Certificate no.:
TAE00004Y1

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Light Fitting

with type designation(s)
LEMar-Spot-200

issued to
OptoPrecision GmbH
Bremen, **Germany**

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Vibration class	**A**
Degree of protection	**IP67, Control Panel IP60**
Temp. class	**D, Control Panel B**
Voltage (V)	**12-48 VDC, 90-240 VAC**
Suitable for Hazardous areas	**No**

Issued at **Høvik** on **2024-12-06**
This Certificate is valid until **2029-12-05**.
DNV local unit: **Hamburg – CMC North/East**

for **DNV**

Approval Engineer: **Uwe Supke**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

LED searchlight was developed as an innovative light source equipped with the latest LED technology in a particularly compact and durable design. The product has a very low energy consumption and emits almost no heat.
The high-quality optics achieve very homogeneous illumination results when focused ± 2° with very little scattered light outside the beam cone.
Due to the excellent beam profile the spot provides cutting-edge lighting performance. The minimum required supply voltage of 12-18 V DC (optionally 90-240 V AC) is particularly advantageous for use in mobile applications. The housing with IP protection class 67 is pressure-tight and seawater-resistant and withstands short-term flooding.

LED-Searchlight:
Ingress protection: IP67
Control Panel: IP60

Electronic Connection Box, Pan-Tilt:
Power supply: 12-48 VDC or 90-240 VAC
Power consumption: max. 300 W

Application/Limitation

Location classes:
Temperature class: D, Control panel B
Humidity class: B, Control panel A
Vibration class: A
EMC class: B
Enclosure class: C, IP67, Control Panel IP60

Installation instruction of the manufacturer to be followed.

Type Approval documentation

Tests carried out

Applicable tests according to DNV Class guideline DNV-CG-0339, Edition August 2021

Marking of product

Manufacturer Name OptoPrecision GmbH
Model Name and Type Searchlight LEMar-Spot-200
Serial No.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE