

[www.lightgraphix.co.uk](http://www.lightgraphix.co.uk)



# LightGraphix

Creative Lighting Solutions

**YACHT APPLICATION GUIDE**



# OUR VISION

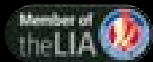
A world where lighting innovation, experience and inspiration combine responsibly to enhance the visual environment.

# OVER 45 YEARS OF EXCELLENCE

Manufacturing marine lighting since 1979

**OUR PURPOSE IS TO INSPIRE LIGHTING PROFESSIONALS WITH INNOVATIVE LIGHTING TOOLS THAT ENCOURAGE CREATIVE LIGHTING SOLUTIONS.**

- > Our marine, architectural and display solutions are proudly manufactured in the UK
- > Interior and exterior solutions are designed specifically for marine use
- > We operate around the world with local representatives providing support in over 30 countries
- > Particular attention is paid to glare control, the lit effect and quality of our beams
- > In-house testing facilities allow the quick analysis of optic and LED combinations
- > Products exhibit industry-leading glare control, essential to any high-end lighting scheme
- > We only use the latest LED technology and deliver unrivalled lifetime figures
- > High-quality finishes include machined marine grade metals, paint and bespoke finishes
- > A custom solutions team is on hand to meet specific project requirements
- > Clients are allocated a dedicated contact to ensure excellent service
- > We are a sustainably conscious manufacturer and have built this ethos into our designs



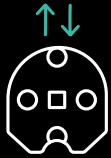
# TRUSTED GLOBAL SUPPLIER

Working with marine designers & builders around the world



# SUSTAINABLE MANUFACTURING

Our environmental policy



## RLE (REPLACEABLE LIGHT ENGINES)

The RLE system provides our customers with an unlimited ability to repair and upgrade LED fittings at any stage in their life-cycle, renewing them for decades, with minimal material waste as a result. Utilising LED engine insert sub-assemblies, they can be easily removed and upgraded in many of our top selling products. We continue to strive to migrate our entire range over to a replaceable or repairable light engine methodology and all new products are designed around this.



## RESPONSIBLE MANUFACTURING

As part of our commitment to responsible manufacturing, we are working on a policy to tackle the circular economy of our products, the waste we produce, the power we consume and emissions we generate. Where possible, we use materials that are 100% recyclable including 316 Stainless Steel and aluminium.



## REPAIR & REFURBISHMENT

When it's time to replace an existing LightGraphix lighting scheme, we always encourage customers to consider our repair and refurbish service. We will replace LED engines where possible and refinish bezels to provide a new lease of life. This prevents machining a brand new fitting and the hassle of finding a product that fits into the existing cut-outs on your yacht.



## RECYCLABLE PACKAGING

Our cardboard and packaging tape is 100% recyclable. Suppliers are certified by the FSC, which means they only source materials from ethical sources. We also shred any cardboard packaging we receive internally and reuse it to protect our products in transit.

# RLED

REPLACEABLE LIGHT ENGINE

Integrated into exterior  
IP67 rated products



Easily replace or upgrade  
LED engines whilst onsite



Interchange optics or  
colour temperatures

Modular engine insert resulting  
in minimal waste

**BUILD  
BACK  
BETTER**  
PLATINUM

**BUILD  
BACK  
BETTER**  
GREEN

[CLICK HERE](#) ►

TO WATCH OUR  
REPLACEABLE LIGHT ENGINE VIDEO

# DESIGN & TECHNOLOGY

Future proof industry-leading solutions

## OUR DESIGNS

Products have been designed specifically for use on Yachts, both internally and externally. Within our range you'll discover everything from high IP rated uplights, miniature downlights and 2-channel navigational lighting.

## KEY FEATURES

- > Bezels are machined and not cast, for superior quality
- > Minimal bezel and body depth for shallow installation requirements
- > Water tight fixing methods include first fix sleeves with O-rings and spring clips
- > Deep recessed optics and optional glare shields for the best visual comfort
- > Marine-grade materials are used to withstand harsh marine elements
- > 316 Stainless Steel can be passivated for further enhanced corrosion resistance
- > Wet spray, powder coated and bespoke finishes available
- > Future proof designs allow easy replacement of the LED
- > Optics and glare control accessories can be easily interchanged on most products
- > Every product is hand checked for quality before leaving our manufacturing facility



## OUR TECHNOLOGY

LightGraphix products are highly regarded for their expert engineering and high-performance output. We only source the latest LED technology and design products based around the LED chip itself so that the optimal solution for its specific thermal management needs are met.

### KEY TECHNOLOGY

- > IP54, IP55, IP66, IP67, IP68 rated products across our range
- > Products tested in ambience of -20° to 45° (drive currents may vary)
- > Tight 2-step LED binning guarantees colour consistency across products
- > High efficiency optics for maximum LED output and superior beam shape
- > Industry leading LED lifetime figures of 90,000 hours (to 90% lumen maintenance)
- > Anti-polarity protection to prevent damage to the LED if wired incorrectly
- > Anti-wicking barrier to prevent water ingress to the luminaires
- > LightGraphix pioneered copper LED board for excellent thermal management
- > EN60598 (European Standard for lighting) compliant products
- > Switched, 0-10V, Casambi, DMX, DALI or Mains dimmable drivers available



### OPTIC

High-quality optics used for superior beam control and efficiencies



### LED BOARD

Aluminium LED Board used for excellent thermal transfer and LED life

 **NICHIA**



**CREE** 



**OSRAM** 

### LED

Nichia, CREE and Osram LED's used due to their exceptional reliability and 2-step binning process, which guarantees high colour consistency

**eldoLED**



### ELDO LED DRIVER

eldoLED drivers are used for their superior flicker free dimming and long-term reliability



## 2-CHANNEL - RED NAVIGATION CIRCUIT

We have developed a unique board that includes both white LEDs and a red LED chip, specifically designed for safe sailing during the night. This feature allows the LD73SR and LD74SR fittings to have dual capabilities - to remain bright during the day, and when switched to red, not interfere with the helm's nighttime vision.

### KEY FEATURES

- > Supplied with a 4 core cable (2 circuits)
- > Requires 2 LED drivers, 0-10V, DMX, DALI or Mains dimmable

White LED



Red navigation LED





# MARINE GRADE FINISHES

Machined solid metal and paint finishes collection

Our materials are selected to work in the toughest environments in extreme heat and cold, salt and chlorine, water and dust. Metal components are machined to ensure the highest quality. We complete all our painting in-house and can colour match to any shade provided. Chrome, nickel and copper plating is also possible. To receive a sample of any of our finishes please contact us at [light@lightgraphix.biz](mailto:light@lightgraphix.biz).

## MACHINED FINISHES



### 316 STAINLESS STEEL

- > Marine grade 316 Steel
- > Standard machined finish
- > Extremely durable with very high corrosion resistance
- > Passivation is recommended to further strengthen the existing high corrosion resistance, if the fitting is to be continuously subjected to salt water
- > Interior & exterior use



### POLISHED & PASSIVATED 316 STAINLESS STEEL

- > Marine Grade 316 Steel
- > Pristine mirror like finish
- > Extremely durable with very high corrosion resistance
- > Passivated to extensively prolong resistance to corrosion and brown stains caused by oxidation in marine environments
- > Interior & exterior use



### MACHINED BRASS

- > Solid CZ121 Brass
- > Standard machined finish
- > Corrosion resistance rated fair to excellent
- > Please note a natural green/brown patination layer will form after long term exposure to the elements, the extent of this discolouration will be dependant on its location
- > Interior & exterior use



### FLAMED SOLID BRONZE

- > Solid Bronze
- > Hand finished Flamed Bronze unique to LightGraphix
- > Extremely durable with very high corrosion resistance
- > Please note a natural dark patination layer will form after long term exposure to the elements, the extent of this discolouration will be dependant on its location
- > Interior & exterior use

Our paint finishes are suitable for interior, exterior and high-saline environments. Our standard colours are below but we can accommodate any RAL.

## PAINT FINISHES

### EXTERIOR POWDER COAT



WHITE  
(RAL 9016)



BLACK  
(RAL 9005)



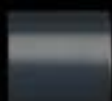
CLASSIC BRONZE  
(YM262E)



TEXTURED  
FIR GREEN  
(RAL 6009)



TEXTURED  
MARS BRONZE  
(YM262E)

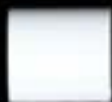


GUNMETAL  
GREY  
(RAL 7021)



ANY RAL  
COLOUR

### INTERIOR WET SPRAY



WHITE  
(RAL 9016)



BLACK  
(RAL 9005)



SILVER  
ANODISED



ANTIQU  
BRONZE



SATIN ANTIQU  
BRASS



SATIN  
BRASS



ANTHRACITE  
GREY  
(RAL 7016)



ANY RAL  
COLOUR



[CLICK HERE](#) ►  
TO DOWNLOAD  
OUR FINISHES  
GUIDE

# POLISHING & PASSIVATION

Marine grade finishing and protection

## MARINE GRADE POLISHING

To achieve a flawless polished finish on our bezels, we developed marine grade polishing. It creates a pristine mirror like finish from the additional step of lapping the already smooth bezel in a diamond liquid, to totally remove any machine marks.

STANDARD  
POLISHING



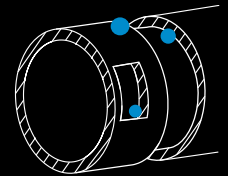
MARINE  
GRADE

## PASSIVATION

We understand the corrosive power of the sea, which is why we encourage polished fittings to be passivated for ultimate protection and longevity, although 316 stainless steel alone is still highly resistant to corrosion. Passivation forms a protective chemical oxide layer after removing iron from the metal's surface, improving corrosion resistance.

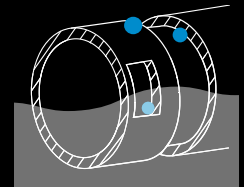
### NON-PASSIVATED STEEL

316 stainless steel alone is suitable for marine environments as it has a high concentration of molybdenum and nickel, but a passivated piece of metal which has been further treated will add a deeper layer of protection by removing all surface iron.



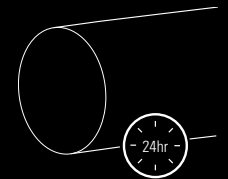
### REMOVAL OF SURFACE IRON

To remove the iron on the surface of the stainless steel, the metal is placed in a nitric acid or citric acid immersion bath to fully dissolve any free irons and sulfides.



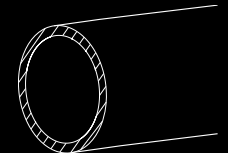
### STRIPPED DOWN TO THE BARE METAL

After the metal has been submerged in the acid bath for around 30 minutes, it can be removed and washed in a chloride free rinse. The chromium content in the steel will then begin to react with the air.



### PASSIVATED STAINLESS STEEL

It can take between 8-24 hours for the stainless steel to oxidise and form the chromium oxide layer. This passive layer is what makes the metal resilient to further oxidation, prolonging its lifetime by decades.

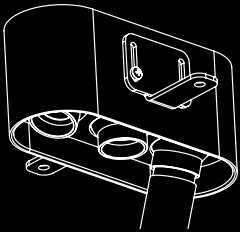




# CUSTOM SOLUTIONS

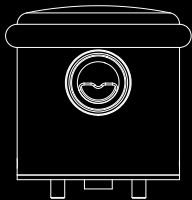
Ultimate flexibility with our custom design service

Our dedicated custom design team have created hundreds of bespoke solutions and modifications of existing products to match the exacting requirements of clients and designers. Because all our products are machined and not cast, not only are they better quality, but they offer the ability to modify designs cost-effectively and with no minimum order requirement.



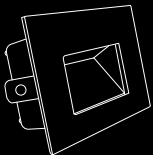
## TRIPLE DOWNLIGHT

The design brief of the triple downlight was to provide as much user flexibility as possible, with the ability to angle lights in any direction and at various focal points. We designed miniature ball-joints to achieve this, with 360° rotation and up to 25° tilt. Each of the triple downlights had a high output of 450lm and held contrasting optics so that various lighting effects could be created. It was essential to match the finish of the fitting to the brushed nickel ceiling panel in which it would be recessed, so a custom paint solution was offered. Converter packs were also supplied as a solution to the yacht's 24V power and control system.



## BOLLARD FLOOR WASHER

In 2018 we were asked to design a solution that matched the vessel's mooring bollards, as the fitting would be placed between them to provide a wash of light across the deck. We modelled the Polished & Passivated 316 Stainless Steel bollard casing around our LD43 uplight, which was repurposed as a floor washer and featured a special half moon glare shield and 20° tilt film, to angle the light down onto the lit surface with incredibly low glare.



## DIFFUSED STEP LIGHT

Lighting Design International were commissioned to create a lighting scheme for the refit of a 86m superyacht and worked with us to design 2 custom wall lights. As well as using an innovative white reflector for ultra low glare, we designed both products with a high quality, machined, marine grade polished 316 stainless steel bezel. The reflectors were specially designed to suit their individual applications, which included general floor washing and lighting the riser of the staircase with a soft diffused beam.



Design: Lighting Design International | Product: Custom diffused step light





# YACHT EXTERIOR

Product application guide. Click on a product for more information and for datasheets.

## DOWNLIGHTING



LD1083 LD1093Z LD1093 LD1094 LD197

## BULWARK LIGHTING



LD42 LD43G LD44Y LD44G LD47 LD48



LD57 LD141Y LD141G LD170

## LINEAR



LD11 LD LINE 15

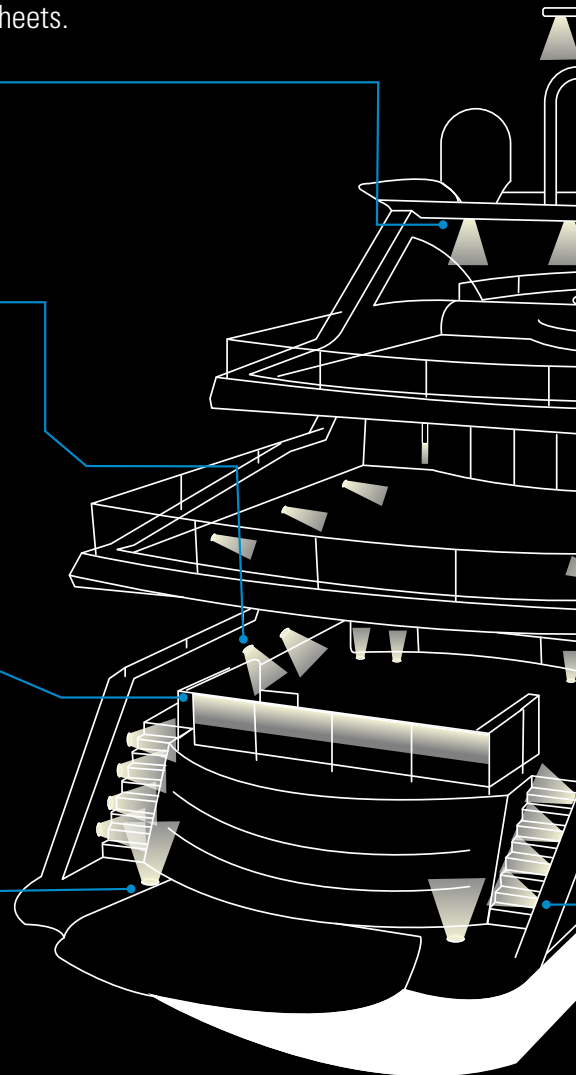
## UPLIGHTING

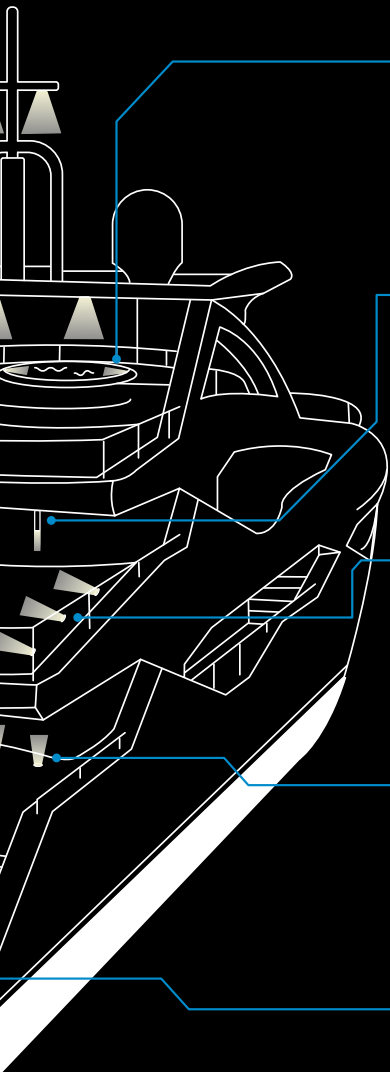


LD190 LD141X LD141G LD151 LD151T LD154/T



LD154G/TG LD154DR LD154DRG LD155 LD56 LD56T





## POOL LIGHTING



LD242A LD242ARGB

## WALL LIGHTING



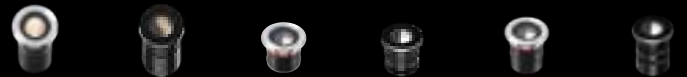
LD10236 LD10237 LD96 LD97 LD10238 LD238

## INDICATOR LIGHTING



LD61 LD62 LD64 LD65

## MINIATURE UPLIGHTING



LD43DR LD43DRG LD43 LD43G LD44X LD44G

## STEP LIGHTING



LD42 LD42D LD43G LD44Y LD44G

# YACHT INTERIOR

Product application guide. Click on a product for more information and for datasheets.

## WALL LIGHTING



LD10236



LD10237



LD96



LD97



LD10238



LD238



LD233

## SHELF LIGHTING



LD70



LD70-OP



LD70D

## UPLIGHTING



LD141X



LD141G



LD151



LD151T



LD154/T



LD154G/TG



LD154DR



LD154DRG



LD155



LD56



LD56T

## MINIATURE UPLIGHTING



LD43DR



LD43DRG



LD43



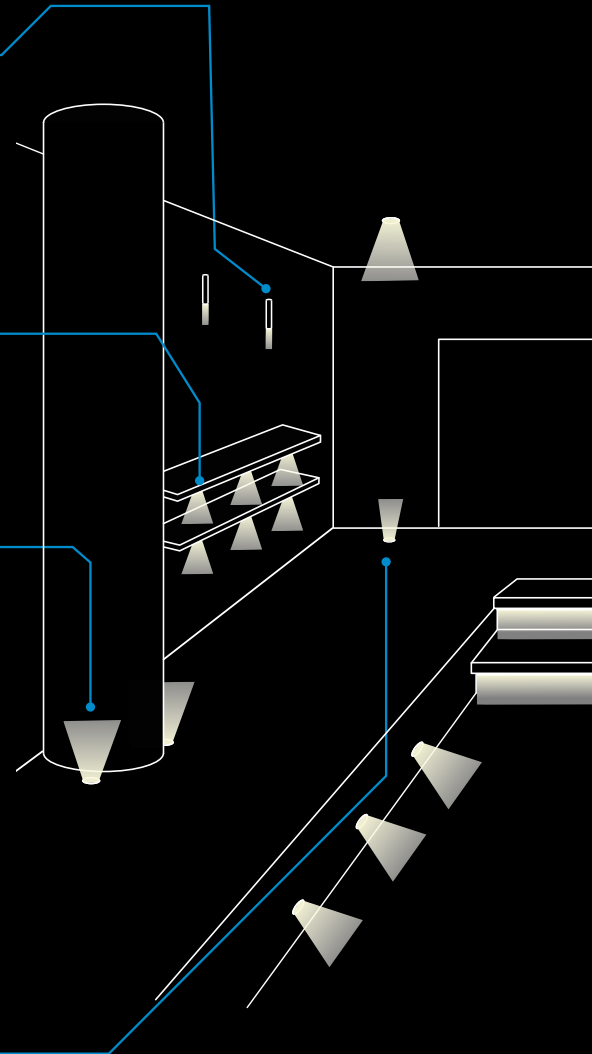
LD43G

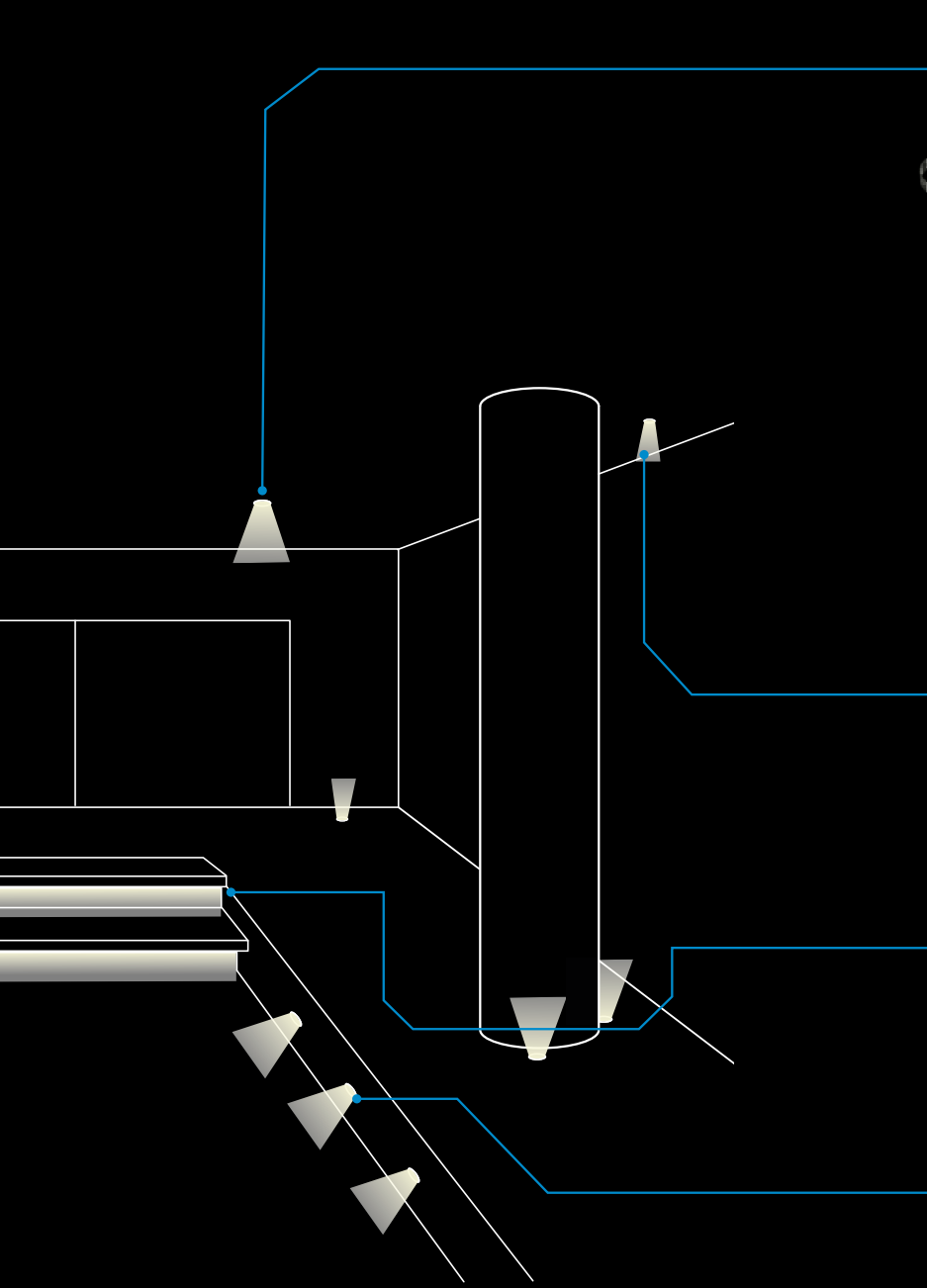


LD44X



LD44G





## DOWNLIGHTING



LD1080

LD1082

LD1090

LD1092



LD1093Z



LD1093



LD780



LD782



LD790



LD792

## MINIATURE DOWNLIGHTING



LD72M



LD71M



LD72DR



LD71DR

## LINEAR



LD11



LD LINE 15

## STEP LIGHTING



LD42



LD42D



LD43G



LD44Y



LD44G

# YACHT SPREADERS

Product application guide. Click on a product for more information and for datasheets.

## SPREADER LIGHTING



LD242



1094

## UPLIGHTING



LD141X



LD141G



LD151



LD151T



LD154/T



LD154G/TG



LD154DR



LD154DRG



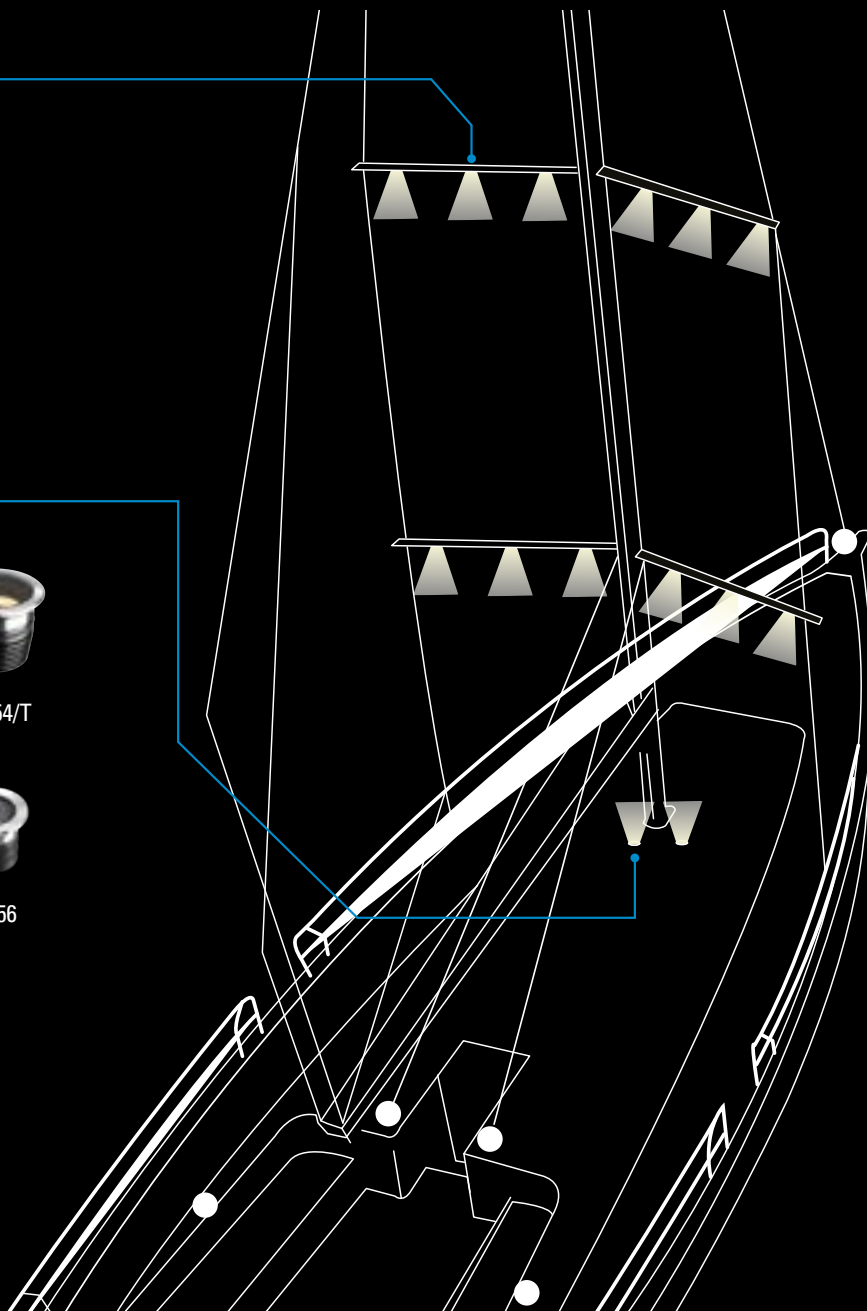
LD155



LD56



LD56T







LUSINE

GEORGETOWN

# MY LUSINE GEORGE TOWN

## Project case study

MY Lusine is a fully custom steel motor yacht with an enclosed volume of 1,079 GT, built by Heesen Yachts. The lighting designer, Lighting Design International (LDI), used LightGraphix products to deliver powerful uplights, downlights, step lights, and surface-mounted lights to this 60-metre vessel.

Many of our products have been developed specifically for use on yachts, both internally and externally. Our marine fittings are designed with shallow recess depths, high IP ratings, and watertight fixing methods. LDI required 2-channel products for this large project and unique custom solutions to align with the lighting vision. The following fittings were used: LD1094, LD10236, LD155, LD151T, LD56T, LD170, LD40, LD73SR, and custom LD1081s. The LD1081s were supplied in a special RAL colour and included a tilt film.

Design: Lighting Design International

Architect: Heesen Yachts, Sinot Yacht Architecture & Design

Products: LD1094, LD10236, LD155, LD151T, LD56T, LD170, LD40, LD73SR, CUSTOM LD1081

[VIEW PROJECT ►](#)



LD170



LD170



LD40



LD73SR with 2-channel circuit



# CONTACT US

Supporting you around the world

As well as our offices and manufacturing premises located in the United Kingdom, we have partnered up with exclusive distributors of LightGraphix products around the world, who have expert technical knowledge and can offer local support for your project, ensuring excellent levels of service.

Our contact details can be found below. If you would like to get in touch with your local LightGraphix agent, please contact us so that we can provide you with an appropriate contact.

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