Drawing/Documentation:**

Drawing No. 0062811-00, ISO 9001 certificate, Revision: -, Pages: 1  
Drawing No. 100520-1, Sample NLC wiring schematics, Revision: -, Pages: 1  
Drawing No. 118-20800-1, Testing specification, Revision: -, Pages: 28  
Drawing No. 118-26781-1, Marine type testing of navigation light, Force Technology, Denmark, Date: 04.03.2019, Revision: 1, Pages: 130  
Drawing No. 120-31471, Supplementary test Report for navigation lights, Force Technology, Denmark, Date:

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11.12.2020, Revision: 1, Pages: 42  
Drawing No. 120-29844-1, Test Report for marine type approval of NLC control box, Force Technology, Denmark,  
Date: 02.12.2020, Revision: 1, Pages: 82  
Drawing No. 12-70035(E1), LR Type Approval Certificate, Revision: -, Pages: 1  
Drawing No. 1600011/M1, Module B Certificate, Revision: -, Pages: 1  
Drawing No. 190320, Degradation calculation, Revision: -, Pages: 1  
Drawing No. 1950085, MED Module B certificate, Revision: -, Pages: 1  
Drawing No. 200-012, datasheet, Revision: 1, Pages: 1  
Drawing No. 200-014, datasheet, Revision: 1, Pages: 1  
Drawing No. 200-015, datasheet, Revision: 1, Pages: 1  
Drawing No. 200-064, datasheet, Revision: 1, Pages: 1  
Drawing No. 200-064ST, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-036, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-037, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-039, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-112, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-114, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-115, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-139, datasheet, Revision: 1, Pages: 1  
Drawing No. 300-X38, Datasheet, Revision: 1, Pages: 1  
Drawing No. 500-100, NLC Datasheet, Revision: -, Pages: 1  
Drawing No. Manual, Navigation Light Controller and Control panel, Revision: 6, Pages: 36  
Drawing No. 600-321-1, Installation Instructions- Vertical mounted lights, Revision: -, Pages: 1  
Drawing No. 600-322-1, Installation Instruction, horizontally mounted lights, Revision: -, Pages: 1  
Drawing No. 600-326-1, Installation Instructions- horizontally mounted lights, Revision: -, Pages: 1  
Drawing No. 82508414, Software Reliability and Quality Information, Revision: -, Pages: 1  
Drawing No. B A 118-323-196, 1nm green sidelight, Revision: -, Pages: 1  
Drawing No. B B 118-323-195, 1nm red sidelight, Revision: -, Pages: 1  
Drawing No. B C 118-323-189, 2nm white stern light, Revision: -, Pages: 1  
Drawing No. B E 118-323-190, 2nm green sidelight, Revision: -, Pages: 1  
Drawing No. B F 118-323-191, 2nm red sidelight, Revision: -, Pages: 1  
Drawing No. B G 118-323-197, 2nm white masthead, Revision: -, Pages: 1  
Drawing No. B H 118-323-198, 3nm white masthead, Revision: -, Pages: 1  
Drawing No. B I 118-323-192, 2nm yellow towing light, Revision: -, Pages: 1  
Drawing No. B J 119-323-005, 3nm white stern light, Revision: -, Pages: 1  
Drawing No. B L 118-323-194, 3nm red sidelight, Revision: -, Pages: 1  
Drawing No. B M 118-323-162, 3nm yellow towing light, Revision: -, Pages: 1  
Drawing No. B N 119-323-057, 3nm 180 degree red light, Revision: -, Pages: 1  
Drawing No. B O 119-323-008, 3nm green 180 degree light, Revision: -, Pages: 1  
Drawing No. B P 119-323-004, 3nm 180 degree white light, Revision: -, Pages: 1  
Drawing No. B R 119-323-006, 5nm white masthead, Revision: -, Pages: 1  
Drawing No. B1 TESTS, B 1 OVERVIEW LIGHT TESTS, Revision: -, Pages: 1  
Drawing No. Brochuer, Control and Monitoring System, Revision: -, Pages: 1  
Drawing No. C 200-013, Datasheet, Revision: -, Pages: 1  
Drawing No. C 201-010KL-11KL, Datasheet, Revision: -, Pages: 1  
Drawing No. C 201-011KLST, 3nm double masthead, Revision: -, Pages: 1  
Drawing No. C 201-013ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 201-02X, Datasheet, Revision: -, Pages: 1  
Drawing No. C 201-030, Datasheet, Revision: -, Pages: 1  
Drawing No. C 300-116ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 300-118, Datasheet, Revision: -, Pages: 1  
Drawing No. C 300-118ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 300-124ST, 3nm white, Revision: -, Pages: 1  
Drawing No. C 301-005, Datasheet, Revision: -, Pages: 1

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Drawing No. C 301-005ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-008, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-008ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-009, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-009ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-011KL, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-105, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-107ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-108, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-108ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-109, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-109ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-113ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-X01ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-X02ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-X06, Datasheet, Revision: -, Pages: 1  
Drawing No. C 301-X06ST, Datasheet, Revision: -, Pages: 1  
Drawing No. C X00-X16, Datasheet, Revision: -, Pages: 1  
Drawing No. C X00-X24, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-003, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-004, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-005, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-007-9S, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-010-11, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-013V-107, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-X01, Datasheet, Revision: -, Pages: 1  
Drawing No. C X01-X02, Datasheet, Revision: -, Pages: 1  
Drawing No. D LED datasheets GREEN LV CQBP OSLON, Revision: -, Pages: 1  
Drawing No. D LED datasheets RED LJ CKBP OSLON, Revision: -, Pages: 1  
Drawing No. D LED datasheets WHITE LUW CRBP OSLON, Revision: -, Pages: 1  
Drawing No. D LED datasheets YELLOW GY CS8PM1, Revision: -, Pages: 1  
Drawing No. D LED driver information Driver diagram 3-4095-2 lgd, Revision: -, Pages: 1  
Drawing No. Degradation Note, Degradation Profile, Revision: -, Pages: 1  
Drawing No. DoC, DoC for Lopolight NLC, Revision: -, Pages: 1  
Drawing No. EMES 1649, Test report (2), Revision: 1, Pages: 1  
Drawing No. EU DOC, Declaration of Conformity, Revision: -, Pages: 1  
Drawing No. Information, LED driver for Nav Light, Revision: -, Pages: 1  
Drawing No. List, list of lights to incl in cert, Revision: 1, Pages: 1  
Drawing No. List (excel), List of lights to incl in cert excel, Revision: 1, Pages: 1  
Drawing No. Lopolight Quality Management System (QMS), Revision: -, Pages: 1  
Drawing No. MED 1800008/16, MED Module D Certificate, Revision: -, Pages: 1  
Drawing No. MED 1850147, LR EC Type Examination (Mod B) Certificate, Revision: -, Pages: 1  
Drawing No. MED 1850189, MED Module B certificate, Revision: -, Pages: 1  
Drawing No. A NEW NAV LIGHTS OVERVIEW AND RELATIONSHIP BETWEEN PRODUCTS, Revision: 1, Pages: 1  
Drawing No. NLC A, NLC Brochure - overview, Revision: 1, Pages: 1  
Drawing No. NLC B, NLC Datasheet, Revision: 1, Pages: 1  
Drawing No. NLC E, NLC Declaration of Conformity, Revision: 1, Pages: 1  
Drawing No. NLC F, NLC certificates of components in NLC, Revision: 1, Pages: 1  
Drawing No. NLC D, NLC sample wiring schematic (1), Revision: 1, Pages: 1  
Drawing No. NLC G, NLC sample wiring schematic (2), Revision: 1, Pages: 1  
Drawing No. QMS, Quality Management System, Revision: -, Pages: 1

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**STANDARDS**

**ABS Rules:**

- Marine Vessels Rules (2020): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-2/11.3, 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11, 4-9-9/7 and 4-9-9/Table 1 and 4-9-9/Table 2;
- Facilities on Offshore Installations (2020): 1-1-4/9.7, 1-1-A2, 1-1-A3, 3-7/3.5;
- Mobile Offshore Units (2020): 1-1-4/9.7, 1-1-A3, 1-1-A4, 6-1-1/9, 6-1-1/13; 4-3-1/9, 4-3-1/11, 4-3-1/15, 4-3-2/13.3;
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2020): 1-1-4/7.7, 1-1-A3, 1-1-A4;
- High Speed Crafts (2020): 1-1-4/11.9, 1-1-A2, 1-1-A3, 4-3-2/13.3, 4-7-9/7, 4-7-9 Table 9 and 4-7-9/Table 10;
- Steel Barge Rules (2020): 1-1-4/7.9, 1-1-A3, 1-1-A4;

**National:**

NA

**International:**

IACS E10 Rev:7:2018  
IEC 60529 Ed. 2.2 b:2013  
IEC 60945 Ed. 4.0 b CORR1:2008  
IMO Res. MSC.253(83) (adopted on 8 October 2007)

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA