

## Type Approval Certificate

*This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.*

This certificate is issued to:

<b>PRODUCER</b>	Ocean-LED
<b>PLACE OF PRODUCTION</b>	Unit 1, Phoenix Business Park Brindley Road Dodwells Bridge Hinckley LE10 3BY United Kingdom (UK)
<b>DESCRIPTION</b>	Underwater Lights
<b>TYPE</b>	Surface mount, through hull, mould-in and weld-in  1000 series 2000 series 3000 series
<b>APPLICATION</b>	Marine, offshore and industrial installations
<b>SPECIFIED STANDARD</b>	Manufacturer's Specification IEC 60529
<b>RATINGS</b>	Input voltage (All models): 12 V and 24 V (d.c) 110 V and 230 V (a.c.)  Enclosure: IP 68  Hydrostatic Pressure: 10 bar / 10 minutes
<b>Certificate No.</b>	06/00038
<b>Issue Date</b>	01 May 2006
<b>Expiry Date</b>	30 April 2011
<b>Sheet</b>	1 of 2



M.H.A. Rufaie  
London Plan Approval  
Lloyd's Register EMEA

Lloyd's Register EMEA  
71 Fenchurch Street, London EC3M 4BS

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*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The Design Appraisal Document No. 06/00038 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

Certificate No.	06/00038
Issue Date	01 May 2006
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Sheet	2 of 2



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**DESIGN APPRAISAL DOCUMENT**

Date 01 May 2006	Quote this reference on all future communications LPA/DAPP/ECE/TA/W00977512/MHR/O- 70427
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**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.**

**Issued to: OCEAN-LED**  
**for: UNDERWATER LIGHTS**  
**Type: SERIES 1000, 2000 AND 3000**  
**TYPE APPROVAL CERTIFICATE No. 06/00038**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

**APPROVAL DOCUMENTATION**

Request form	02.09.2005
Ocean-LED letter	03.09.2005
LR Liverpool fax message	18.04.2006
Ocean-LED Installation Manual	03.2006
Ocean-LED Thru Hull	Undated

**Data Sheets**

Ocean-LED Advertising and Literature	18.01.2006
Ocean-LED Products	05.09.2005
Thermally Conductive Epoxy Twin Pack (CP0122 v2.0 RS 160-8469, 552-668)	01.10.2003
Loctite (CP0126 v3.0 RS 408-4169, 409-1476, 448-4547, 454-7452, 496-091, 514-587)	15.08.2003
Epoxy Potting Compound (CP0237 v2.0 RS 199-1468)	01.10.2003
Polyurethane Resin UR5041 (CP0380 v2.0 RS 160-8481)	01.10.2003
Permabond (UV610)	21.02.2006
Multicore Solders (CP1040 v1.0 RS 184-9985, 184-9991)	13.10.2004
IPA Aerosol (CP0430 v2.0 RS 389-1792, 693-775)	01.07.2003
Techcon (TSI 0256B)	04.10.2003
Thermally Conductive Epoxy -White (CP0815 v.2.0 RS 422-8218)	01.10.2003

**TEST REPORTS**

Hydrostatic Pressure - FLUKE. Logging Form (Fluke 189 V2.02 0088980047)	07.04.2006
LR Liverpool inspection report (W00977512)	07.04.2006

**Supplementary Type Approval Terms and Conditions**

*Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.*

*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*



**Lloyd's Register EMEA (London Office)**  
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## DESIGN APPRAISAL DOCUMENT

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### Supplementary Type Approval Terms and Conditions (cont.)

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.*

M.H.A. RUFAlE  
Senior Electrical Engineer  
Electrical and Control Engineering/Type Approval  
London Plan Approval / Lloyd's Register EMEA  
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**Part 1B**

**Subject: Electrical Equipment (Not Environmentally Tested)**

**Product: Lamps (Part 1B)**

Producer/Licence No.	Description of Product				Cert. No.
	Type	Details of Approval	Application	Remarks	
Ocean-LED, Unit 1, Phoenix Business Park, Bridley Road, Dodwells Bridge, Hinckley, LE10 3BY, United Kingdom (UK).	1000 Series 2000 Series 3000 Series	Underwater Lights Surface mount, thru-hull, mould-in and weld-in Input voltage (All models): 12 V and 24 V (d.c.) 110 V and 230 V (a.c.) Enclosure: IP 68 (IEC 60529) Hydrostatic Pressure: 10 bar / 10 minutes	Marine, offshore and industrial installations	Expires: 30 April 2011	06/00038

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