



„Why lightsource.tech?“

5 Reasons Why We're  
**the Right Partner** for Your  
Project

## „Why lightsource.tech?“

### – 5 Reasons Why We’re the Right Partner for Your Project

#### Why? ✓ Because lightsource.tech is truly an all-round talent

Photonic technologies are playing an increasingly important role in research, industry and consumer products. If you wish to achieve more with light than simply illuminating a kitchen table, you soon need a partner with a good cross-section of competencies. Building a powerful LED light source for industrial quality control, for instance, demands comprehensive expertise: from the choice of components through to the electronics, hardware-oriented programming, thermal management, optical design and optical-mechanical construction. Our team more than does justice to these demands, and through our unique products and services we deliver precisely the professional light-based solution required today.

#### Why? ✓ Because we work with the latest technologies in a modular system

For one thing, we’re always keeping pace with the head of the field because of our constantly up-to-date, far-reaching perspective of different technologies and the latest components. This is not always easy, because many of exciting new developments being reported are “reserved” for a fixed circle of clients. That’s why it took quite a few years for the laser phosphor converter light sources originally developed for the automotive industry to become available in other applications and in smaller order volumes. It’s a fascinating technology we’re now applying to our LS-WL1 high-brightness light sources.

Secondly, we’re always trying to gain the edge through a special design or intelligent technical trick. It’s why, for example, you find in our Hyperchromator the laser-pumped plasma directly at the input of the monochromator. That’s how we save wasteful intermediate mapping at an entrance slit and achieve higher output power.

And finally, we offer not just solitary products but modular design made up of compatible components that can be easily brought together into complex systems. The basis of this is formed by optical fibers and a corresponding optical design that never loses sight of the goal to achieve a maximum throughput of light. This allows our LS-BB1 broadband source to combine easily with our “fiber-to-fiber” Monochromator-F and one of our homogenizers to create a system of illumination for hyper-spectral imaging. This modular system is constantly being further developed.

#### Why? ✓ Because our products have much in common with each other

The focus of our standard products, for example, is on optical fiber based solutions. We see in our R&D projects how practical it is when optical fiber can simply bring the light to where it’s needed. A certain amount of light is always lost when it is coupled into fibers, but often the advantages outweigh the loss. We also, of course, use free beam optical engineering when this is better suited to the application.

Another example is high luminance or high throughput: in most applications, it is almost impossible to have too much light, and high luminance – the key term here is “point light source” – is advantageous to the subsequent optics.

#### Why? ✓ Because we support our customers individually and comprehensively

Our customers have very diverse needs. One customer in research requires the broadest possible light spectrum on one small spot, another from industry would like monochromatic illumination over a large area but also very homogenously. And another requires triggering and short pulses... “Customization” is therefore part of our daily business. Often, it is necessary to adapt a standard product in order to achieve a certain characteristic. We like queries such as these, because as a result of our many years experience in various areas of optical engineering, measurement technology and image processing, we can offer our support and consulting as equals in the field. Or even contribute a few ideas on how something could function even better. We’ve tried out quite a lot ourselves over time, and seen even more. Our customers are advised by people who themselves have been developing scientific instruments for many years, always trying to find new solutions to a given challenge.

As a result of our work together with large companies or on aerospace projects, we’re used to working to very demanding standards. This is especially important to our OEM customers. We want to achieve the technical targets in the agreed time, at the agreed cost and at the level of quality required. For more demanding projects or if the path to a solution still needs to be clarified, we’re pleased to carry out a feasibility study in advance, on an academic level when required. This provides our customers with a high degree of certainty for project success.



### Why? ✓ Because we're not done yet!

Over the next two or three years we'll be significantly expanding our product spectrum, with a clear focus on technical light sources. On the one hand, this will be through organic further development – for example, product variants with new LED wavelengths, or by extending our modules with matching accessories. On the other hand, this will be through new products. Hot topics at the moment are UV, NIR/MIR, and in general overcoming the spectral limitations of existing LED technology in terms of bandwidth, colour reproduction, and suitability for spectroscopy. In this regard, we're currently working on several new developments – not only for devices, also technologies.

We're especially looking forward to the results of various projects for OEM customers. We will be boosting our personnel capacity in the near future, both to support our own development projects as well as for OEM projects.

**+49 (0) 551/270765-0**  
**info@lightsource.tech**

### Why lightsource.tech is the right address for you

 <p>All-round talent</p>	<p>Photonics demands a range of technical expertise we can offer</p>
 <p>Leading-edge and compatible</p>	<p>We work with the latest technologies, unique technical features and a product portfolio based on modularity</p>
 <p>Unique product spectrum</p>	<p>Our modular system based on optical fibers means we implement your application quickly and effectively</p>
 <p>Customer understanding</p>	<p>You receive from us competent consulting, feasibility studies, customization, and professional advice and support for OEM customers</p>
 <p>Technical highlights as standard</p>	<p>We are continuously developing our technologies and product range for you</p>

lightsource.tech  
A brand of the  
Technologie Manufaktur GmbH & Co. KG

+49 (0) 551/270765-0  
info@lightsource.tech

Hannah-Vogt-Str. 1  
D-37085 Göttingen

Copyright 2021