

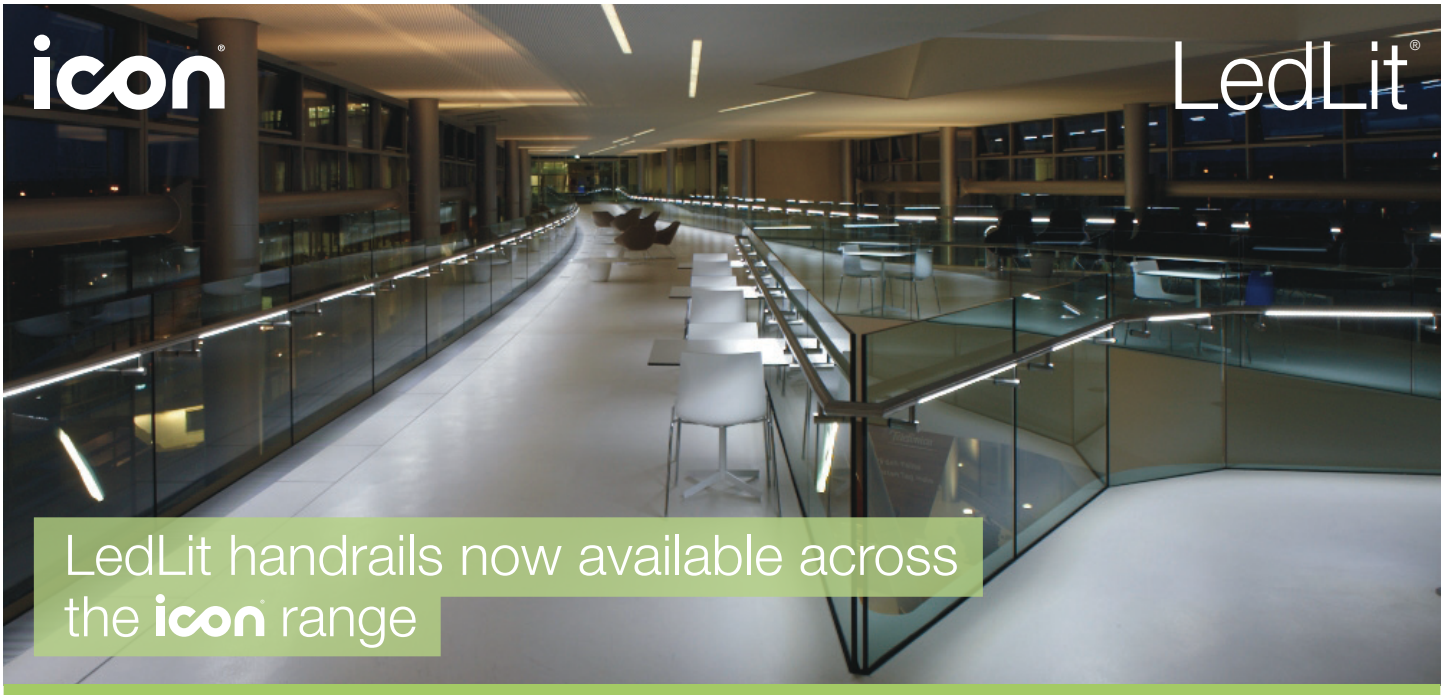
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Architectural Handrail and Balustrade

LedLit® Handrails

Linear LED illumination by INSTA



LedLit handrails now available across the **icon** range



The rapid development of LED lighting has allowed artificial illumination to be incorporated into many different building components in new and unusual ways. For some time, handrailing has been cited as an obvious fixture in which to embrace the new technology although few products have entered the market with convincing calibre and expertise. **icon** LedLit represents the first high-end solution offering unparalleled INSTA LED's integrated into our architecturally renowned **icon** handrail and balustrade systems.

icon in Partnership with INSTA UK

Modular LED Light Lines



Handrail Design have collaborated with INSTA Lightment, the leading manufacturers of LED luminaires, to develop a fully integrated LED illumination system utilising handrails as the light source. INSTA Ledlux LED's provide extremely high luminous efficiencies and their unique product capabilities and control expertise allow for extreme lengths of handrail to be powered with the need for very few cable entry points.

The housing of the LED units has been meticulously designed to be ergonomically part of the handrail and INSTA's ground breaking technology pushes the boundaries of lux levels and energy-efficiency to create a virtually maintenance-free alternative to common light sources.

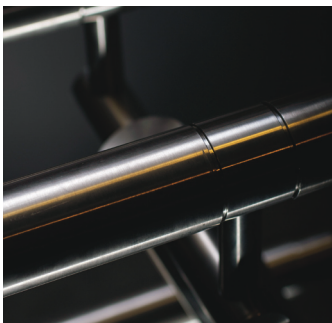
Features & Benefits of LED Lighting

- Low Maintenance
- Reliability and Long Service
- Energy Efficiency
- Compact Fittings Discreetly Housed Within Handrail
- Cool or Warm White Variants
- RGB Colours Available
- Dimmable
- Special Effects, Colours and Dynamic Accentuation
- Bespoke beam alignment (see diagrams over)

Applications

- Feature Staircases
- Atriums and Walkways
- Internal Entrance Lobbies, Access Ramps and Steps
- External Entrance Ramps and Steps
- Public Realm
- Bridges
- Airports
- Train & Bus Stations
- Stadia

See our separate INSTA technical brochure for Ledlux luminaire specifications.



LED Orientation



1. Asymmetric Orientation – Forward Facing
Provides walkway illumination, highlighting the route of travel and reducing emergency lighting requirements. Any angle can be specified.



2. Symmetric Orientation – Downward Facing
Provides even illumination from the centre of the handrail, ideal for divider rails to wide entrance steps and ramps.



3. Asymmetric Orientation – Backward Facing
Provides ambient lighting, bathing the wall in light - RGB LED's create contrasting and colour changing effects. Any angle can be specified.

Service

Working in partnership with INSTA UK, the lighting, control and wiring specifications are created in conjunction with the Architectural handrail & balustrade requirements of each scheme. Both internal and external applications can be considered as the LED chips and printed circuit board housings are IP54 and IP65 rated with the added protection of an anti-algae finish having been applied to the lenses.

Total Solution

All LED components, power supply units, controls, dimmers, cables, conduits and associated cable-entry posts are supplied and installed as integral elements to the handrail system and undertaken under one contract placed with Handrail Design.

Single Source

Architects and Lighting Designers now have access to standard details allowing all key aspects of both the handrail and lighting specifications to be identified through a single source, from the initial concept, right through to project completion.

Technical

The orientation of LED's can be specified at any angle within the handrail allowing Lighting Designers total freedom to create symmetric or asymmetric light distribution effects. Beam transmissions are set longitudinally at 70 degrees and at 120 degrees from each end of a unit so whilst the luminaires are individually placed between handrail brackets and bends, a continuous linear illumination is achieved at floor level rather than localised intermittent pools as can otherwise be the case.

Unrivalled Technology

INSTA's quality is unrivalled since they are the only LED manufacturer to incorporate Z-Diodes into the circuitry to protect the rest of the LED's from failure in the unlikely event that a single LED stops working. All LedLux LED luminaires are manufactured with a 50,000 hour design life, the electronic controls offer extremely high output whilst always maintaining a comfortable running temperature which is vital when placed within the handrail.

Power Supply Units

Bespoke power supply units are manufactured by INSTA so that the current to each LED chip is controlled and automatically regulated to compensate for the temperature of the unit and the ambient temperature of the environment. This guarantees consistency of illumination at all times and throughout multiple runs of LED units along any given length of handrail.

Light Plots

Incorporating the latest luminaire data provided by INSTA, Handrail Design use DIALux software to produce simple, effective and professional lighting plots to give energy evaluations and schematic visualisations.

DIALux Visualisations

The latest state of the art DIALux software allows cool or warm white LED's to be visualised within the handrails including coloured or colour changing light scenes to be evaluated within the overall context of the proposed scheme.

Lux Level Calculations

Whilst lighting schemes can be planned creatively, DIALux software also determines the illumination levels and energy required for each light solution and provides support in complying with the respective national and international regulations.

INSTA

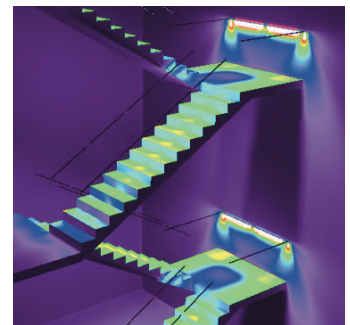
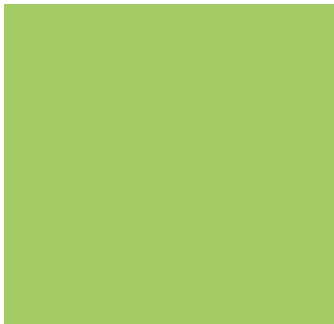
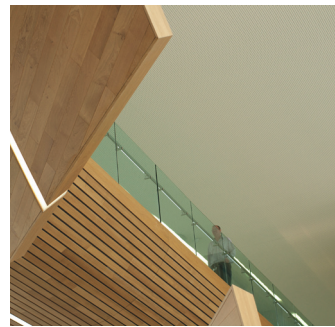
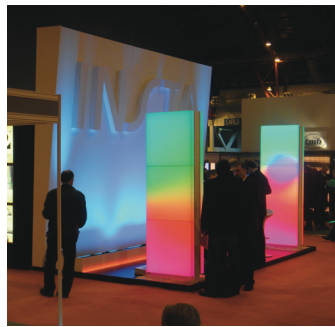
INSTA Elektro GmbH was founded in 1970 and at their electronics technology centre in Lüdenscheid, Germany, over 500 employees develop and fabricate modules, components and LED luminaires along with the appropriate controls for modern architectural lighting. More than 80 engineers work on research and development for different product ranges to react to market trends and customer requirements. INSTA select the optimum performance LED chip for each application. Production and assembly is undertaken in an electrostatically protected facility and LED orders are tested for 72 hours at the factory before being dispatched.

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LedLit®



INSTA's unparalleled LEDs integrated into the architecturally renowned **icon** handrail and balustrade system.



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 **Handrail Design**

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