



CERTIFICATE NUMBER 20-1968547-PDA
EFFECTIVE DATE 16 April 2020
EXPIRATION DATE 15 April 2025
ABS TECHNICAL OFFICE Singapore Engineering Services

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

TOP HI-TECH CO., LTD.

located at

9F, NO.1 ZHONGSHAN ROAD, NEW TAIPEI CITY, TAIWAN, 23680

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Lighting Fixtures, LED

Model THT-L1102, THT-L1105A and THT-L1203

This Product Design Assessment (PDA) Certificate remains valid until 15 April 2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Manoraaju, Engineer/ Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

TOP HI-TECH CO.

9F, NO.1 ZHONGSHAN ROAD
TUCHENG DISTRICT
NEW TAIPEI CITY
Taiwan 23680
Telephone: +886-2-2267-1234
Fax: +886-2-22696-1166
Email: jimmy.acera@tth-ex.com
Web: www.tth-ex.com

Tier: 3 - Type Approved, unit certification not required

Product: Lighting Fixtures, LED
Model: THT-L1102, THT-L1105A and THT-L1203

Intended Service:
Lighting in Marine and Offshore Platform Applications

Description:
LED luminaires

Rating:
Temperature Rating: -20 Deg.C~+40 Deg.C;
Humidity Rating: 65%RH~100%RH;
Voltage Rating: THT-L1102 and THT-L1105A: 110Vac or 220 Vac; THT-L1203: 24 Vac, 110Vac or 220 Vac;
Frequency: 50/60Hz;
Lighting Rating: THT-L1102: 60W, 80W or 100W;
THT-L1105A: 40W or 60W;
THT-L1203: 20W

Service Restriction:
Unit Certification is not required for this product.
If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

- Comments:**
- 1) Electrical equipment is to be constructed of durable, flame-retardant, moisture resistant materials, which are not subject to deterioration in the marine environment and at the temperatures to which it is likely to be exposed.
 - 2) Electrical equipment is to be designed such that current-carrying parts with potential to earth are protected against accidental contact.
 - 3) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:
Drawing No. THT-L1102, Explosion Proof LED Lighting THT-L1102, Revision: 1, Pages: 30
Drawing No. THT-L1105A, Explosion Proof LED Lighting THT-L1105A, Revision: 0, Pages: 33
Drawing No. THT-L1203, Explosion Proof LED Lighting THT-L1203, Revision: 0, Pages: 30

Terms of Validity:
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Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

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STANDARDS

ABS Rules:

Rules for Conditions of Classification (2020) – 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Rules for Building and Classing Marine Vessels: 4-8-2/7.13, 4-8-2/9.21, 4-8-3/1.3, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-4/11

Rules for Conditions of Classification (2020) – Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Mobile Offshore Drilling Units: 4-3-1/15, 4-3-2/13, 4-3-3/3.1.1(a), 4-3-3/3.17

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA