

EC Type Examination (Module B) Certificate

This is to certify that:

LLOYD'S REGISTER VERIFICATION B.V. (LRV B.V.), designated as a "notified body" under the Ministry of Infrastructure and the Environment - Netherlands Shipping Inspectorate (ILT Scheepvaart) notification, did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the Design Appraisal Document attached hereto.

Manufacturer	Jessup Manufacturing Company
Address	2815 West IL State Route 120, McHenry, Illinois, United States of America (USA)
Reference	Regulation (EU) 2020/1170
Regulation Item (No. & Item Designation)	MED/3.40 Low-Location Lighting Systems (Components Only)
Product Type	LOW-LOCATION LIGHTING SYSTEMS (COMPONENTS ONLY)
Product Description	Photoluminescent thin gauge polyester film – Types: "7500 series Glo Brite®" and "7600 series Glo Brite®"
Specified Standard	IMO Res.A.752(18) ISO 15370 : 2010 Annex A – Testing of photoluminescent materials
Trade Name	7500 series Glo Brite® and 7600 series Glo Brite®

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to and agreed with the notified body named on this certificate. The manufacturer should notify LRV B.V. of any modification or changes to the equipment in order to obtain a valid Certificate.

Should the specified regulations or standards be amended during the period of validity of this certificate, the product is to be re-approved prior being placed on the market and on board vessels to which the amended regulations or standards apply.

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-control phase module (D,E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

Lloyd's Register Verification B.V. (Reg. no. 24247947) a private limited company registered in the Netherlands with registered office at K.P. Van Der Mandelelaan 41 A, 3062MB, Rotterdam.
A member of the Lloyd's Register group.

Lijo Thomas

Senior Surveyor
For and on behalf of Lloyd's Register
Verification B.V. (2814)

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR21189643MB

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document forms part of the Certificate.

EXAMINED DOCUMENTATION

Measurements of photoluminescence with low stimulation according to ISO 15370:2010, RISE Test report No: 105105-21-122986-03rev1 dated 22/04/2021

Measurements of photoluminescence with low stimulation according to ISO 15370:2010, RISE Test report No: 105105-21-122986-01rev1 dated 22/04/2021

Needle Flame Test according to BS EN 60695-11-5:2005 carried out on 7500 series LLL material, report No:436949, dated 2nd March 2021

Needle Flame Test according to BS EN 60695-11-5:2005 carried out on 7600 series LLL material, report No:435951, dated 2nd March 2021

CONDITIONS OF CERTIFICATION

- Approval limited to the luminance properties of photoluminescent thin gauge polyester films – Types: “7500 series Glo Brite®” and “7600 series Glo Brite®”.
- Chromaticity area (colour classification)-

	x	y
7500 series Glo Brite®	0,276	0,575
7600 series Glo Brite®	0,275	0,575

- The LLL system shall provide a luminance of at least 15 mcd/m² measured 10 min after the removal of all external illuminating sources and shall continue to provide luminance values greater than 2 mcd/m² for 60 min. All photoluminescent materials are to be provided with no less than the minimum level of incident/ambient excitation light necessary to charge the material to provide luminance greater than 2 mcd/m² after 60 min as per the below table depending on their widths. PL strips having a width less than 75 mm shall only be used where the excitation illuminance (lx) is increased to achieve the minimum luminance (mcd/m²) to compensate for the reduced width in accordance with the table.

	Width (mm)	Minimum Luminance (mcd/m ²) after 10 minutes	Minimum Luminance (mcd/m ²) after 60 minutes	Minimum required excitation illuminance (lx) for fluorescent tube lamp with a colour temperature of 4100 °K
7500 series Glo Brite®	75	15	2	3.5
	25	135	18	180
7600 series Glo Brite®	75	15	2	3
	25	135	18	100

- The minimum excitation illuminance for the tested light source is to be marked on the product.
- The arrangement of LLL systems on vessels shall be approved by the competent authority. For this purpose, the manufacturer or the installer shall submit the installation plan and description, including certificates which state that the materials and components of PL to the competent authority. On board arrangements in each case to be approved by competent authority at the design stage in accordance with IMO Resolution A.752(18).

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6. After the installation, photoluminescent systems shall be tested at the place of use in accordance with annex B of ISO 15370:2010 at least twice on each deck and the measurements shall be recorded in accordance with annex C of ISO 15370:2010. This measurement shall be repeated and recorded whenever the lighting system, walls, floor or ceiling decorations in the area are substantially changed.
7. It is recommended that, at least once a year, LLL systems be tested on one deck in each main vertical zone. The complete installations should have their luminance tested at least once every five years.
8. The manufacturer shall keep a copy of the EC type-examination certificate, its annexes and additions together with the technical documentation at the disposal of the national authorities for at least 10 years after the wheel mark has been affixed on the last product manufactured and in no case for a period shorter than the expected life of the marine equipment concerned.
9. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products, whether manufactured by themselves or their licensee manufacturers, if agreed by Lloyd's Register, are fully compliant with the relevant statutory regulations and Lloyd's Register Class rules as applicable and designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.
10. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place.
11. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place.
12. Should a change of Place of Production from that stated below be required i.e. where the stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to Lloyd's Register prior to the change taking place. This Certificate will require to be updated for Approval to be maintained.

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PLACE OF PRODUCTION

Jessup Manufacturing Company
2815 West IL State Route 120
McHenry, Illinois
United States of America (USA)

Jessup Manufacturing Company
1701 Rockland Road
Lake Bluff, Illinois
United States of America (USA)



Lijo Thomas
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Fire & Safety, Statutory Discipline Team
UK&I Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Verification B.V. (2814)