

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the "B" Class divisions, fire integrity

with type designation(s)

B-0 Ceiling with LED downlight DL170 fitting

Issued to

Lightpartner Lichtsysteme GmbH & Co. KG
Bremen, Germany

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2017/306,**

item No. MED/3.11b. SOLAS 74 as amended, Regulation II-2.3.4 & II-2/9 and IMO 2010 FTP Code

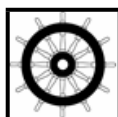
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-07-31**.

Issued at **Hamburg** on **2017-08-01**

DNV GL local station:
Bremerhaven

Approval Engineer:
Pavel Golyshev



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudzus
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

"B-0 Ceiling with LED downlight DL170 fitting"

The ceiling consists of panels assembled together by fitting. Each panel is made as follows:

- The 3-sided (along the longitudinal edges and the side exposed to fire) panel is made by 0.6 mm thick steel sheet.
- The panel is filled with a layer of mineral wool referenced FIREBATTS 100 (ROCKWOOL) of nominal density 96 kg/m³ and thickness 30 mm. The insulation side unexposed to fire is not covered with steel sheet.
- The form of the steel sheet profile along the edge from the side unexposed to fire builds T-profile similar stiffener form (along the full panel length), with the side exposed to fire being the 0.6 mm steel sheet.

The panels are assembled together by fitting without screwing.

In a hole with diameter of 58 mm made in the ceiling, the electrical component LED downlight DL170 is inserted. The DL170 component has dimensions of 45 mm in diameter and 34 mm in height, with the round steel cover plate from the side exposed to fire, fixed with the ceiling by 3 self-tapping screw Ø 4,2 x 16 mm.

Overall panel thickness is 35 mm.

For more details, see test reports with drawings listed under Type Examination documentation below.

Application/Limitation

Approved for use as a horizontal continuous fire retarding division of Class B-0.

Max. panel size: 3050 mm x 300 mm (length x width)

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Type Examination documentation

Test reports EFR-16-E-003272 A dated 22nd of June 2017 (ceiling without fitting) and 13-E-131482 B (ceiling with fitting) dated 20th of July 2017, both from Efectis Test Laboratory, Maizières-lès-Metz, France.

Tests carried out

Tested according to IMO 2010 FTP Code – IMO Resolution MSC 307(88) Part 3 and in compliance with Appendix 4 of IMO 2010 FTP Code Part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG approval number if applicable (see first page).