

Light is Vision.



___ Lighting Solutions for Industrial Imaging



Volpi - Light is Vision

Volpi provides the proper illumination for industrial processes, microscope analysis tasks and medical examinations. No question whether to use fiber optic or LED technology, with Volpi you will always obtain the perfect illumination system for your application.

With branches in Switzerland and the United States, and our highly educated specialists, we have a distinguished research, development and production infrastructure at our disposal.

We are flexible: In addition to our well-known standard products, we can provide modifications to custom fit them to your requirements.

In many cases imaging tasks are everything but standard. For this reason these tasks cannot be made with standard illumination components. We are the right partner for you: We will develop and produce your custom illumination system according to your requirements.

- **Competency in Fiber Optic and LED**
- **Standard & Custom Design**
- **Consulting & Support**
- **Development & Production**
- **Utilization of the latest Technology**
- **High Quality and Reliability**



Accurate processing of glass fibers



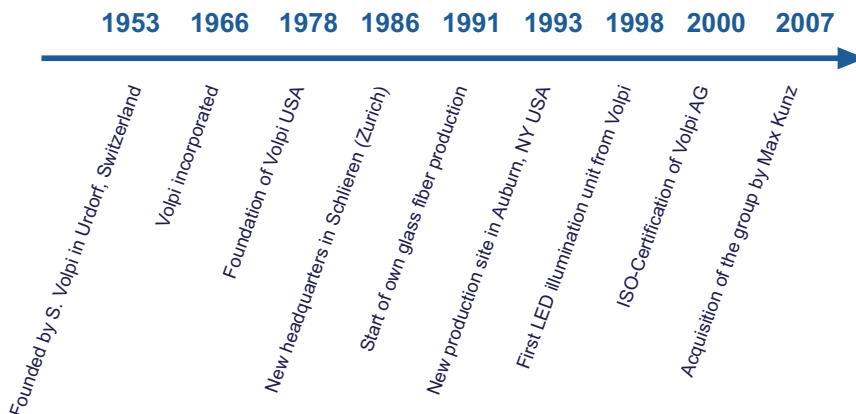
Hybrid-Linelight with 3.5m length



Site Schlieren (Zurich), Switzerland



Site Auburn NY, USA



Illumination Techniques

Ring Illumination

Ringlight illumination provides a shadow-free and homogenous illumination of objects with matte or low reflection surfaces. Using additional equipment it is possible to generate polarized or fluorescence stimulating light.

Direct Incident Light

The object is illuminated with flexible or semi-rigid light guides. This method is well-suited for objects with matte or low reflection surfaces. Flexible light guides in different lengths are also suitable for hard to access places.

Diffuse Incident Light (Dome Illumination)

Diffuse incident light is ideal for illuminating non-reflective or low reflective objects without causing shadows.

Line Illumination

Lightlines are mainly used as incident light illumination but are also used as backlights or light curtains. Lightlines from Volpi offer you a good degree of uniformity and homogenous illumination all the way to the line edges.

Coaxial Illumination

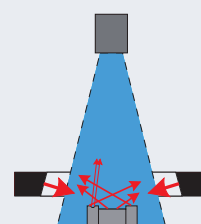
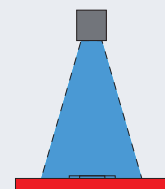
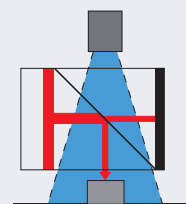
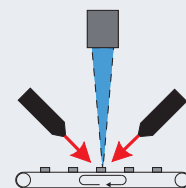
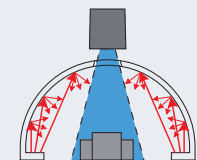
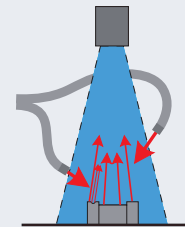
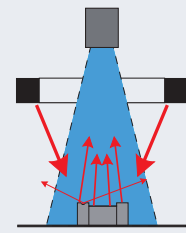
Coaxial illumination is needed for objects with glossy or highly reflective surfaces. The light is generated with a diffuse light field and diverted with a 50% transparent mirror onto the object such that the axis of illumination is exactly on the optical axis of the camera (CIS). With the Advanced Coaxial Illumination System (ACIS) the object is also illuminated diffusely.

Backlight Illumination

Background or transmitted light illumination is preferred if contours are to be measured or inspected. Background illumination can also be used for diffuse incident light illumination.

Darkfield Illumination

Darkfield illumination has the effect that only part of the light which is deflected by dispersion, reflection, refraction or diffraction reaches the camera lens. Darkfield illumination allows edges and height structures of objects to be highlighted.





Glass Fiber

Fiber Optic Illumination Systems

A fiber optic illumination system always consists of two basic components: a cold light source and a fiber optic light guide. Volpi offers a large variety of light sources, fiber optic components and accessories to make any desired composition possible.

Light Sources

A controlled, intense light is the main requirement of any cold light source. Optimized thermal management, long lamp life and intuitive controls are additional assets of our halogen cold light sources. Furthermore, Volpi has been one of the pioneer manufacturers to include high-power LED light sources in its product range.

Fiber Optics

Volpi looks back on decades of experiences producing glass fibers and processing them into the finest fiber optic illumination components. From flexible light guides to semi rigid swan necks right up to multilayer woundstrip light lines; Volpi offers a comprehensive variety of high-quality and reliable fiber optics.

- Halogen cold light sources
- High power LED light sources
- Flexible and semi rigid light guides
- Fiber optic lightlines
- Backlights
- High material and workmanship quality
- Extensive accessory range



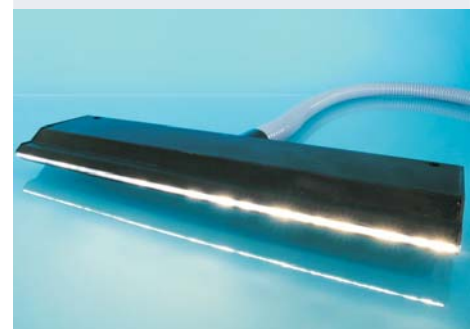
LED light source IntraLED 2020



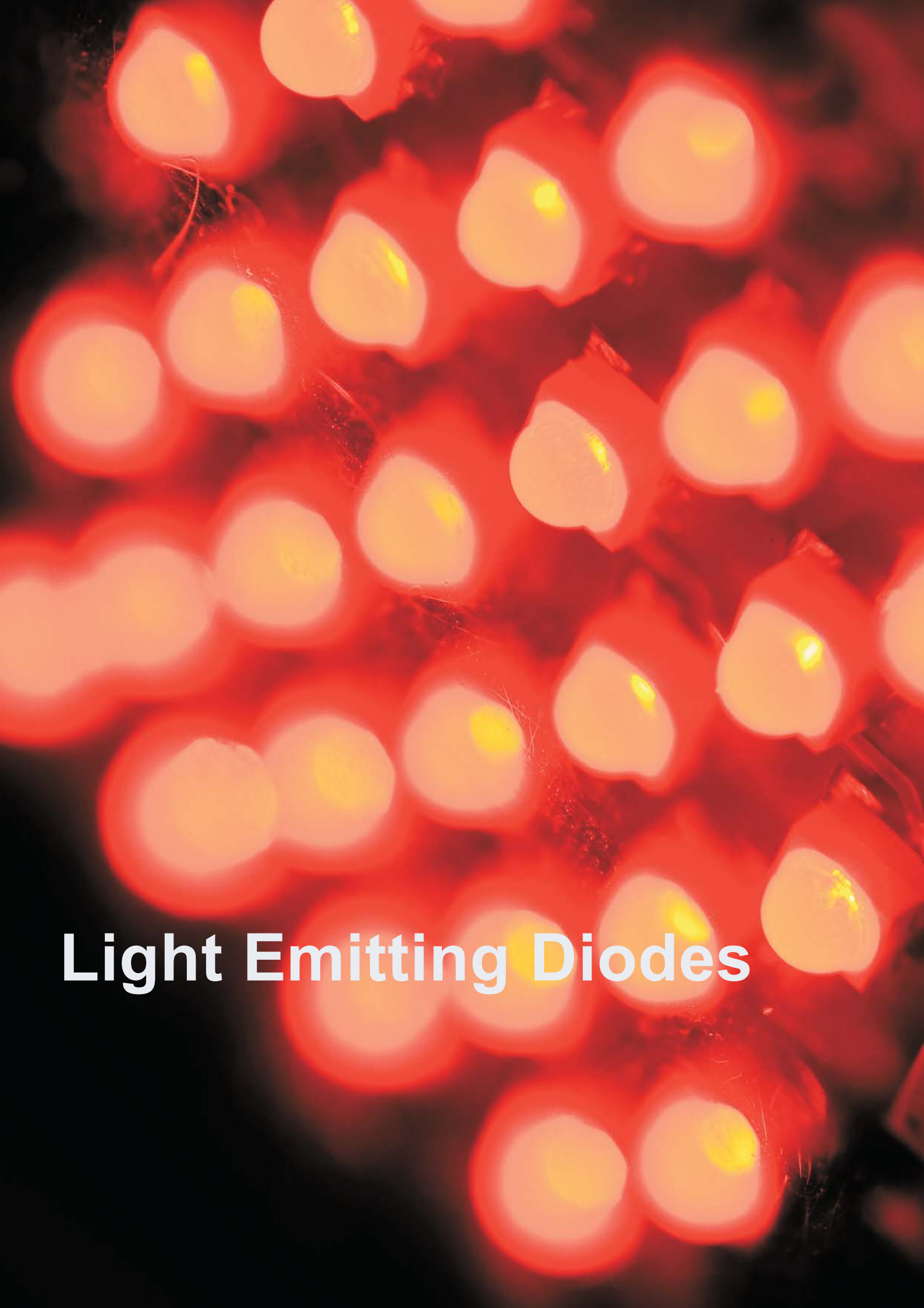
Halogen light source with lightguides



Glass fiber Backlight



Fiber optic Lightlines



Light Emitting Diodes

LED Illumination Systems

In Machine Vision and Microscopy, extremely durable Volpi LED-Systems are often preferred over other illumination concepts.

Optimized Total Cost of Ownership

Thanks to their very low power consumption, an investment in LED illumination systems pays off immediately. Compared to conventional halogen/fiber optic concepts, energy savings up to 90% are possible with LED technology.

Convincing Performance Features

Besides low operating costs, optimized homogeneity, powerful light output, various light colors and industrial enclosures are additional features of LED systems from Volpi.

From a single source

Our choices include the complete spectrum of high-quality LED lighting systems for brightfield, darkfield and backlight illumination. The product range is accessorized with a choice of power supplies and strobe and intensity control units.

- **Brightfield and Darkfield Illumination**
- **Backlights**
- **Latest LED technology**
- **Uniform and high light output**
- **Standard or modification**
- **Large variety of different variants**
- **Durable and energy efficient**
- **Wide accessory range**



LED Segment Ringlight



LED Backlight



LED Lightlines

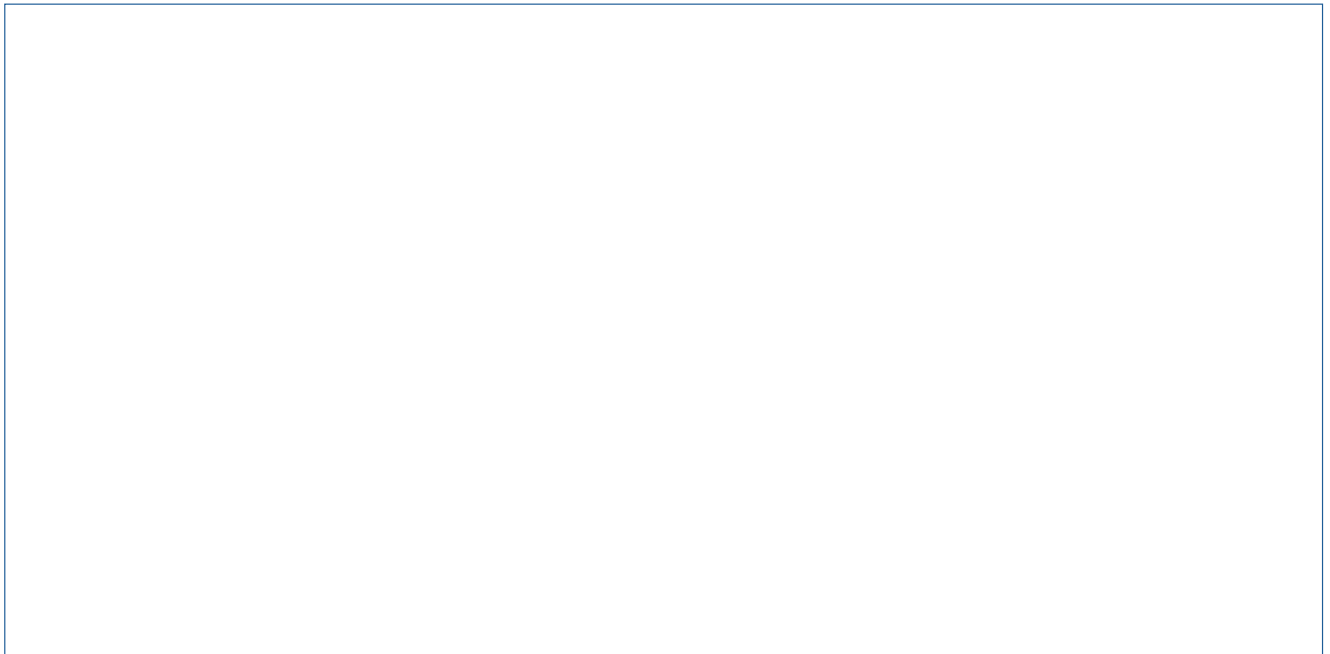


Coaxial Illumination System ACIS

Lighting Solutions for Industrial Imaging

Please visit our websites for detailed documentation
and PDF downloads: www.volpi.ch/catalog

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