



Correct Positioning

NavILED360 PRO All Round Lamps must be installed as follows:

When the lamp operates, the light should not be obstructed or concealed by masts, topmasts or structures, i.e. Installed on the highest point of a vessel so the light arc is unbroken.

All Round lamps must be positioned as close as practicable to the fore and aft centre line of a vessel. (see Fig.1)

The All Round white lamp on a power driven Vessel less than 12m in length shall be installed at least one metre higher than the sidelights.

The lamp must be installed so that the horizontal surface of the base is parallel to the vessel's water line. (See Fig.2)

Fig. 1 On the fore and aft centre line.

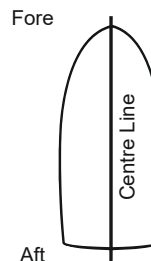
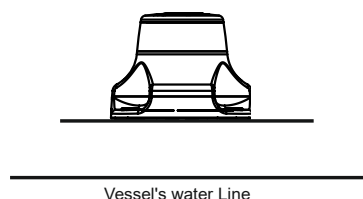


Fig. 2 Installed with base parallel to vessel's water line.



Common applications for All Round White, Red and Green signal lamps.

WHITE -Vessels of less than 50m at anchor
must exhibit a white all-round light

WHITE - Vessels of less than 7m and max. 7 knots
must exhibit a white all-round light

RED/RED/WHITE - Vessels aground
must exhibit the white light for a vessel at anchor and two all round red lights in a vertical line where they can best be seen.

RED/RED - Vessels not under command (NUC)
must exhibit two all round red lights in a vertical line where they can best be seen.

RED/WHITE/RED - Vessels restricted in their ability to manoeuvre (RAM)
must exhibit three all round lights in a vertical line where they can best be seen, the highest and lowest being red and the middle white.

RED/RED/RED - Vessels constrained by their draught
may, in addition to the port, starboard, and stern and

masthead lights required, exhibit three all round red lights in a vertical line.

GREEN/WHITE - Vessels engaged in trawling
A vessel trawling, by which is meant the dragging through the water of a dredge net or other apparatus, must exhibit two all round lights in a vertical line, the upper being green and the lower white.

RED/WHITE - Vessels engaged in fishing, other than trawling
must exhibit two all round lights in a vertical line, the upper being red and the lower white.

WHITE/RED - Pilot vessels
A vessel engaged in pilotage duties must exhibit at or near the masthead, two allround lights in a vertical line, the upper being white and the lower red.

RED/WHITE/RED - Vessel engaged in diving operations
must exhibit three all-round lights in a vertical line where they can best be seen.
The highest and lowest being red and the middle white.

Definitions

“Not under command” means a vessel which through some exceptional circumstance is unable to manoeuvre as required by the collision prevention rules and is therefore unable to keep out of the way of another vessel.

“Restricted in their ability to manoeuvre” means a vessel which from the nature of her work is restricted in her ability to manoeuvre as required by the collision prevention rules and is therefore unable to keep out of the way of another vessel.

This shall include but not be limited to a vessel engaged in:

- laying, servicing or picking up a navigation mark, submarine cable or pipeline;
- dredging, surveying or underwater operations;
- replenishment or transferring persons, provisions or cargo while underway;
- mine clearance operations;
- a towing operation that severely restricts the towing vessel and her tow in their ability to deviate from their course.

“Constrained by her draught” means a power-driven vessel which, because of her draught in relation to the available depth and width of navigable water, is severely restricted in her ability to deviate from the course she is following.



Vision and Innovation

INSTRUCTION SHEET: NavILED360 PRO Surface Mount 2NM All Round Red/Green/White Lamp

for: **2LT 980 910-xxx**

Hella marine LED Navigation Lamps offer many advantages over conventional bulb lamps. Significantly reduced power consumption, ultra long life and high tolerance to shock and vibration make the LED lamps the ideal choice for the harsh marine environment.

The Hella marine NavILED360 PRO series are Precision Optical Instruments, tested and type approved to comply with international maritime regulations. They are covered by a 5 year warranty.

Marine Equipment Directive Declaration of Conformities are available at www.hellamarine.com

Housing Material	UV resistant high impact acrylic lens
Minimum Visible Distance	2 Nautical Miles
Cable	Pre-wired with twin core marine cable
Operating Voltage	Multivolt™ 12/24V DC (9-32V DC)
Power Consumption	2W (0.12A @ 12V / 0.06A @ 24V)
Degree of Protection	IP67 - Completely Sealed
Weight (with cable)	120g



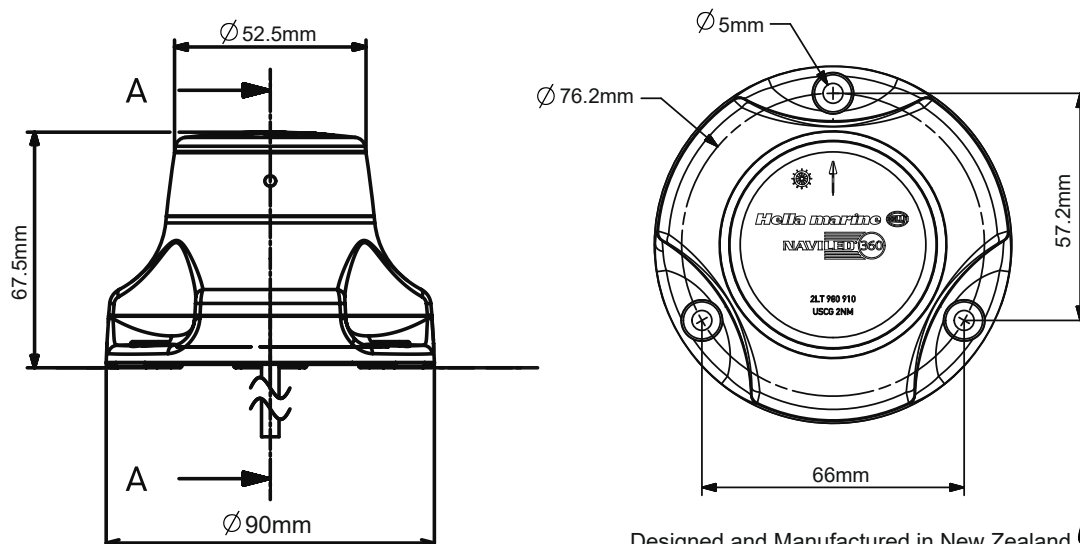
Electromagnetic Compatibility (EMC)

This LED lamp is an electronic device. The electrical circuits contain components that suppress possible interference, both emission as well as susceptibility, to the limits prescribed in international regulations.

Wiring colour coding

LED modules are polarity conscious. This lamp is protected against reverse polarity connection, reverse polarity will not damage this product but will inhibit its function. HELLA marine recommends wire connections be soldered, and heat shrink tubing applied to seal the joint. Notes : Lamp must be protected by a fuse suitable for the low current draw of this product. Calculate fuse rating from spec table above. Do not attempt to open, no serviceable parts inside.

Colour	Connect to
Black	Negative (-ve)
Red	Signal (+ve)



Designed and Manufactured in New Zealand



460 965-04 / 04.22



NaviLED360 Integrated Timer

To ensure long term safety, this NaviLED360 lamp is equipped with a timing circuit.

Once the lamp has operated for a total time of 10,000 hours, the lamp activates 'Service Mode'.

Service Mode is indicated by the lamp flashing at a rate of 60 flashes per minute for 15 seconds as soon as the lamp is switched on. This will occur for 15 seconds every time the lamp is switched on until the unit has operated for another 2000 hours.

After 2000 hours the Service Mode flash rate doubles to 120 flashes per minute for 15 seconds as soon as the lamp is switched on.

To ensure the lamp meets the light output criteria of its certification, Hella marine recommends the lamp be replaced as soon as it enters this 2000 hours Service Mode stage.

By normal recreational boating standards, even with regular night sailing, 'Service Mode' will hardly ever be reached.

Beschreibung der NaviLED360 Zeitschaltung

Um Ihre langjährige Sicherheit auf See zu gewährleisten, wird jede NaviLED360 mit einer Zeitschaltung ausgestattet.

Wenn die Lampe für eine Gesamtzeit von 10.000 Stunden betrieben wurde, aktiviert die Lampe ihren Service-Modus.

Ein 15 Sekunden langes Blinken (60/min) beim Einschalten der Laterne signalisiert dem Bootsführer, daß die Laterne auf Service-Modus geschaltet hat. Nach der Signalisierung des Service-Modus schaltet die Laterne zurück auf Dauerlicht. Nach weiteren 2.000 Betriebsstunden im Service-Modus verdoppelt sich die Blinkfrequenz der Laterne auf 120 Blinksignale pro Minute.

Um sicher zu gehen, daß die Navigationsbeleuchtung auch weiterhin die erforderlichen Tragweiten erreicht, wird dem Bootsführer empfohlen, spätestens jetzt das komplette Lichtmodul der Laterne zu ersetzen.

Der Service-Modus sollte erst nach mehreren zehntausend Betriebsstunden auftreten und wird bei Sportbooten, selbst bei regelmäßigem Nachtsegeln, mit hoher Wahrscheinlichkeit nie erreicht werden.

Description du système de minutage des feux de navigation NaviLED360

Pour satisfaire aux exigences de la sécurité en mer sur le long terme, chaque feu de navigation NaviLED360 est équipé d'un minuteur.

Lorsque la durée d'utilisation du feu atteint 10 000 heures, celui-ci passera en «Service Mode» (mode entretien).

Lorsque le feu passe en «Service Mode», celui-ci scintille à l'allumage pendant 15 secondes à raison de 60 flashes / minute. Cet avertissement initial de 15 secondes se reproduira à chaque allumage et ce pendant les prochaines 2000 heures d'utilisation.

Une fois cette période de 2000 heures écoulée, la fréquence de scintillement doublera pour atteindre 120 flashes / minute pendant les 15 secondes qui succèdent à l'allumage.

Pour garantir que l'intensité lumineuse du feu de navigation soit conforme à sa certification, Hella marine recommande que celui-ci soit remplacé dès lors qu'il entre dans la phase de «Service Mode» des 2000 heures.

A noter que pour les navires de plaisance, ce stade ne sera probablement jamais atteint, même lorsque de nombreuses navigation de nuit sont effectuées.