



Confirmation of Product Type Approval

Company Name: RAYTEC LTD

Address: UNIT 15 WANSBECK BUSINESS PARK ROTARY PARKWAY WASHINGTON NE63 8QW
United Kingdom

Product: Lighting Fixtures, LED, Hazardous Area

Model(s): FL12, BL24, FL24, FL48, FL72, WL84, WL168 and HP (Standard and Emergency version)

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-1990083-PDA	18-MAY-2020	17-MAY-2025
Manufacturing Assessment (MA)	NA	NA	NA
Product Quality Assurance (PQA)	NA	NA	NA

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Intended Service

For use on ABS classed Vessels and Offshore Facilities in accordance with the listed ABS Rules.

Description

The SPARTAN Flood range is designed specifically for hazardous environments which require high performance, high reliability, White-Light illumination.

Available in both standard and emergency versions and using Raytec's field-proven, long-life LED technology, SPARTAN floodlights are ATEX and IEC Ex approved for all Zone 1 and Zone 2 applications and rated for T4, T5 and T6 environments.

Spartan FL** Luminaire are four size luminaires available in the range FL12 (small), FL24 (medium), FL48 (large) and FL72 (extra large).

Spartan LED Linear Luminaires are two size luminaires available WL84 (small) and WL168 (large). BL24, Bulkhead is designed for mounting in any orientation using steel brackets at the back of luminaire.

Spartan HP luminaires are available with floodlight (HPFL) or highbay (HPBY) mounting brackets and can deliver between 10K lumens and 25K light output.

All variants are offered as LV (Low Voltage); rated at 18V to 30V AC / 18V to 40V DC or HV (High Voltage); rated at 110V to 254V AC. The HV luminaires may also be supplied with a battery pack and inverter to enable operation in 'emergency' mode.

Spartan FL** Luminaire, Enclosure: IP66 & IP67

EU Type Certificate (CML 13ATEX3007 issue 16) and IECEx Certificate (IECEX CML 14.0001 issue 12)

- FL12, FL24, FL48, FL72: Ex II 2 GD, Ex e mb IIC T6 Gb or Ex e mb IIC T5 Gb or Ex e mb IIC T4 Gb,

Ex tb IIIC T 82°C Db, Ta = -52°C to +55°C

- BL24 Bulkhead: Ex II 2 GD, Ex e mb IIC T6 Gb or Ex e mb IIC T5 Gb or Ex e mb IIC T4 Gb, Ex tb IIIC T 98°C Db, Ta = -52°C to +55°C

EU Type Certificate (CML 17ATEX4231 Issue 1) and IECEx Certificate (IECEx CML 17.0135 Issue 1)

- FL12,FL24,FL48, FL72: Ex II 3 GD, Ex ec mc IIC T4 Gc, Ex tc IIIC T 82°C Dc, Ta = -50°C to +55°C

- BL24 Bulkhead: Ex II 3 GD, Ex ec mc IIC T4 Gc, Ex tc IIIC T 98°C Dc, Ta = -50°C to +55°C

Spartan LED Linear Luminaires, Enclosure: IP66 & 67

EU Type Certificate (CML 14ATEX3119 Issue 11) and IECEx Certificate (IECEx CML 15.0001 issue 10)

- Standard: Ex II 2 GD, Ex e mb IIC T4/T5 Gb, Ex tb IIIC T75°C Db, Ta = -40°C to +55°C / Ex e mb IIC T6 Gb, Ex tb IIIC T65°C Db, Ta = -40°C to +45°C

- Emergency: Ex II 2 GD, Ex e mb IIC T5 Gb, Ex tb IIIC T76°C Db, Ta = -20°C to +50°C / Ex e mb IIC T5 Gb, Ex tb IIIC T76°C Db, Ta = -20°C to +50°C

EU Type Certificate (CML 15ATEX4138 Issue 7) and IECEx Certificate (IECEx CML 15.0068 Issue 7)

- Standard: Ex II 3 GD, Ex nA mc IIC T4/T5 Gc, Ex tc IIIC T80°C Db, Ta = -40°C to +60°C / Ex nA mc IIC T6 Gc, Ex tc IIIC T65°C Dc, Ta = -40°C to +45°C

- Emergency: Ex II 3 GD, Ex nA mc IIC T4/T5 Gb, Ex tc IIIC T75°C Db, Ta = -20°C to +50°C / Ex nA mc IIC T5 Gc, Ex tb IIIC T65°C Dc, Ta = -20°C to +40°C

Spartan HP Luminaires, Enclosure: IP66 & IP67, Temperature range: -50°C to +50°C

EU Type Certificate (CML 17ATEX1148 Issue 2), Marked: Ex II 2 G D, Ex db eb mb op is IIB+H2 T4 Gb or Ex db eb mb op is IIB T4 Gb or Ex tb op is IIIC T104°C Db

EU Type Certificate (CML 17ATEX4149 Issue 1), Marked: Ex II 3 G D, Ex ec nR op is IIC T4 Gc or Ex tc op is IIIC T104°C Dc

IECEx Certificate (IECEx CML 17.0074 Issue 2), Marked: Zone 1 version - Ex db eb mb op is IIB+H2 T4 Gb or Ex db eb mb op is IIB T4 Gb or Ex tb op is IIIC T104°C Db and Zone 2 version - Ex ec nR op is IIC T4 Gc or Ex tc op is IIIC T104°C Dc

All Emergency Variants have a lower ambient of -20 Degree only.

Ratings

LV (Low Voltage); rated at 18V to 30V AC / 18V to 40V DC

HV (High Voltage); rated at 110V to 254V AC 110 v to 254 V

Tamb up to -52°C to +55°C

Service Restrictions

1. 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.

2. Equipment has been tested to the applicable IEC 60079 series standards by an independent laboratory listed on the United States Coast Guard Maritime Information Exchange Accepted Laboratories list.

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Drawing No. Correspondence, PDA-Application-Form 2020

Drawing No. DECLARATION OF CONFORMITY, DECLARATION OF CONFORMITY

Drawing No. CML 13ATEX3007, EU Type Examination Certificate issue 16

Drawing No. CML 14ATEX3119, EU Type Examination Certificate issue 11

Drawing No. CML 15ATEX4138, EU Type Examination Certificate issue 7

Drawing No. CML 17ATEX1148, EU Type Examination Certificate issue 2

Drawing No. CML 17ATEX4149, EU Type Examination Certificate issue 1

Drawing No. CML 17ATEX4231, EU Type Examination Certificate issue 1

Drawing No. IECEX CML 14.0001, IECEX Certificate of Conformity, Revision: 12

Drawing No. IECEX CML 15.0001, IECEX Certificate of Conformity, Revision: 10

Drawing No. IECEX CML 15.0068, IECEX Certificate of Conformity, Revision: 7

Drawing No. IECEX CML 17.0074 issue 2 signed, IECEX Certificate of Conformity, Revision: 2

Drawing No. IECEX CML 17.0135, IECEX Certificate of Conformity, Revision: 1

Drawing No. SPARTAN Bay Light Zone 1 Datasheet IIB-H2_EL, SPARTAN Bay Light Zone 1 Datasheet IIB-H2_EL

Drawing No. SPARTAN High Power Flood Zone 1 Datasheet IIB-H2_EL, SPARTAN High Power Flood Zone 1 Datasheet IIB-H2_EL

Support documentation from previous reviews:

Drawing No. 910-M-0094, SPX SPARTAN Floodlight Range - Installation Guide, Revision: D, Pages: -

Drawing No. 910-SD-001, Spartan Led Floodlight Ex Em, Revision: D, Pages: -

Drawing No. 920-SD-0007 rev A sht 3, 920-SD-0007 rev A sht 3, Revision: -, Pages: -

Drawing No. 920-SD-0007 rev B sht 1, 920-SD-0007 rev B sht 1, Revision: -, Pages: -

Drawing No. 920-SD-0007 rev B sht 2, 920-SD-0007 rev B sht 2, Revision: -, Pages: -

Drawing No. 940-SD-0001 rev A, 940-SD-0001 rev A, Revision: -, Pages: -

Drawing No. CML 13ATEX3007 issue 7 FL,BL Spartan SPX, CML 13ATEX3007, Revision: 9, Pages: -

Drawing No. CML 13ATEX3007 issue 7 FL,BL Spartan SPX, CML 13ATEX3007, Revision: -, Pages: -

Drawing No. IECEX CML 14_0001 issue 2 FL,BL Spartan SPX, IECEX CML 14_0001 issue 2, Revision: 2, Pages: -

Drawing No. R705A_00, evaluation report, Revision: -, Pages: -

Drawing No. Spartan extra large flood - FL72, Spartan extra large flood - FL72, Revision: -, Pages: -

Drawing No. 910-M-0094, SPX SPARTAN Floodlight Range - Installation Guide, Revision: C, Pages: -

Drawing No. 910-SD-0001 rev A Pages 1 to 4 approved, SPARTAN LED FLOODLIGHT, Em em 910-SD-0001, Revision: -, Pages: -

Drawing No. 920-M-0036, SPX SPARTAN Linear Range - Installation Guide, Revision: B, Pages: -

Drawing No. 940-M-0003, SPX SPARTAN Floodlight Range - Installation Guide, Revision: B, Pages: -

Drawing No. CML 13ATEX3007 issue 7 FL,BL Spartan SPX, CML 13ATEX3007 issue 7, Revision: -, Pages: -

Drawing No. CML 14ATEX3119 Issue 1 LED Linear Spartan, CML 14ATEX3119 Issue 1, Revision: -, Pages: -

Drawing No. IECEx CML 14_0001 issue 2 FL,BL Spartan SPX, IECEx CML 14_0001 issue 2, Revision: -, Pages: -

Drawing No. IECEx CML 15 CML 15.0001, IECEx CML 15.0001 Issue 1, Revision: -, Pages: -

Drawing No. R325A00, Evaluation Report for Spartan FL** Luminaire, Revision: -, Pages: -

Drawing No. R34A_01 Evaluation Report, Evaluation Report for Spartan FL** Luminaire, Revision: -, Pages: -

Drawing No. R423A_00, Evaluation Report for both certificates, Revision: -, Pages: -

Drawing No. SPARTAN Bulkhead BL24, BL 24 datasheet, Revision: -, Pages: -

Drawing No. SPARTAN Flood - WL12, WL12 datasheet, Revision: -, Pages: -

Drawing No. SPARTAN Flood - WL24, WL24 datasheet, Revision: -, Pages: -

Drawing No. SPARTAN Flood - WL48, WL48 datasheet, Revision: -, Pages: -

Drawing No. SPARTAN Linear - WL168, WL168 datasheet, Revision: -, Pages: -

Drawing No. SPARTAN Linear - WL84, WL84 datasheet, Revision: -, Pages: -

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 17/May/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.

ABS Rules

- Rules for Condition of Classification (2020): 1-1-4/7.7, 1-1-A3 & A4
- Marine Vessel Rules (2020): 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11.1, 4-8-3/1.17, 4-8-3/13.3
- Rules for Conditions of Classifications - Offshore Units and Structures (2020): 1-1-4/9.7, 1-1-A2 & A3
- Mobile Offshore Units Rules (2020): 6-1-1/9, 6-1-1/13; 4-3-1/9, 4.3.1/11, 4-3-1/15, 4-3-1/17.1
- Rules for Condition of Classification - High Speed Crafts (2020) 1-1-4/11.9, 1-1-A2 & A3
- High Speed Crafts Rules (2020): 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11.1, 4-8-3/1.17, 4-8-3/13.3

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'Joseph W. ...'.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 17-Nov-2020 5:06

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

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 prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.