

**OPTONAVAL
UNL
SYSTEM**

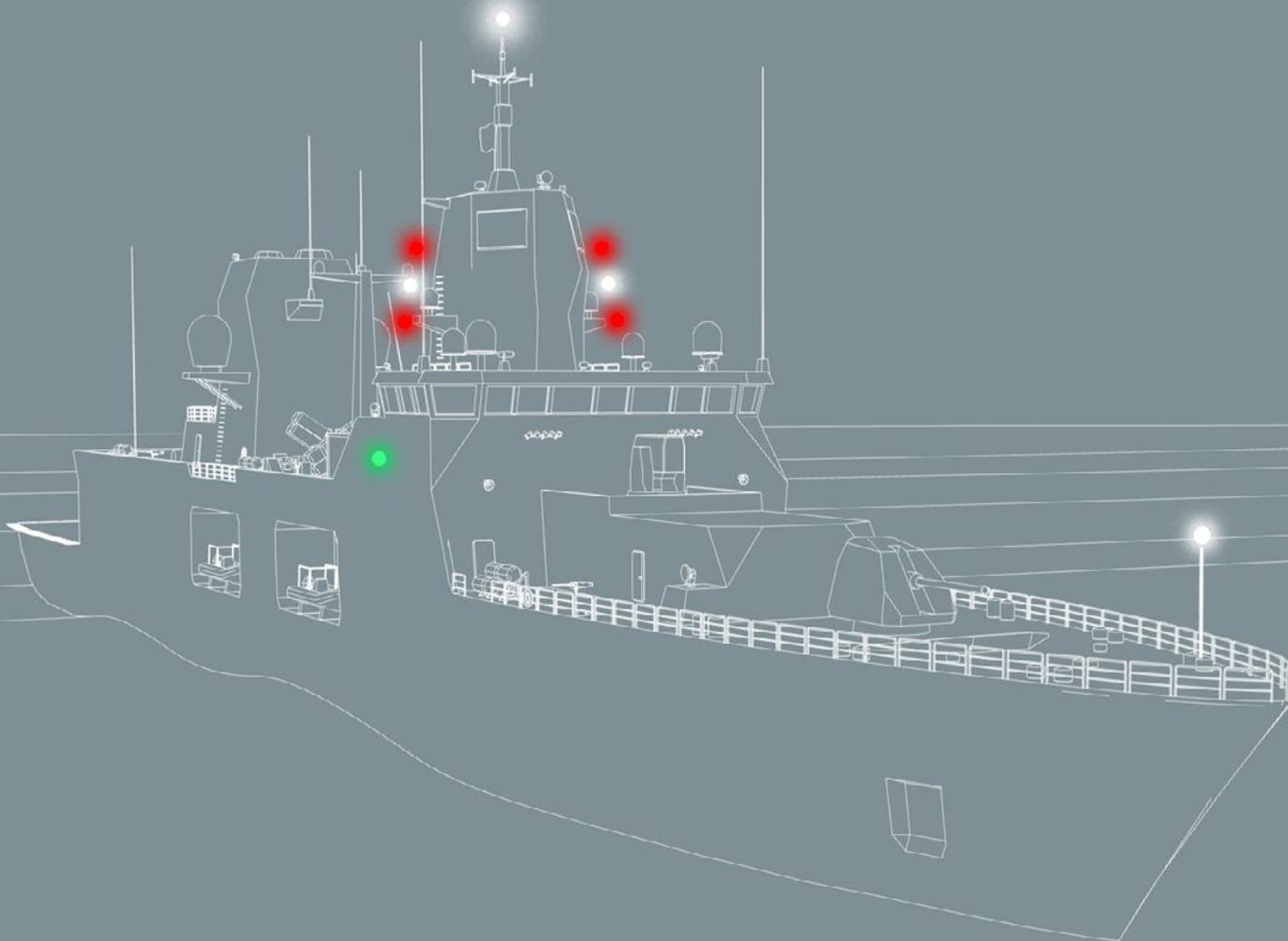
**UNIVERSAL
NAVIGATION
LIGHTS**

NAVIGATION LIGHTS

SOLID | MONITORED | MAINTAINABLE



TOUGH | SAFE | STATE-OF-THE-ART TECHNOLOGY





A CONCEPT RETHOUGHT FROM SCRATCH

Family of navigation lights

Common parts, different functions

High performance LEDs

Built-in redundancy

Dimmable for NVG operations

Heating for polar service

Robust design

Easy on-board maintenance

Weight reduction by smart cabling

Touch Panel controls and / or
integration in bridge management
systems

Wheel mark certification by DNV

PRODUCT RANGE

TOP LIGHT

SIDE LIGHT

ANCHOR LIGHT

STERN LIGHT

NUC LIGHT

RAM / CBD LIGHT

TOW LIGHT

SUEZ LIGHT

PANAMA LIGHT

MANOEUVRE / MORSE LIGHT

ANY SPECIAL LIGHT

CONTROL AND MONITORING



COMPETENCE & PRECISION | HANDCRAFTED IN HAMBURG





PERFECT MARRIAGE OF FUNCTION AND TECHNOLOGY

Taylor-made project solutions

Low life cycle cost

Meeting highest requirements in quality and functionality

Focus on low maintenance

Built for rough marine environment

MATCHING NAVAL DEMANDS

Customizable coating/colour

Side light integrated in superstructure, mast etc.

Radar Cross Section friendly

Clear shape underlines state-of-the-art technology

IT WORKS |
THEY WARN YOU BEFORE A
PROBLEM ARISES





SYSTEM HEALTH MONITORING

Fully monitored by multiple electronic sensors

Measuring internal humidity, temperature, brightness and electric flow

Ensuring highest reliability and sound warnings, long before the light may fail

Active time counters

SAFETY

Fulfilling all applicable standards

- EMC tested
- Shock tested
- Vibration tested

Light intensity always as required

Round shape – best tightness

Massive aluminium body for maximum heat dissipation

CONTROLS AS YOU LIKE IT

The image displays the OPTONAVAL control interface, which is divided into several sections. At the top, the OPTONAVAL logo is visible. The main interface is split into three primary areas: Navigation Lights, Groups, and System Health.

Navigation Lights: This section contains a grid of buttons for controlling various lights. The buttons are: Port upper NUC, Port mid RTM, Portside light, Port lower NUC, Anchor, Stbd upper NUC, Masthead, Stbd mid RTM, Stern light, Stbd lower NUC, and Starboard light. A legend indicates that ON means Light on, OFF means Light off, and FLASH means Failure. The Masthead button is highlighted with a green glow.

Groups: This section contains three buttons: Underway, Restrict to Manoeuvre, and Not under Command. The Underway button is highlighted with a green glow.

System Health: This section provides a detailed view of the system's status. It includes a list of components with their respective status indicators (LEDs), temperature, and battery level. The Masthead component is highlighted with a red border and a warning icon, indicating a failure. The status indicators for Masthead are: ON (green), OFF (green), and FLASH (red).

System Health Data:

Component	Status 1	Status 2	Temp	Battery
Anchor	ON	OFF	26 °C	28%
Masthead	ON	OFF	26 °C	82%
Stern light	ON	OFF	26 °C	28%
Portside light	ON	OFF	26 °C	28%
Starboard light	ON	OFF	26 °C	28%
Port upper NUC	ON	OFF	26 °C	28%
Stbd upper NUC	ON	OFF	26 °C	28%
Port mid RTM	ON	OFF	26 °C	28%
Stbd mid RTM	ON	OFF	26 °C	28%
Port lower NUC	ON	OFF	26 °C	28%
Stbd lower NUC	ON	OFF	26 °C	28%



MULTIPLE CONTROL OPTIONS

Intuitive graphical user interface

Option to integrate in existing bridge system

Hardwired buttons as per regulatory requirements

Assisting in identification of malfunctions

Tracking of maintenance history

REDUNDANCY

Switch over in case one light fails

Built-in test when switching on

MODULAR CONSTRUCTION | ACCESSIBLE FOR MAINTENANCE





MODULARITY

- Maximum of common parts
- Stacks with different light colours
- Shaders for different functions

INSTALLATION

- Common base plate
- No special tools required for installation
- Sensitive parts mounted just when needed
- Single cable connection
- Cable outlet side or bottom
- Bayonet catch for easy mounting and removal
- Customized solutions for refits

MAINTENANCE

- Common spare parts at minimized demand
- Light elements simply stacked – no soldering
- Interchangeable parts
- Maintenance in workshop – not exposed to weather
- Planned maintenance instead of breakdown repair



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