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EPSILON

1 **ATEX Category 3 Certificate**

2 Equipment intended for use in potentially explosive atmospheres

3 Certificate Number: EPSILON 06 ATEX 2015

4 Equipment: ML Series Marine Signal Lanterns ML300, ML155 and ML140

5 Manufacturer: Tideland Signal Corporation

6 Address: 4310 Directors Row
Houston
Texas
TX 77092
USA

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 Epsilon certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the directive 94/9/EC.

The examination and test results are recorded in confidential report no RETS(A)1698/A/1.

Epsilon accepts no responsibility for the accuracy or completeness of declarations made by the manufacturer and detailed in the above report, on which aspects of the evaluation may be based.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

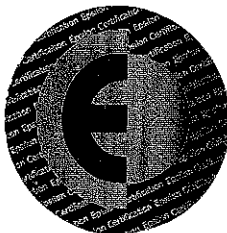
EN60079-15:2005

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 Certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC

12 The marking of the equipment shall include the following:

 II 3 G EEx nL IIA T See schedule for T class



On behalf of Epsilon

S D'Henin
Certification Manager

Date: 29 June 2006

Certificate 06 ATEX 2015

This certificate may only be reproduced in its entirety and without any change, schedule included.
The certificate is only valid when it carries an original signature and holographic security label.
For help or assistance relating to this certificate, contact cs@epsilon-ltd.com.

Epsilon Compliance Services Limited is a trading name of Epsilon Technical Services Limited



ATEX Category 3 Certificate Schedule

Certificate Number: EPSILON 06 ATEX 2015

Equipment Description:

The ML-Series lanterns are a series of electrically powered Marine Signal Lanterns which are outfitted with lamps and a flasher/lamp changer. They are used as aids to navigation on offshore structures (i.e., drilling barges, channel markers, onshore light stations). They are to be operated from 6 to 15 V storage type batteries.

Models ML140 and ML155 are rated 15 V dc, 0.77 A maximum (22 V dc maximum with lamp power control, 36 V dc maximum with Omnibus flasher/timer circuit). They have a compression moulded UV stabilised fibre glass and polyester resin base and a single piece injection moulded acrylic lens. They have a maximum diameter of 257mm and a maximum height of 487mm.

Model ML300 is rated 15 V dc, 2.03 A maximum (22 V dc maximum with lamp power control, 36 V dc maximum with Omnibus flasher/timer circuit). It consists of a compression moulded UV stabilised fibre glass and polyester resin base and a single piece injection moulded acrylic lens. It has a maximum diameter of 419mm and a maximum height of 778mm.

Drawings:

Number	Rev	Sheet	Date	Title
010.1110-SA	C	1 of 1	03 MAY 99	System Assembly – ML-140 Lantern W/ TF-3B MP/Omnibus Flasher/Lampchanger
010.1111-SA	C	1 of 1	03 MAY 99	System Assembly – ML-155 UL Lantern W/TF-3B MP/Omnibus Flasher/Lampchanger
010.1112-DWG	F	1 of 1	16 NOV 04	ML-300 UL Lantern W/TF-3B MP/Omnibus Flasher/Lmpchgr
630.1073-DWG	AB	1 of 1	05 DEC 02	Assy, Lantern ML-300 Series "E" (UL)
630.1102-□	F	1 of 1	10 NOV 97	Assembly – (UL) ML-155 Signal Lantern
630.1181-□	B	1 of 1	30 DEC 97	Assy: ML-140 UL Signal Lantern
751.1047-DWG	D	1 of 1	08 JUL 03	TF-3B Lampchanger Omnibus II
204.1207-DWG	A	1 of 1	26 April 06	NAMEPLATE, ATEX C-3 ML-300 LANTERN
204.1208-DWG	A	1 of 1	26 April 06	NAMEPLATE, ATEX C-3 ML-140/155 LANTERN
204.1165-00	C	1 of 2	19 Jan 93	NAMEPLATE, ML-300 UL MP/OMNI, TEMP CAUTION
204.1164-00	A	1 of 2	29 Nov 90	NAMEPLATE, ML140/155 MP/OMNI UL
204.1164-00	A	2 of 2	29 Nov 90	ARTWORK: ML140/155 MP/OMNI UL

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ATEX Category 3 Certificate Schedule

Certificate Number: EPSILON 06 ATEX 2015

Conditions of Certification

T classes for each of the lanterns are as follows:

Lantern Model	Maximum Input voltage	T Class	Lamp type
ML140/155	38VDC	T215°C	0.55A
ML140/155	38VDC	T280°C	0.60 or 0.77A
ML300	38VDC	T3	12.0V S11/CCB 1.90A
ML300	38VDC	T215°C	12V 0.25 A or 0.55A or 0.77A or 1.15A
ML300	38VDC	T215°C	6.2V 0.25A or 0.48A or 0.70A or 0.92A
ML300	38VDC	T280°C	12V 1.35A or 2.03A
ML300	38VDC	T280°C	6.2V 1.40A

Special Conditions of Certification:

None

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Epsilon

Supplement to EC - Type Examination Certificate

Certificate Number: 06 ATEX 2015 Dated: 29 June 2006
Variation Number: 01
Report Number : RETS(A)1698/A/1V1

Variation Detail:

To Permit: The following models MLED140, MLED155 and MLED300 which incorporate a LED lamp module. Rated at 36V dc input , 0.8A maximum input current and 7W Maximum power. These models may include an optional GPS receiver module part number 5301592-00

Descriptive Documents:

Number	Rev	Sheet	Date dd/mm/yyyy	Title
010.1165-CTL	B	1 of 1	08/02/2008	Lantern, MLED-140 W/Maxihalo-60 Flasher
010.1166-CTL	B	1 of 1	08/02/2008	Lantern, MLED-155 W/Maxihalo-60 Flasher
010.1167-CTL	B	1 of 1	08/02/2008	Lantern, MLED- 300 W/Maxihalo-60 Flasher
751.1097-CTL	B	1 of 6	16/01/2008	Flasher Assembly Maxihalo-60, MLED-140/155/300

Additional Conditions of Certification:

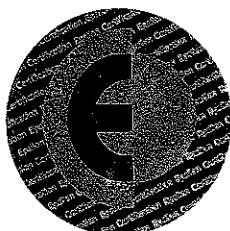
T classes for each of the lanterns are as follows:

Lantern Model	Maximum Input voltage	T Class	Lamp type
MLED300	36VDC	T5	MaxiHalo-60 LED
MLED155	36VDC	T4	MaxiHalo-60 LED
MLED140	36VDC	T4	MaxiHalo-60 LED

Coding is  II 3 G Ex nA IIA T4/5 (-40°C ≤Ta ≤60°C)

Additional Special Conditions for Safe Use:

Switch off power before opening enclosure to adjust configuration switches



On behalf of Epsilon

S D'Henin
Director

Date: 14 February 2008

