



Certificate no.:
TAS00004ED

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Underwater Lights

with type designation(s)
SEA LED EVO160 Stainless Steel
SEA LED EVO160 Aluminium

issued to

4C INNOVATION S.r.l.
Massarosa LU, IT, Italy

is found to comply with

IEC 60529 Ed. 2.2 (2013-08) Degrees of protection provided by enclosures (IP Code)

Application:

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

Issued at **Høvik** on **2024-09-13**

This Certificate is valid until **2029-09-12**.

for **DNV**

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Inga-Kristin Schröder**

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.



Form code: TA 251

Revision: 2023-09

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Product description

These Underwater Lights are certified as watertight appliances for use in the hull of vessels classed by DNV, covering pressure resistance of the Underwater Light body for installation in aluminium and steel structures in marine and offshore use.

Application/Limitation

- 1) The present certificate is based on the documentation listed below and is valid only for a construction and material as specified in the approved drawings and the given instructions.
- 2) Inspections and survey procedures are to be performed as required by the Rules and Regulations of DNV.
- 3) The mounting location and details remain subject to examination and approval for each individual project and are to be submitted by the yard or design office to DNV prior to installation on board.
- 4) The degree of protection provided by enclosure is IP 68, as tested.
- 5) The manufacturer's recommendations and instructions regarding location and operation must be observed. The operation of the light is limited to the (permanently) submerged condition of the lens.
- 6) The materials as given in the drawings are acceptable for use in DNV vessels, provided the material is suitable for the hull in which the appliance is fitted. Aluminium materials must be coated with corrosion protection in addition.
- 7) IP 68 Cable Glands are acceptable if tested along with the appliance. Cable Glands not tested in combination with the appliance shall be certified and tested to withstand a minimum hydrostatic pressure of 5bar for at least 30 Minutes. Certification must be presented to DNV along with the installation documentation.

Type Approval documentation

Tests carried out

245190A Test Report DNV Ref. A1381247
245189A Test Report DNV Ref. A1381247

Marking of product

n/a

Periodical assessment

DNV's surveyor is to be given permission to carry out an audit at any time during the validity period of this certificate. For appliances installed on DNV vessels, the appliances should be checked (visual check) by a DNV surveyor before being dispatched.