



Certificate No:
TAF00001S3

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Class B Recesses for Light Fittings, Ventilation Units and similar**

with type designation(s)

LED220N series, LED210N series, LED120S series, LED120N series, LED120N series, LED140N series, LED12 series

Issued to

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

is found to comply with

DNV offshore standards

DNV rules for classification – Ships

DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021

Application :

Approved as light fixtures for use in B-15 class ceilings.

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

Issued at **Høvik** on **2022-10-10**

This Certificate is valid until **2027-10-09**.

for **DNV**

DNV local station: **Gimhae Station**

Approval Engineer: **Tessa Biever**

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Jowita Permoda
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.



Form code: TA 251

Revision: 2021-03

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Product description

“LED CD220N series, LED CD210N series, LED CF120S series, LED CF120N series, LED CW120N series, LED CW140N series, LED DL12 series”

Light fixtures installed in cut-outs in B-15 ceilings. The light fixtures are composed of 1 mm galvanized steel body fastened to the ceilings by means of bolting, excepted for the Ø150 mm who has a 0.8 mm galvanized steel body. A 30 mm thick insulation box with density 160 kg/m³ (manufactured by KCC) is placed over the cut outs. For further dimensions of this box please see table 1 below.

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

Application/Limitation

Approved for use in B-15 class ceilings.

Table 1

Type	Max. size (W x L x H) [mm]	Max weight [kg]	Insulation box dimensions (W x L x H)
LED CD220N series	300 x 1272	15	430 x 1420 x 90
LED CD210N series	300 x 647	8	430 x 800 x 90
LED CF120S series	195 x 713	8	430 x 800 x 90
LED CF120N series	144 x 658	5	430 x 800 x 50
LED CW120N series	237 x 637	8	430 x 800 x 120
LED CW140N series	237 x 1245	15	430 x 1420 x 120
LED DL12 series	Ø150 x 95.5	2.5	430 x 550 x 150

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

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

Test report No. AK2022-0173 dated 09 June 2022 from FILK, Gyeonggi-do, Korea.

Test report No. AK2022-0174 dated 09 June 2022 from FILK, Gyeonggi-do, Korea.

Drawing No. B-15 no gap dated 23 March 2022 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'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 DNV-CP-0338, Section 4.