ZONE 1 SICE TYPE LS-10NM-L-1

10 NAUTICAL MILE MAIN WHITE SIGNAL LIGHT
(ALSO SUITABLE FOR >3 NAUTICAL MILE RED SUBSIDIARY SIGNAL LIGHT)

Main white lantern, led type, with very high efficiency & long life. It is suitable for marking the fixed obstacles in the sea, in compliance with IALA recommendations, where a range of 10 nautical miles is required. Made with one tier equipped with 48 leds that are driven with a "U" coder & power circuit. This lantern assures an excellent vertical and horizontal light distribution, with a "white optimum colour", for all power conditions. The construction is very rugged and is sealed for life. No maintenance is required during total life time. Inside this lantern only the LED tier is installed, no other devices and no moving components are present. The photocell and "U" coder driver circuit are placed externally, so the reliability of this equipment is very high. The photometric data have been tested by Italian Institute in compliance with IALA chromaticity and 90th percentile intensity standards. It can be used also as "subsidiary red signal light". In this case the leds mounted are of same type but with red colour.

Main advantages:

- *Very long life. Expected minimum 40 years of working time, with "U" coder and with lumen output in compliance with IALA Recommendations. After this timing, SICE suggests to change with a new lantern, even if it is still working.*
- *Available as "main & reserve system", two separated led lines system (optional).*
- *No maintenance is required during all life. The lantern is sealed for life and body is in AISI 316L stainless steel.*
- *Very low energy consumption and excellent horizontal & vertical light distribution.*
- *Excellent value for money.*
- *Reduced connection cable section.*
- *Reduced dimensions.*
- *No moving parts placed inside the lanterns. Only the LEDs are placed inside this equipment.*
- *No electronic control circuits are placed inside the lantern. The constant current driver and coder circuits are placed in a suitable junction box placed next to the lantern, in the support pole or in the centralized control panel.*

MAIN TECHNICAL DATA:

-Control circuit driver & coder supply voltage	:	Standard 24Vdc (range from 21 to 33Vdc) (available others voltage on request)
-Single LED line supply voltage (standard system)	:	White 150Vdc; Red 100Vdc (+-5% approx.)
-Double LED lines supply voltage (option for main & reserve)	:	White 75+75V; Red 50Vdc (+-5% approx.)
-10 n. mile (white) expected power	:	25W peak approx. (average 3,5W approx. during night) (*)
->3 n. mile (red) expected power	:	10W peak approx. (average 1,4W approx. during night) (*)
-10 n. mile effective intensity	:	>1500cd (during dot) (*)
->3 n. mile (red) effective intensity	:	>150cd (during dot) (*)
-Vertical divergence	:	+/- 3,6 degrees to 50%; +/- 9 degrees to 10%
-Horizontal divergence	:	360 degrees (Uniformity within +-6%)
-Expected life time minimum	:	>50.000 working hours (79 years approx. with "U" code) (*)
-Lumen maintenance	:	90% at 30.000 hours (47 years approx. with "U" code) (*)
-Construction mode	:	Sealed for life, maintenance free
-Working temperature range	:	From -20° to +50°C
-Photocell	:	External
-Synchronization	:	Possible
-(*) Expected IALA "U" CODE	:	0,4" on; 0,5" off; 0,4" on; 0,5" off; 1,2" on; 12" off
-Marking	:	Ex II 2G Ex d IIB T6 Gb IP66
-ATEX Certificate Number	:	SEV 13 ATEX 0101
-IECEx Certificate Number	:	INE 14.0048X

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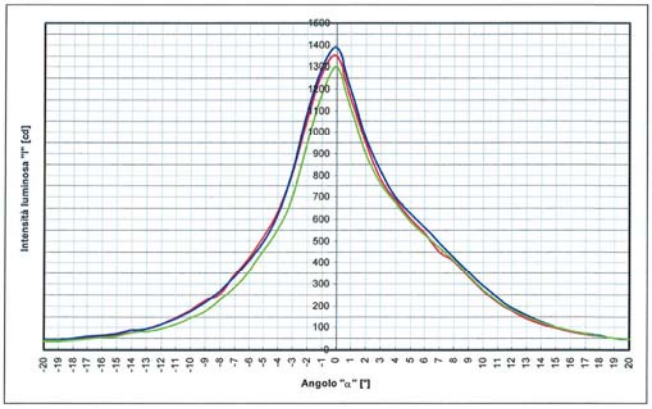
Vertical profile



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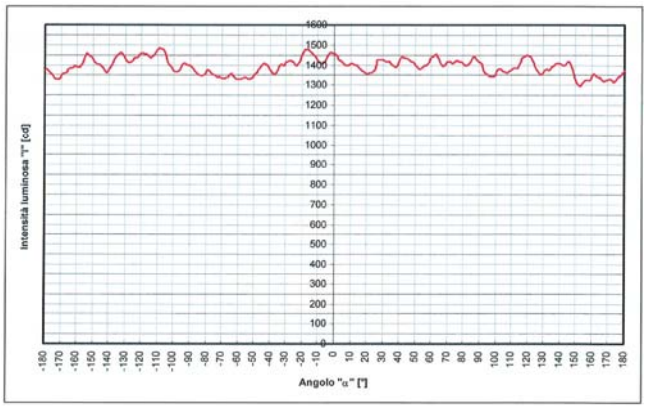

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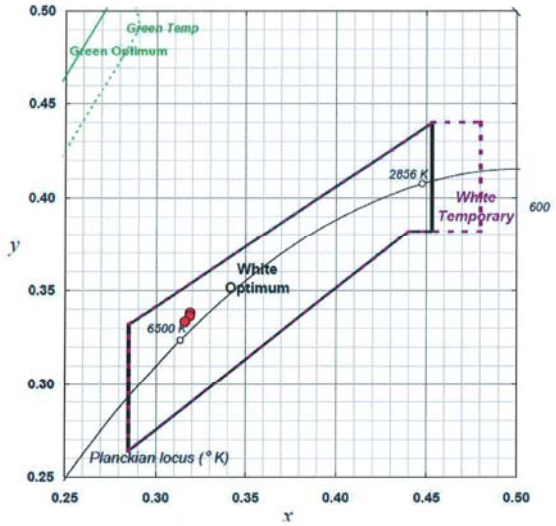
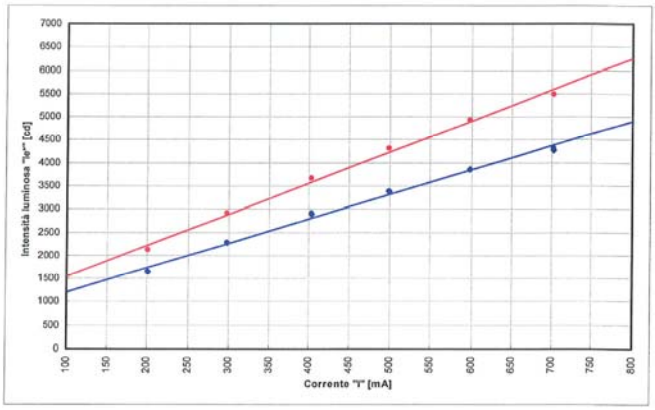
Chromatic coordinates



Effective intensity at the corresponding led current value with"U" code standard IALA: red = 1,2" (line) - blue = 0,4" (dot)



THE PHOTOMETRIC DATA ARE IN COMPLIANCE WITH IALA CHROMATICITY AND 90TH PERCENTILE INTENSITY STANDARDS

MAIN MECHANICAL DATA:

-Body & pedestal material	:	AISI 316L Stainless Steel polished, not painted
-Cover cylinder type	:	Methyl Methacrylate (Acrylic), clear, non flammable
-Cover cylinder external diameter	:	300mm
-Cover cylinder thickness	:	10mm
-Cover cylinder weather resistance	:	Exceptional at each climatic condition
-LED manufacturer	:	OSRAM
-LED quantity	:	48
-LED Fresnel lenses material	:	PMMA
-Connection junction box (if installed)	:	Glass reinforced polyester, IP66 minimum, ATEX Certified
-Signal light dimensions	:	330mm (base diameter) x 388mm (height), including anti-winged system
-Signal light weight	:	25kg
-Signal light mechanical protection degree	:	IP66

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LED LANTERN AND SUPPORT POLE
TYPICAL ASSEMBLING PICTURES

OPTION FOR "MAIN & RESERVE LINES" CONFIGURATION

This equipment can be supplied with the LED tiers connected to two overlapped and separated lines that are powered through two separated driver circuits, one for each line. During normal working both lines are normally powered, so the consumption and photometric data are in compliance with the above described and showed. Instead, when an failure occurs, at one led line or at one driver circuit, the remaining driver circuit increases automatically the working current of the led line that is still working and restores the lumen output in compliance with the IALA Recommandations. So, in this configuration, the failure of one line is not serious because the working mode of lantern remains still compliant. During this phase, when one line is failed, the lantern consumption increases of 40% approx and an remote control of failure is available from control circuit.

Document can be subjected to modifications, without prior notice