

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class B Recesses for Light Fittings, Ventilation Units and similar**

with type designation(s)

LEDCD210N, LEDCD220N, LEDCF210N, LEDCF220N, LEDCF210S, LEDCF220S, LEDCW210N, LEDCW220N and LEDDL

Issued to

SUNIL ELECOMM CO., LTD.
Gyeongsangbuk-do, Republic of Korea

is found to comply with

DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**DNV GL rules for classification – Ships****DNV GL offshore standards****Application :****Approved as light fixtures for use in B-0 class ceilings.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2020-11-02**This Certificate is valid until **2025-11-01**.for **DNV GL**DNV GL local station: **Ulsan**Approval Engineer: **Helge Bjørnara**

Mårten Schei-Nilsson
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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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

LED210N, LED220N, LEDCF210N, LEDCF220N, LEDCF210S, LEDCF220S, LEDCW210N, LEDCW220N and LEDDL,
Light fixtures installed in cut-outs in B-0 ceilings. The light fixtures are composed of 0.8 mm galvanized steel body fastened to the ceilings by means of bolting and insert between ceiling panel.

For further details, see drawings listed under Type Approval documentation below.

Application/Limitation

Type	Max size (L x W x H) [mm]	Max weight
LED210N	775 x 324 x 125	8 kg
LED220N	1400 x 324 x 125	15 kg
LEDCF210N	681 x 180 x 62	5 kg
LEDCF220N	1291 x 180 x 62	12 kg
LEDCF210S	742 x 226 x 109	8 kg
LEDCF220S	1322 x 226 x 109	15 kg
LEDCW210N	695 x 282 x 104	8 kg
LEDCW220N	1292 x 282 x 104	15 kg
LEDDL	Ø176 x 97 (H)	2.5 kg

The light fixtures are approved for use in approved B-0 class ceilings consisting of panels constructed by not less than 0.8 mm thick galvanized steel sheets covered by minimum 25 mm thickness insulation (density 80 kg/m³) on unexposed side.

Maximum width of panels: 300 mm

Minimum distance between the recesses should not be less than 200 mm.

The manufacturer of ceiling is responsible to document that the structural and thermal integrity is maintained after fitting the light fixtures into the ceiling. The arrangement is subject for approval in each case.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Approval documentation

Test report No. KOMERI-0402-19T5255(E) dated 24 June 2020 from KOMERI, Pusan, Korea.
Test report No. KOMERI-0402-19T5254(E) dated 26 June 2020 from KOMERI, Pusan, Korea.

Drawing No. BO GAP LEDC 01 Rev.1 (8 sheets) dated 5 March 2020 from manufacturer.
Drawing No. BO NO GAP LEDC 01 Rev.0 (7 sheets) dated 13 February 2020 from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation, fire-technical rating.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.