



Certificate no.:
TAE00004ZW

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Light Fitting

with type designation(s)
VULKAAN Universal Retrofit LED Gear tray

issued to

RLT Group Global Ltd
Widnes, United Kingdom

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	20
Temp. class	D
Voltage (V)	220-240
Suitable for Hazardous areas	N/A

Issued at **Høvik** on **2024-12-02**

This Certificate is valid until **2029-12-01**.

for **DNV**

DNV local unit: **UK & Ireland CMC & VMC**

Approval Engineer: **Marcin Tobiasz**

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

“VULKAAN Universal Retrofit LED Gear tray”

Variants:

Non-emergency:

Single: L2-3039 (model TGT1140-1200, 11 W), L2-3079 (model TGT1130-1200, 11 W), L2-3080 (model TGT2240, 22 W), L2-3086 (model TGT2265, 22 W), L2-3099 (model TGT1165-1200, 11 W), L2-3059 (model TGT5.530, 5.5 W), L2-3060 (model TGT1140, 11 W), L2-3063 (model TGT5.540, 5.5 W), L2-3066 (model TGT1165, 11 W), L2-3089 (model TGT5.565, 5.5 W), L2-3060S (model TGT1140SL, 11 W),

Twin: L2-3067 (model TGT1130TS, 11 W), L2-3087 (model TGT2230TS, 22 W), L2-3062 (model TGT1130T, 11 W), L2-3072 (model TGT1165T, 11 W), L2-3092 (model TGT1140T, 11 W), L2-3076 (model TGT2265T, 22 W), L2-3082 (model TGT2230T, 22 W), L2-3096 (model TGT2240T, 22 W)

Emergency:

Single: L2-3039E (model TGT1140-1200E, 11 W), L2-3039E24 (model TGT1140-1200E24, 11 W), L2-3079E (model TGT1130-1200E, 11 W), L2-3079E24 (model TGT1130-1200E24, 11 W), L2-3080E (model TGT2240E, 22 W), L2-3080E24 (model TGT2240E24, 22 W), L2-3086E (model TGT2265E, 22 W), L2-3086E24 (model TGT2265E24, 22 W), L2-3099E (model TGT1165-1200E, 11 W), L2-3099E24 (model TGT1165-1200E24, 11 W), L2-3059E (model TGT5.530E, 5.5 W), L2-3059E24 (model TGT5.530E24, 5.5 W), L2-3060E (model TGT1140E, 11 W), L2-3060E24 (model TGT1140E24, 11 W), L2-3063E (model TGT5.540E, 5.5 W), L2-3063E24 (model TGT5.540E24, 5.5 W), L2-3066E (model TGT1165E, 11 W), L2-3066E24 (model TGT1165E24, 11 W), L2-3089E (model TGT5.565E, 5.5 W), L2-3089E24 (model TGT5.565E24, 5.5 W)

Twin: L2-3067E (model TGT1130TSE, 11 W), L2-3067E24 (model TGT1130TSE24, 11 W), L2-3087E (model TGT2230TSE, 22 W), L2-3087E24 (model TGT2230TSE24, 22 W), L2-3062E (model TGT1130TE, 11 W), L2-3062E24 (model TGT1130TE24, 11 W), L2-3072E (model TGT1165TE, 11 W), L2-3072E24 (model TGT1165TE24, 11 W), L2-3092E (model TGT1140TE, 11 W), L2-3092E24 (model TGT1140TE24, 11 W), L2-3076E (model TGT2265TE, 22 W), L2-3076E24 (model TGT2265TE24, 22 W), L2-3082E (model TGT2230TE, 22 W), L2-3082E24 (model TGT2230TE24, 22 W), L2-3096E (model TGT2240TE, 22 W), L2-3096E24 (model TGT2240TE24, 22 W)

Rated voltage:	220-240V, 50/60Hz
Rated power:	See listing of variants above
Ingress protection:	IP20
Ambient temperature:	-25°C to 55°C
Material:	Mild steel
Luminous flux:	154 lm/w
Light colour:	3,000K, 4,000K, 5,000K, 6,500K
Emergency operation:	AC or Battery Backup

Place of production:

DNV Ref.: 10794040

DNV Ref.: 10793731

Application/Limitation

Installation instruction of the manufacturer to be followed.

DNV Location classes:

Temperature class:	D
Humidity class:	B
Vibration class:	A
EMC class:	B

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Applicable tests according to class guideline DNV-CG-0398, August 2021.

Photometric tests.

Marking of product

The products to be marked with:

- Manufacturer name
- Model name
- Serial number
- Power supply ratings
- Degree of protection

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are 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 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