

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Light Fitting

with type designation(s)
LRRLS room light, LRCLS ceiling light

Issued to

Glamox Marine and Offshore GmbH
Bremen, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft
DNV rules for classification – Naval vessels

Application :

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

Location classes:

Type	Vibration class	Enclosure class	EMC class	Temp. class	Voltage (V)	Suitable for Hazardous areas
LRRLS room light	A	B	B	B	24V DC	n/a
LRCLS ceiling light	A	B	B	B	24V DC	n/a

Issued at **Hamburg** on **2021-08-18**

This Certificate is valid until **2026-08-17**.

for **DNV**

DNV local station: **Hamburg – CMC North/East**

Approval Engineer: **Uwe Supke**

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Arne Schaarmann
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

LRCLS ceiling light

P/N	1401-000-001 LRCLS ceiling light white
	1401-000-002 LRCLS ceiling light white, green
	1401-000-003 LRCLS ceiling light white, amber
	1401-000-004 LRCLS ceiling light green
	1401-000-005 LRCLS ceiling light white, red
Rated voltage	24V DC
Rated power	7W
Ingress protection	IP 55
Operating temperature	-25°C to +55°C
Weight	0,5kg
Software version	v1.0x, v2.0x
Integration DWG	1401-200-001 rev.001

LRRLS room light	with bracket	with frame
P/N	1402-000-004	1402-000-001
Rated voltage	24VDC	24VDC
Rated power	24W	24W
Ingress protection	IP 55	IP 55
Operating temperature	-25°C to 55°C	-25°C to 55°C
Weight	3,2kg	3,1kg
Software version	v1.0x, v2.0x	v1.0x, v2.0x
Integration DWG	1402-200-001	1402-200-003

Place of production:

Rieselwiesen 1, 21218 Seevetal, Germany

Approval conditions

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- Functional description including function types
- System block diagram
- Power supply arrangement (may be part of the System block diagram)

The Type Approval covers hardware and software listed under Product description.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 [1.2.3] will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, December 2019.

For the bridge mounted components, the 'Compass safe distance' was measured according to section 11.2 of IEC 60945 4th edition (2002) Corr.1 (2008).

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the 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 this certificate.

END OF CERTIFICATE