

# Neumüller Elektronik GmbH

**Products & Services** 



#### Essential criteria

As a long established and owner-operated company, we always act according to the features reliability and liability, honesty and transparency as well as flexibility and discretion. Customer satisfaction confidence and commercial added value are basis for successful cooperation.

#### Reliable and strong partnership

We put the strength in working together exclusively with well-respected and leading manufacturers and suppliers. We achieve confidence and consistency in the market for more than 70 years. We do implement your demand on product quality and availability.

#### All-over processes and significant quality

The certification according to DIN EN ISO 9001:2008 proves the continuous representation of our processes. All procedures and workflows are location and department overall recorded. This guarantees you, as our valued customer a maximum of safety and transparency in the complete process chain.

#### High advisory skills and solution

We confirm the confidence of our customers by fulfilling and exceeding their expectations. Our competence of individual consulting and target-oriented solutions are reflected in our custom-fit products. Have a look by yourself!

#### Market knowledge from A to Z

Besides our specialized product portfolio we distinguish ourselves with profound branch knowledge. We use this know-how in order to give an optimum of product support. You can always rely on our extensive technical expertise from A like Acrich High Voltage Technology to Z like Zhaga LED modules. Our experts are always beyond ones nose and give you full support during your complete project realization and do also consider alternative solution approaches, if necessary.





#### Onwards with sophisticated steps

Neumüller Elektronik has been a successful electronics distributor of electronic components and systems for more than 65 years. With its expertise in the fields of optoelectronics, lighting, sensors, power supply, electromechanics, hi-rel, alarm & acoustics and circuit breakers an industrial storage solutions, Neumüller Elektronik is a valued partner in the development of customer-specific applications.

#### Customer proximity and know-how...

#### Paired with a solution-oriented and holistic way of thinking

This is the key to the long-term integration process of our customers. Every day we prove a new that we are on the right track.

#### Who goes for the whole, must know the whole

Complete solutions without interfaces and friction losses are made possible by our highly qualified employees through holistic, process-spanning thinking and acting.

#### Solid growth needs continuity

We want to be a continuous and calculable partner for our customers. Therefore, we put long-term stability above short-term profit.

#### Only those who act close to their customers can react promptly

Our proximity to our customers in terms of content and geography is the best prerequisite for a fast, flexible response to all relevant changes in the market and in the requirement profile of our customers. We are currently represented by 65 employees at five locations in Germany and one office in Austria.















#### **Design-In-Distribution**

#### Market and innovation-oriented distribution

The path from the product idea to series production is often complex. Therefore, the different processes must be secured, seamless and coordinated.

Our proven chain includes the steps of product development, covering adjustments and continuous optimization of the finished product. It ensures that each product and each special solution meets the high expectations of our customers.

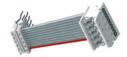
We support our customers in the following areas:



Power supply



optoelectronic solutions



Cable assembly Wage services



individual conenctors

# Optoelectronic

#### In the field of optoelectronics, we offer probably the broadest product portfolio in Germany

As a system provider, we develop - together with you - the product that fits your needs and that with more than 65 years of experience. Our special strength lies in the interaction of the availability of standard products, the high flexibility and the application-oriented implementation of customer-specific adaptations and special solutions.

We are proud of our good reputation, which we have made not least due to our broad product range in the field of optoelectronics, in particular IR components / sensors and visible LEDs. We only offer quality products from leading manufacturers. Put simply: We offer optoelectronics from specialists!

LEDs				
Visible LEDs				
Full Spectrum	COB	Acrich	LEDs Wired / THT	
SMD High-Power	SMD Mid-Power	SMD Low-Power		
• UV LEDs	• UV LEDs			
SMD	COB	Flip-Chip	THT	
• IR-LEDs				
• IR-VCSEL				
Fiber-Optic	Fiber-Optic			

<b>UV-Technology</b>				
• UV LEDs				
SMD	COB	Flip-Chip	THT	
UV CCL				
Straight Type	Compact Type			
• UV-Sensors				

Receivers & Sensors				
<ul> <li>Photodiodes</li> </ul>				
<ul> <li>Phototransistors</li> </ul>				
Photodarlington Trans	sistors			
Fiber-Optic				
Sensor (LED   VCSEL)	Receiver (PIN   TIA-PIN)	Receptical (ST   SMA  )		
Line Imagers				
Photodiode Arrays				
UV Sensors				

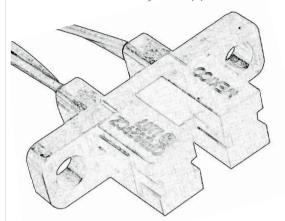
ToF (Time-of-Flight)			
ToF Imager	ToF Camera	Evaluation Kits	

#### **Optocouplers**

#### **High voltage optocouplers**

#### **Optoelectronic special solutions**

As individual as your application



Only the optimal coordination of all components achieves the ideal result of your system. Due to the close coorporation between you and our project team we enable a fast development of your individual optoelectronics. We also cover special requirements.

Your advantage: High-quality products are matched by us for maximum efficiency and a long service life. For optoelectronics that at best even exceed your requirements.

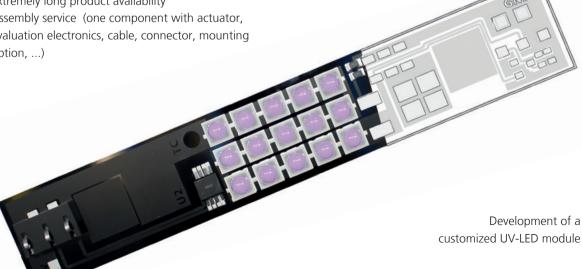
For the benefit of the customer, we offer not only a wide range of standard components, but also an individually tailored solution for the customers problem.

Electrical, mechanical and optical parameters are adapted to fit exactly. Starting with customer-specific cable assembly, through specially selected parameters such as brightness, sensitivity limits or transmission factors, up to complete application-specific and complex optoelectronic components, modules and systems.

We accept this extensive challenge of creating customer-specific solutions and develop innovative products for our customers, which are based on our many years of extensive know-how, our creativity and last but not least the high vertical range of manufacture. Access to and mastery of technology, in conjunction with intensive coorperation with the user, are the basis for mutual success.

#### Application-specific versions • Customer-specific selections • Extremely long product availability

• Assembly service (one component with actuator, evaluation electronics, cable, connector, mounting option, ...)



# **LED Lighting**

#### **Product diversity for the LED lighting industry**

Our product variety for the LED lighting industry is second to none. As a distributor of leading manufacturers, we only sell products (LEDs, OLEDs, optics, power supplies,...) that offer maximum functionality, performance and reliability. As an LED system house for manufacturers of LED lighting systems, we also develop technically and economically optimised LED modules and systems. From the idea through high-quality lighting concepts to series production: You define - we deliver the perfect solutions.

#### **LEDs**

- Full Spectrum LEDs
- COB LEDs
- SMD LEDs

High-Power Mid-Power Low-Power

- Acrich LEDs
- LEDs wired (THT)

#### **LED-Systems**

#### **LED-Strips**

#### **LED-Modules**

#### **LED-Power Supply**

#### **LED-Driver ICs**

LED Lighting Driver ICs

Nano Driver ICs RGB LED-Driver ICs Linearregler ICs AC/DC LED-Driver ICs

DC/DC LED-Driver ICs

LED-Display-Driver ICs

#### **MicroDriver**

#### **LED Optics**

UV LEDs			
SMD	COB	Flip-Chip	THT

#### **Engineering**

LED-Modules | LED-Systems

#### Photometcric Lab.

Spectroradiometer

Integrating sphere Ø30cm | Ø100cm

Goniophotometer

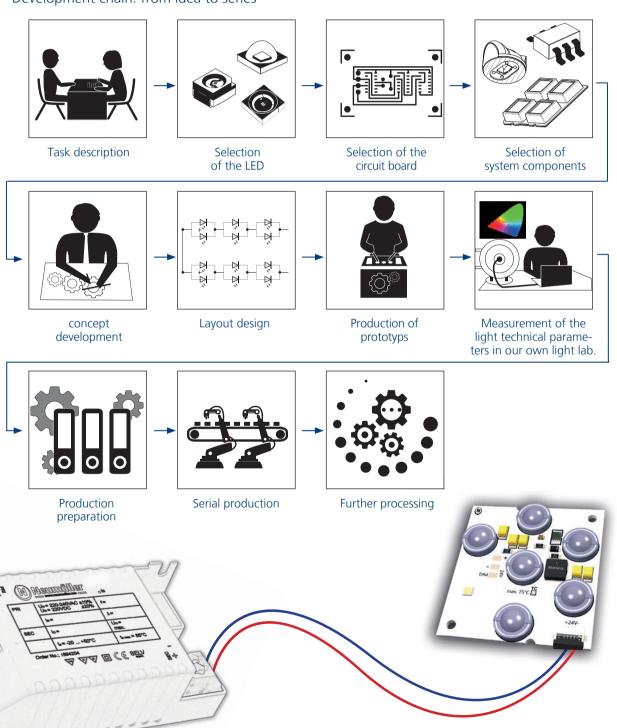
#### **Customized LED solutions**

#### Tailored to your requirements

Just as no two people are alike, so are our customers. Every customer has his own idea and criteria, which are particularly important to him. In order to meet these, it is our claim to find target-oriented and custom-fit LED solutions.

Precise analysis and planning are our basis for high-quality lighting concepts. We support you in the systematic planning for your lighting project with concrete decision-making aids for efficient LED modules and systems that meet your requirements.

#### Development chain: from idea to series



### Sensors

#### With our products we offer you a maximum of quality, reliability, function and performance

In addition to the wide selection of different forked photoelectric sensors and reflex couplers, we also offer optocouplers, arrays, liquid sensors, various IR transmitters and receivers and special components for sensor applications. Should our products not be covered by our standard range - no problem! Together with you, we create application-specific products as well as complete solutions in the field of IR components and sensor technology.

LEDs					
• IR-LEDs					
Hermetical sealed	Wired / THT	SMD	High-Power		
• VCSEL	• VCSEL				
• visible LEDs					
SMD High-Power	SMD Mid-Power	SMD Low-Power	LEDs Wired / THT		
UV-LEDs	• UV-LEDs				
SMD	COB	Flip-Chip	LEDs Wired / THT		
Standard and customised modules					

#### **Receivers & Sensors**

- Photodiodes
- Phototransistors
- Photodarlington Transistors
- Fiber-Optic

Sensor (LED | VCSEL) Reciever (PIN | TIA-PIN) Receptical (ST | SMA | ...)

- Line Imagers
- Photodiode Arrays
- UV-Sensors

ToF (Time-of-Flight)			
Tof Imager	ToF camera	ToF Evaluation Kits	

Fork light sensors					
Phototransistors	Photodiodes	Foto-Logic			
wired   with cable   connector   separate type					

Reflex coupler					
Phototransistors Photodiodes		Foto-Logic			
wired   with cable   connector   separate type					

#### **Optical level switches**

#### **Liquid sensors**

#### **System components**

- Photodiode Amplifiers
- Output Drivers
- Optical Filters

#### From the sensoric component to the complex solution

All from one source

Customized optical sensors play an important role in the further development and growth of the market for medical devices, among others. Adaptable sensors today enable highly integrated devices that improve (patient)-care worldwide with their performance, connectivity and portability.

#### From component to complex solution

#### Example 1









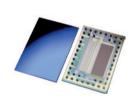
#### Example 2







Example 3







**ToF Imager Module** 



**ToF Kamera** 

#### **Color Sensors**

#### **Hall-Effect-Sensors**

# Potentiometers Precision Potentiometers Solid-state Linear Single-Turn Trimmer Potentiometers Single-Turn Open Type

#### **Encoder**

# **Power Supply**

#### Highest reliability and durability for maximum availability

We provide power supplies of the highest quality and reliability for lighting, automation, medical & life science, automotive, marine, rail, aerospace, military, security & surveillance, communications & IT, consumer & home appliances, instrumentation and many other industrial applications. In addition to standardized power supplies from well-known manufacturers, we also offer customer-specific solutions.

#### **AC/DC Power Supplies**

Wall / Desktop Power Supply

Medical | Home care | ITE | Industry | Household

Build-In Power Supply

Medical | Home care | ITE | Industry | Robotik | Household

• Configurable Power Supply

Medical | ITE | Industry | Robotics

Din Rail Power Supply

Industry | Robotik | ITE | Household

#### **DC/DC Converter**

DC/DC Board-Mounted isolated / non isolated

Industry | Automotive technology | Train applications | NAT | Consumer | Medical

• DC/DC Chassis Mount Converter isolated / non isolated / encapsulated

Industry | Automotive technology | Fuel cell | NAT | IP protection

#### **LED-Power Supplies**

#### **BatteryPacks / Modules**

LiPo | Lilon | 12V, 24V, 48V | e-Mobility

# What if the standard does not fit? Your customer-specific solution

Based on your requirements, we work out modifications to standard Smart communication interfaces Devices or develop a custom-fit special product (z. B. CAN-open, I<sup>2</sup>C, USB, ...) Special registration Vibration / shock protection High quality capacitors Suitable connections and fixings Special Individual size, Load profiles casing shape, surface and color Specific output voltage Ideal or voltage combinations thermo design

# Electromechanics

#### Standardized and customer-specific connectors as well as individual cable assembly

Our high-quality product portfolio of leading electromechanical manufacturers covers numerous industries and application fields such as industrial, consumer, data and telecommunications electronics or automotive and also includes hi-rel (high reliability) industries such as medicine, military and aerospace.

Connectors				
FFC/FPC	Board to Board	Wire to Board	Modular Jack	
USB	Power	D-Subminiature	Rectangular	
Round	HDMI	RJ45	Sensors	
Modular	Fiber Optics	Hermetical	Customized	
IP   waterproof	Accessories			

Cable Assembly					
Single Strands	Power Cords	FFC Cable	Automotive		
Cable Harness	HDMI-Cable	Hotmelt	Overmoulding		

# Cable assembly and connectors As individual as your requirements

A broad production spectrum of cable assembly enables us to manufacture a wide variety of cable types and connectors in all norms and standards for almost every industry.



# Hi-Rel

#### Solutions that make all the difference

Components for applications in aerospace, avionics, medical technology and military technology as well as precise measuring instruments. 100% tested and inspected (screening) according to MIL-PRF-19500, MIL-STD-750, MILSTD-883 in Group A, Group B, Group C, B-Level and S-Level and classifications such as TX, TXV, B, S as well as ESA. In addition to optoelectronic components, we supply MOSFET and NPN / PNP transistors. The hermetically sealed Hall Effect sensors for HiRel applications are probably unique.

#### **Hall-Effect-Sensors**

#### **Optocouplers**

#### **IR-LEDs**

#### **Phototransistors**

#### **IC-Photodetectors (Logic output)**

#### **Fork Light Barriers (Phototransistors)**

#### **Reflective Opto Switches**

#### **Bipolar Junction Transistors (BJT)**

#### **MOSFET-Transistors**

#### **Diodes and rectifiers**

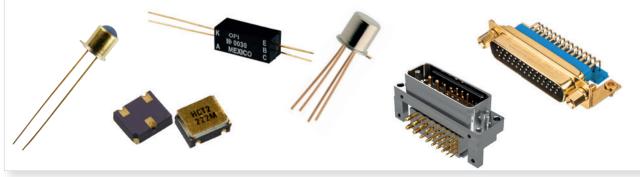
#### **Connectors**

#### **Hi-Rel components**

# Standard or specific according to your requirements

We respond to your requirements with passion and solution-oriented action. Our many years of experience provide you with the objectivity and competence to procure or develop the best objectivity and competence to produce the best technology for your application in the fields of aerospace, military, automotive, ship and railroad as well as other fields of application.





# Signal Technology

#### A wide range of high-quality signal technology

From buzzers to transducers, horns, bells, sirens, signal towers, signal lights, flashing lights and rotating beacons, we offer you a wide range of acoustic, optical and combination signal transmitters. Our signal technology range is rounded off by our acoustic components such as piezo discs, microphones and loudspeakers.

Beacons					
Signal Towers	Signal Lanps	Strobe Beacons	Rotating Beacons		
Sounders					
Buzzer	Transducer	Signal horns	Sirens		
Bells					

#### **Sounder-Beacon Units**

Akustic Components				
Piezo discs	Ultrasonic discs	Speakers	Microphone	



# Circuit breaker

#### Powerful circuit breakers from AIRPAX® and KLIXON®

Airpax® and Klixon® offer you not only a broad portfolio of high-quality thermal and hydraulic-magnetic circuit breakers, but also an experienced team of experts who can provide you with competent support for all your questions. In close cooperation with the parent company Sensata Technologies, we are able to select your technical requirements and offer you a suitable solution, which can also be customer-specific.

#### **Circuit breaker**

Hydraulic-magnetic circuit breakers





- Protection of electronical and electronic components against over current and over voltage
- Temperature independent circuit breakers
- Wide range of qualifications according to MIL, VDE, IEC, UL and CSA



#### **Temperature Switch**

Thermal bimetallic switches



# Memory & Storage

#### **Standard and customised**

Storage solutions and products, especially for the industry, medical, security and automotive sectors. Many requirements call for small data packets and high demands on data integrity, especially in the event of power failures. Here we offer different solutions using firmware and hardware.

Flash			DRAM
Parallel NOR Flash	SATA	1,8"	DDR – DDR4
SLC-NAND	PATA	2,5"	DDR5 (coming soon)
MLC-NAND	PCI	Half Slim	SDRAM
3D-TLC-NAND	SD	M.2 2242	mobile LP-DDR
Pseudo-SLC	USB	M.2 2280	
	еММс	M.2 22110	SRAM
	U2	SD/µSD	Async
		CF/C-FAST	Sync

# Storage solutions for medicine, industry and Hi-Rel When quality and data security play the decisive role The basis of our products: » Long product availibility » Fixed BOM » Commercial and industrial temperature range » Data integrity during power fall » Storage systems can be optimized according to customer requirements » DRAM memory modules available in popular form factors and in both standard industry and enterprise quality



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