Certificate No:
**TAE00004UZ**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Light Fitting**

with type designation(s)
**CL25, CL35 & CL38**

Issued to
**Luminell Sweden AB**
**Halmstad**, **Sweden**

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

## Application :

**Products approved by this certificate are accepted for installation on all vessels classed by DNV.**

| | |
|---|---|
| **Vibration class** | **A** |
| **Degree of protection** | **IP 66** |
| **Temp. class** | **D** |
| **Voltage (V)** | **110-230 VAC, 50/60 Hz** |
| **Suitable for Hazardous areas** | **No** |

Issued at **Høvik** on **2024-02-05**
This Certificate is valid until **2029-02-04**.
DNV local station: **Sweden CMC**

Approval Engineer: **Nicolay Horn**

for **DNV**

**Frederik Tore Elter**
**Head of Section**

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 300,000 USD.

## Product description

CL25 HMI Searchlight

| | |
|---|---|
| Operating voltage | 110-230 VAC, 50/60 Hz, |
| Max Power consumption | 1070W, 4,7 A @ 230 VAC (max load) |
| Operating temperature | -25 ºC to +55 ºC |
| Light intensity | 10,7 MCd measured |
| Initial luminous flux | 66 000 lm |
| Ingress protection | IP66 |
| Housing | Painted Acid proof Stainless Steel 316 |
| Finish | Powder coat white RAL 9016 (other colours on request) |
| CRi | >90 |
| CCI | 6000 K |
| Range with 1 lux at target | 3200 m |

CL35 HMI Searchlight

| | |
|---|---|
| Operating voltage | 110-230 VAC, 50/60 Hz, |
| Max Power consumption | 1460W, 6,5 A @ 230 VAC (max load) |
| Operating temperature | -25 ºC to +55 ºC |
| Light intensity | 28,7 MCd measured |
| Initial luminous flux | 98 000 lm |
| Ingress protection | IP66 |
| Housing | Painted Acid proof Stainless Steel 316 |
| Finish | Powder coat white RAL 9016 (other colours on request) |
| CRi | >90 |
| CCI | 6000 K |
| Range with 1 lux at target | 5300 m |

CL38 HMI Searchlight

| | |
|---|---|
| Operating voltage | 110-230 VAC, 50/60 Hz, |
| Max Power consumption | 2000W, 8,7 A @ 230 VAC (max load) |
| Operating temperature | -25 ºC to +55 ºC |
| Light intensity | 38,1 MCd measured |
| Initial luminous flux | 130 000 lm |
| Ingress protection | IP66 |
| Housing | Painted Acid proof Stainless Steel 316 |
| Finish | Powder coat white RAL 9016 (other colours on request) |
| CRi | >90 |
| CCI | 6000 K |
| Range with 1 lux at target | 6100m |

## Type Approval documentation

## Tests carried out

Type tests in accordance with IEC 60945 (partly), IMO Res MSC 81(70) (Annex 6 13.4) and DNV-CG-0339 / IACS E10 Rev. 8.

## Marking of product

Manufacturer's name or trade mark – type designation under which the product is type approved – voltage – maximum current - IP class.

## Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

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

Assessment shall be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE