Technology for Light

Components · Optics · Automation

BJB//OEM-Line

The smartest route to your LED application

BJB

Technology for Light

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Components · Optics · Automation


Technology for Light:
This way the route to
your LED application
is now even shorter.

What has been our business for almost 150 years is also what inspires us now with regard to new technologies and processes: The development of modern, reliable and efficient systems and components for general lighting. In 2016, therefore, we will again be adding many new products to our range of LED applications and LED lighting solutions. To make the route from the initial idea to the finished LED application even shorter for you. The BJB///OEM-Line offers you technology for light. This brochure will provide you with a concise overview of our current electromechanical, electronic and optical components for use in your lighting solutions. These include

- **Components for Spots and Downlights**
- **Linear Flat Systems**
- **Individual LED Boards and Accessories**
- **Optics and Light Control**
- **Automated Solutions for luminaire manufacturing**

"Technology for Light" is the new expression for our core competency as a systems supplier. Our continued objective is to excel in terms of quality, innovative spirit and technical know-how.

From the initial idea to the system solution

Designed, built, tested, produced

The technological change to LEDs has arrived, and we are active in shaping it – with all our capabilities and strengths focused on your requirements and the possibilities offered by modern technology in research, development and production.

Looking back, such processes of change have occurred throughout the history of our company. Beginning with the petroleum lamp in the 19th century, followed by the incandescent lamp, the fluorescent tube and numerous halogen versions, and now the LED – we have always been involved in shaping these changes and supplying components for your lighting solutions.

Within the company we have developed new structures and built up additional areas of expertise in the fields of lighting technology, optics and automation. In addition, with our worldwide sales network and locations on all continents, we are excellently equipped to meet future requirements both technically and logistically.

We have been developing, producing and supplying high-quality lighting technology for almost 150 years.
Our objective has always been to provide the very best quality and service to our customers.

SPOT-DOWNLIGHT
BJB///OEM-Line

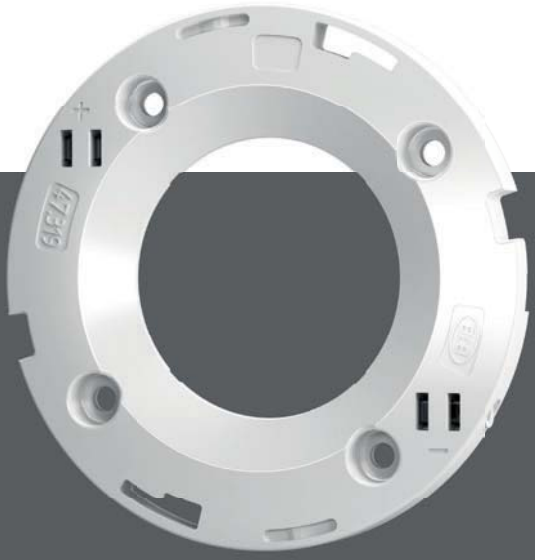
COB connectors 47.319: Because someone has to hold things together

An overview of the most important features

In a spot or downlight application, the connector is the central component. It performs important functions for the COB, attachment of the heat-sink, power feed and reflector interface. As a connection and termination element, it integrates the most important components: On the underside the COB PCB, to the side the push-in connections for the connecting cable, on the upper side the interface for the reflector base.

- Simple, secure installation
- High-strength, blue-light resistant plastics
- Corrosion and wear-resistant contact materials
- Resistant to fretting corrosion

BJB connectors are compatible with COBs of almost all leading LED manufacturers worldwide.



Examples of versions from the 47.319 series

Connectors are used in punctiform lighting applications such as spots and downlights, as well as in applications for hall and street lighting.
Further information is available at bjb.com or directly from your contact person.

Overview of BJB connectors (Ø 50 mm)

Strip length 6 + 1 mm	Pre-fixing method	PCB dimensions	bridgelux	CITIZEN	CREE	EDISON	Lextar	LG Innotek	OSRAM	LUMILEDS		SEOUL
Diameter 50 mm												
47.319.2011.50 (0,5 mm²)		20 x 24 mm								Luxeon 1204/ 1205/ 1208		
47.319.2013.50 (0,5 mm²)												
47.319.2021.50 (0,5 mm²)		19 x 19 mm		CLL 030 CLL 032 CLU 034 CLU 036 CLU 038 CLL 091		Opto 30W					PACB 032	ZC12/18
47.319.2023.50 (0,75 mm²)												
47.319.2025.50 (0,5 mm²)												
47.319.2026.50 (0,75 mm²)												
47.319.2030.50 (0,5 mm²)		28 x 28 mm		CLL 040 CLL 042 CLU 044 CLU 046 CLU 048 CLU 730		Opto 40W		LEMWM 28 - 40W		Luxeon 1211		ZC 25/40/60
47.319.2033.50 (0,75 mm²)												
47.319.2040.50 (0,5 mm²)		25,8 x 22,8 mm	ES								PABA RS	
47.319.2051.50 (0,5 mm²)		20 x 24 mm										
47.319.2070.50 (0,5 mm²)		24,5 x 24,5 mm								Luxeon K12/16		
47.319.2080.50 (0,5 mm²)		24,4 x 18 mm						MCP 10-17 W				
47.319.2090.50 (0,5 mm²)		30 x 30 mm							Soleriq E30			
47.319.2131.50 (0,5 mm²)		17,85 x 17,85 mm			CXA 1816 CXA 1820 CXB 1816 CXB 1820							
47.319.2134.50 (0,5 mm²)												
47.319.2135.50 (0,75 mm²)												
47.319.2141.50 (0,5 mm²)		23,85 x 23,85 mm			CXA 25xx CXB 25xx							
47.319.2144.50 (0,5 mm²)												
47.319.2145.50 (0,75 mm²)												
47.319.2151.50 (0,5 mm²)		27,35 x 27,35 mm			CXA 30xx CXB 30xx							
47.319.2154.50 (0,5 mm²)												
47.319.2155.50 (0,75 mm²)												
47.319.2170.50 (0,5 mm²)		24 x 24 mm							Soleriq X19			
47.319.2224.50 (0,5 mm²)		21 x 21 mm	V 15									
47.319.2274.50 (0,5 mm²)		21 x 21 mm	V 18									
47.319.2275.50 (0,75 mm²)												

SHARP	SUNPU LED	TRIDONIC	VS	Ledtech	LED	NICHIA	GLBTECH	EVERLIGHT	LUMINUS	LUMENS	SAMSUNG	ITSWELL	LITEON
MegaZeni				LP30N3-84N-B131301				Ju2024					
	G17	G4 15 mm	DMC 114/125/128	LP30N3-84N-B131299				Xuan1919	CXM14AC00			COB-N Serie	M04
	G7				SP22N-4090		GME2821		CXM22AC00				
Tiger Zenigata													
										Ergon COB25			
										Ergon COB30			

You will find more connectors with a diameter of 50 mm on the next page.

Overview of BJB connectors (Ø 50, 40 and 70 mm)

Strip length 6 + 1 mm	Pre-fixing method	PCB dimensions	bridgelux	CITIZEN	CREE	EDISON	Lextar	LG Innotek	OSRAM	LUMILEDS		SEOUL
Diameter 50 mm												
47.319.2254.50 (0,5 mm²)		21,5 x 21,5 mm										
47.319.2255.50 (0,75 mm²)												
47.319.2314.50 (0,5 mm²)		28 x 28 mm		CLL 040/042 CLU 044 CLU 044/046 CLU 048 CLU 730			PB20U02.0 PB30H02.0 PB30U03.0 PB40H02.0 PB40U03.0			Luxeon 1211		
47.319.2315.50 (0,75 mm²)												
47.319.2280.50 (0,5 mm²)		21,5 x 21,5 mm										
47.319.2281.50 (0,75 mm²)												
Diameter 40 mm												
47.319.6060.50 (0,5 mm²)		13,5 x 13,5 mm		CLL 020/150 CLU 024/025 CLU 024/025/026 CLU 028 CLU 700		Opto 9W					PACB 022	ZC 6
47.319.6104.50 (0,5 mm²)		15,85 x 15,85 mm			CXA 15 CXB 15							
47.319.6105.50 (0,75 mm²)												
47.319.6111.50 (0,5 mm²)		18 x 18 mm							Soleriq S13			
47.319.6120.50 (0,5 mm²)		13,35 x 13,35 mm			CXA 1304 CXB 1304							
47.319.6180.50 (0,5 mm²)		12 x 15 mm								Luxeon 105 Luxeon 107 Luxeon 109		
47.319.6190.50 (0,5 mm²)		11,8 x 11,8 mm							Soleriq P6			
47.319.6200.50 (0,5 mm²)		15 x 15 mm							Soleriq P9			
47.319.6214.50 (0,5 mm²)		15,8 x 15,8 mm	V 10									
47.319.6264.50 (0,5 mm²)			V 13									
47.319.6265.50 (0,75 mm²)												
47.319.6234.50 (0,5 mm²)		17 x 17 mm										
47.319.6244.50 (0,5 mm²)												
47.319.6294.50 (0,5 mm²)		13,5 x 13,5 mm		CLL 022 CLL 024 CLU 025 CLU 026 CLU 028 CLU 700			PB04H07.0 PB07H04.0 PB10H08.1					ZC6
47.319.6295.50 (0,75 mm²)												
47.319.6304.50 (0,5 mm²)		18 x 18 mm					PB15H05.1 PB20H03.0 PB30H04.0		Soleriq S13 Soleriq X13			
47.319.6305.50 (0,75 mm²)												
Diameter 70 mm												
47.319.4160.50 (0,5 mm²)		38 x 38 mm		CLL 050 CLU 056 CLU 058								ZC100

SHARP	升谱光电 SUNPU LED	TRIDONIC	VS	Ledtech	LED	NICHIA	GLBTECH	EVERLIGHT	LUMINUS	LUMENS	SAMSUNG	ITSWELL	LITEON
											LC026B LC033B LC040B		
	G7		DMS120 DMS150						CXM22AC00			COB-Q Serie	
									CXM18				
	G16		DMC 122					Xuan1313	CXM09AC00			COB-B Serie	M08
Mini Zenigata						NTCxS024B NJCxS024Z							
											LC013B		
											LC019B		
		G4 LES 10	DMC 122					Xuan 1313				COB-B Serie	
	G9											COB-W Serie	

BJB-ALLin1: BJB connector and the COB of your choice

Pre-assembly of COBs and other components as well as assembly of complete modules

To simplify manufacturing processes in the final assembly stage, we enable you to install a complete module. For this purpose, on the basis of numerous COBs, we offer you the possibility of creating modules consisting of our COB connector, the Push-to-Fix fixing element and an optional TIM foil. Special designs are also possible on request.

- BJB connector
- BJB Push-to-Fix
- COB from the manufacturer of your choice
- TIM (Thermal-Interface-Material) optional from BJB

47.319 + COB

Push-to-Fix (optional) from

+

Connector from

+

COB from

+

TIM (optional) from

=

Complete pre-assembled module from

with COB

Twist'n'Spot 32.120: Plug & Play modules for Spots and Downlights

These assemblies are reliable LED modules which are extremely easy to handle and process. The advantages: Maximum flexibility due to exchangeable light sources, a wide range of applications, excellent light quality and cost-effectiveness.

These modules are used in shop and office applications and in many areas of the hospitality field.

Prepared for "Late-Stage Finishing", the luminaires can be fitted with the required light source shortly before they are delivered or put into operation. This late final configuration reduces storage costs and enables small batches to be produced at low cost.

With their various luminous flux and colour temperature ratings and high optical efficiency, they adapt excellently to changing lighting requirements.

The catalogue of advantages offered by this module is rounded off by the uncomplicated method of installation.

An overview of the advantages

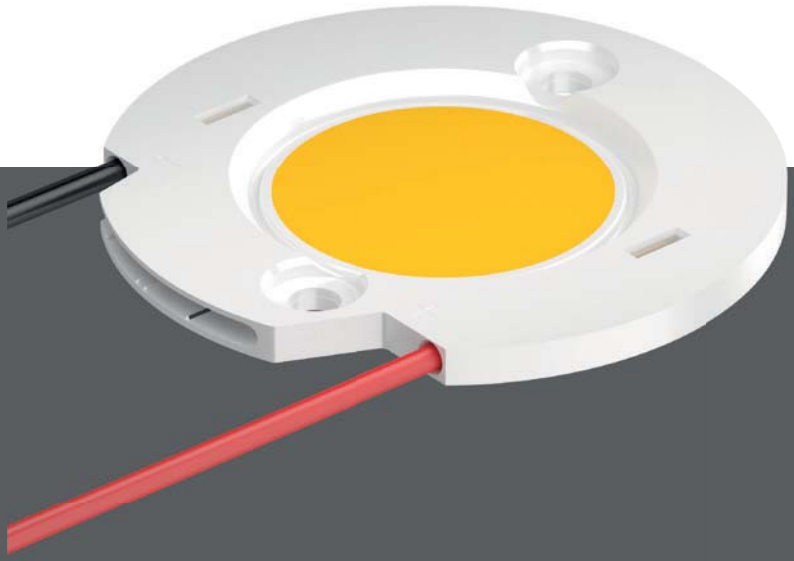
- Late-Stage Finishing – final configuration shortly before delivery
- Adaptation to changes in utilisation of space – light source easy to exchange
- Upgradable – possibility of benefiting from impro vements in efficiency
- Simple, secure installation by means of Twist & Lock fixing

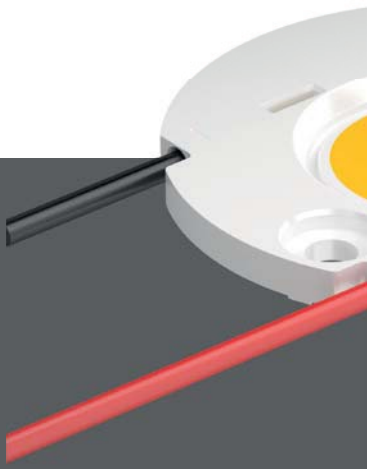
Further information on these and other products from the BJB///OEM-Line is available at bjb.com or directly from your contact person.


BJB diffusor plate
BJB reflector
BJB Twist'n'Spot
BJB lampholder
Heat sink

ALLin1 including conductors. Insert, connect, ready

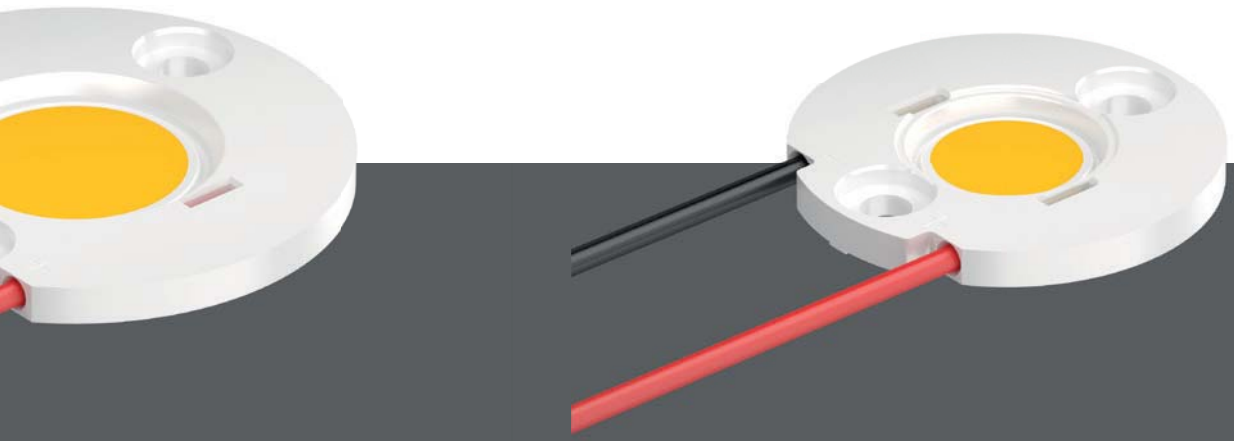
The ALLin1 module is also available pre-assembled from BJB. In various spot applications, the size of the components plays a decisive role. We have therefore developed a solution which offers you an ALLin1 module with a minimum size and conductors already integrated. This is an element which is ready to install, consisting of COB, connector, TIM foil (optional) and connecting cables. For installation purposes, it can, for example, be quickly and easily attached to a heat sink by means of Push-to-Fix fixing elements. It is then only necessary to connect the cables to a suitable ECG.





An overview of the most important features

· Ready-to-install module consisting of COB, connector, TIM foil (optional) and connecting cable
· Quick and easy installation
· Extremely low overall height (2.6 - 2.8 mm)
· Luminous flux between 1,000 - 5,500 lm (example with Lextar COBs V.4)



Push-to-Fix fixing elements for heat sinks with blind drill holes

To lock our COB connectors onto heat sinks with blind drill holes, we have developed the Push-to-Fix fixing element 28.902 as an alternative to the M3 screw. All that is required to assemble such a module is drill holes in the heat sink. No threads are necessary.

28.902

Push-to-Fix fixing elements
for blind holes

Example of application

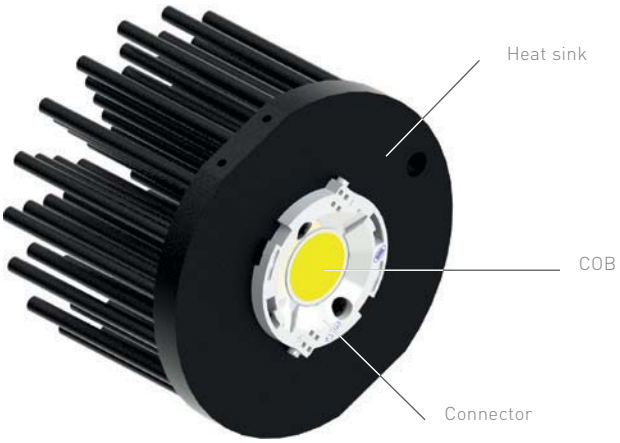
Heat sinks

Optimum heat dissipation is a crucial factor for the service life and light output of an LED. The products of Fischer Elektronik and Mechatronix, for example, provide reliable heat dissipation.

The heat sinks from Fischer Elektronik are also optimised for use with the Push-to-Fix for blind holes 28.902.

fischer elektronik www.fischerelektronik.com

MTx MechaTronix www.mechatronix-asia.com



Light control with BJB optical systems

BJB reflectors and diffusor plates are the ideal addition to our series 47.319 COB connectors and our Twist'n'Spot modules 32.120. These products for specific light control are part of our BJB///OEM-Line modular system. A new addition to the range is lensholder for silicone lenses from the French technology leader Gaggione. These modules open up further possibilities for the design of high-quality Spots and Downlights.

Reflectors

47.950.-301

47.950.-302

47.950.-303

47.940.-311

47.940.-312

47.940.-313

47.940.-351

47.940.-352

Diffusor plates

47.950.-401

47.950.-402

47.950.-403

47.950.-404

Lensholder for Gaggione silicone lenses

Examples of reflectors and diffusors from the BJB range for Spots and Downlights.

Further information on optics and light control is available at bjb.com or direct from you contact person.

LINEAR FLAT SYSTEMS
BJB///OEM-Line

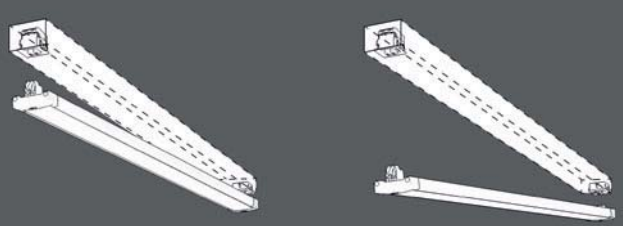
Linear Flat System.
The second generation is available

The Linear Flat System (LFS) from BJB is a success story which began with its presentation at Light + Building 2014 and is now following on logically with its second generation. More efficiency, more versions and an extended modular system with individual components for specific solutions, in short: Ultra-flat elegance offering added value for luminaire manufacturers.

What is new in the Linear Flat System? First of all, the module efficiency, which has increased by 10 % to as much as 142 lm/W. Then there are optics with application-specific light distribution, making the system suitable for both general and accent lighting. The programme is rounded off by a version for standard three-phase power tracks, which the LED module fits into without the need for an additional luminaire housing. The advantage: In terms of form and lighting technology, this combination offers the user a completely independent solution.

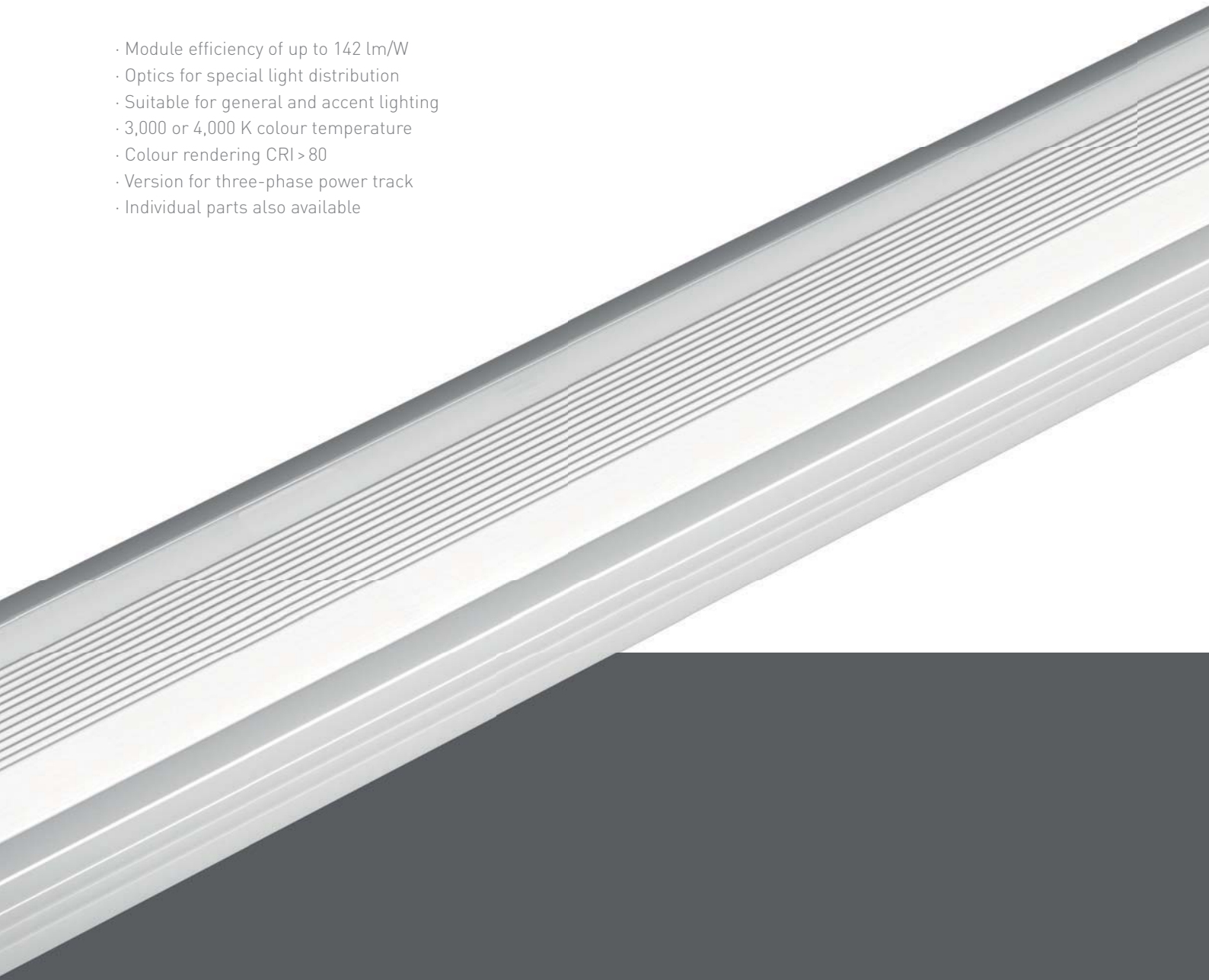
The graceful design of the LED module has been retained, with a width of only 37 mm and a height of 13 mm. There are three standard lengths available, based on the dimensions of conventional T5 fluorescent lamps. And with two colour temperatures of 3,000 K and 4,000 K, a colour rendering of CRI > 80 and, at present, four optics for special light distribution characteristics, the Linear Flat System can also boast good lighting values. Whether in the office, industrial, shop or hospitality fields, everything is possible.

In addition, LED light source components, optics, lampholders and lamp supports are available as individual components for specific designs. The Linear Flat System therefore offers you complete flexibility. You can either purchase individual components from BJB to realise your own individual solutions, or you can make use of the wide range of fully assembled lamps from BJB.



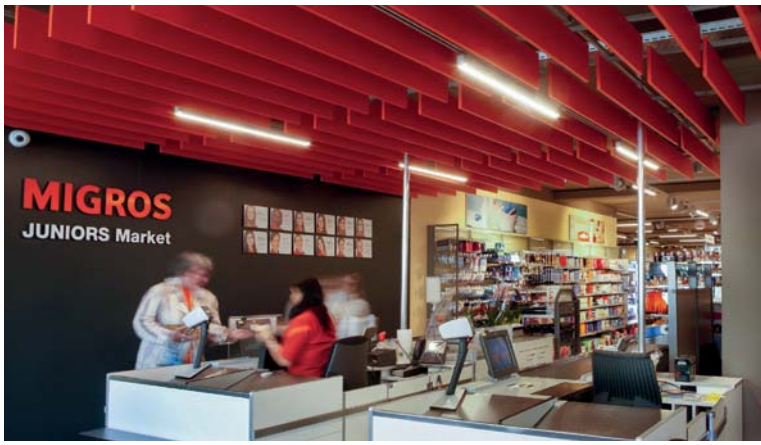
An overview of the most important features

- Module efficiency of up to 142 lm/W
- Optics for special light distribution
- Suitable for general and accent lighting
- 3,000 or 4,000 K colour temperature
- Colour rendering CRI > 80
- Version for three-phase power track
- Individual parts also available



Further information on the Linear Flat System and its possibilities, also for customer-specific versions, is available at bjb.com or direct from your contact person.

The Linear Flat System in practice. Convincing advantages



Migros Juniors Market, Basel/Switzerland

Flexibility and sustainability: These are the success factors for the Linear Flat System, consisting of LED light source, lampholder and lamp support. The resultant possibility of "Late-Stage Finishing" means that luminaire series can be produced in the same way as before. The customer-specific "lamp", i.e. the appropriate LED light source in terms of luminous flux, colour temperature and colour rendering, is only integrated later. In this way, the user always receives a luminaire with the latest lighting parameters – a forward-looking philosophy which makes sense in the fast-moving world of LED technology.

The many users worldwide have discovered this added value for themselves, for example in the field of shop lighting or the illumination of factory production facilities.

For challenging applications

At the beginning of 2015, as part of a revitalisation concept for its approximately 60 hypermarkets, Migros Basel gave the Juniors Market in Grenzbacherstrasse in Basel city centre a "facelift". Throughout the 600 m^2 sales area, Lux Longus LED luminaires from Elpro Lichttechnik, fitted with the Linear Flat System from BJB, ensure that goods are presented in an attractive manner. In the checkout area too, fitted in between the Migros-orange wooden slats, the project-specific Lux Longus linear luminaires emit a glare-free light to work by.

The LED lighting solution has substantially improved the energy efficiency of the store, which now meets the Minergie standard. Due to their low heat generation, LED luminaires have clear benefits in food stores and supermarkets because they also allow the output of refrigerator systems to be kept to a minimum. As Hanspeter Wüthrich, Head of Technology at Migros Basel, explained, there are basically two decisive aspects. Firstly, there must be a positive overall cost balance over the lifetime of the installation, i.e. investment and operating costs, including both energy consumption and maintenance costs. Secondly, great importance is attached to high-quality light with a colour temperature of 3,000 K. This acts as a sales promotion instrument as the pleasant atmosphere induces customers to spend longer in the store and purchase more. Turnover has already increased at Juniors Market since it received its facelift.

In South America too, they are putting their trust in the virtues of the Linear Flat System, plus a little improvisational talent. For the application at Supermercados Peruanos, the most important factors are flexibility and the possibility of combining the BJB system with existing power tracks without the need for a special luminaire housing. With its portfolio of brands including Vivanda supermarkets, Mass and Economax discounters and Plaza Vea self-service department stores, the hypermarket chain caters for the varied requirements of consumers throughout Peru. Supermercados Peruanos has been undergoing a process of expansion since 2006. This includes the building of new branches directly in the capital, Lima, and in the provinces, as well as the remodelling of existing branches. The aim is to open up new market segments and focus more closely on customer requirements. There is therefore considerable potential for applications involving the Linear Flat System.

A special solution for the specialists

The company bpe:LICHT GmbH & Co.KG, based in Arnsberg, has established itself as a successful supplier of bathroom lighting at the higher end of the market. Its product range also includes functional wall and ceiling luminaires. With their modern style, these are design elements which can be used to highlight architectural features and provide creative accents. bpe is very success-oriented and consequently decided to build a new production facility in Arnsberg. For the application-specific lighting, bpe relied on its own expertise. Existing components, such as vacant power tracks, cables

Although still quite new, the Linear Flat System is already popular with a number of users. Its lighting and design features are particularly effective in supermarket and industrial lighting applications.

Supermercados Peruanos, Lima/Peru

Example of application for Linear Flat System

with plug systems and self-made luminaire housings were complemented by the use of Linear Flat Systems. The decisive factor for their use was exchangeability as CEO Klaus Baulmann observed. The BJB system offers a forward-looking flexibility, both in terms of control capability and – as a result of "Late-Stage Finishing" – with regard to colour temperature or light distribution curve. In this way, if there is a change in the production layout or if space is utilised differently, all options remain open without having to replace the entire lighting system. Altogether, this concept resulted in a low-cost package with excellent characteristics for this type of project.

Two rows of striplights illuminate the bpe production facility very evenly. The individual luminaires, each fitted with two Linear Flat Systems, do not shine vertically downwards, but also light up the walls of the building, resulting in an improved spatial perception. This is achieved by installing them at a slightly offset angle, so that the luminaires on the tracks are turned slightly outwards. In addition, when there is enough daylight coming in through the skylights, every second luminaire can be switched off for energy-efficient operation.

The argument for a modular concept

The Linear Flat System with its "classical" structure provides the same flexibility as that offered by conventional luminaires. Consisting of a "lamp", lampholder and lamp support, it forms a closed system with integrated thermal management which requires no additional cooling. The outstanding features of the long-lasting Linear Flat System are its extremely compact design, clean lines and excellent lighting parameters. The light source, which is actually only 37 mm wide with an overall height of 13 mm, is made up of an extruded aluminium profile with an LED module and a diffusing PMMA cover. Various light distribution patterns provide the basis for application-specific lighting solutions. The Linear Flat System is therefore suitable for general lighting purposes as well as accent lighting, wallwashing or shelf-lighting applications.

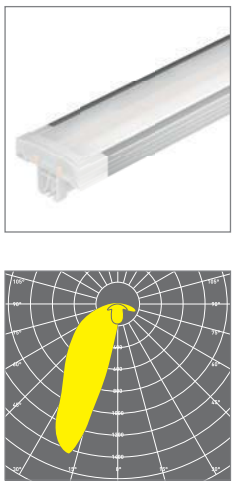
The Linear Flat System not only offers a module efficiency of up to 140 lm/W, but is available in a range of versions to suit a wide variety of applications. It is available in lengths of 565 mm and 1166 mm and with colour temperature options of 3,000 K and 4,000 K. Handling and maintenance processes are also convenient due to the tool-free method of installation. The Linear Flat System from BJB represents the alternative route – intelligent, flexible and sustainable.

bpe:LICHT, Arnsberg/Germany

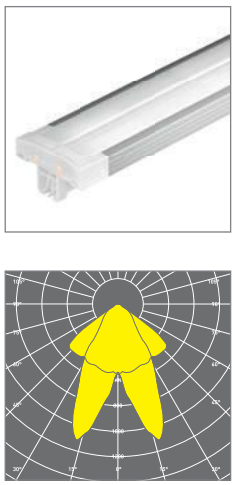
Linear Flat Systems with special light distribution characteristics

For lighting solutions in supermarkets, warehouses or industrial buildings, a defined light intensity is required and also a specific light distribution. To meet these requirements, we have developed special optical covers for the Linear Flat System which possess four commonly required characteristics.

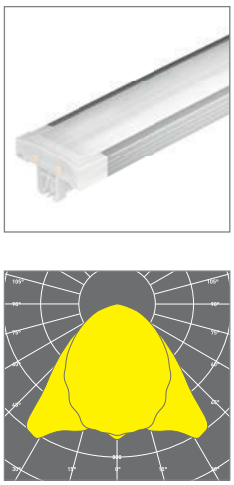
In supermarkets, for example, the shelves can be highlighted and presented to their best effect by means of modules with asymmetrical beams, whereas the wide- or narrow-beam versions might be more appropriate for general lighting, depending on the mounting height.



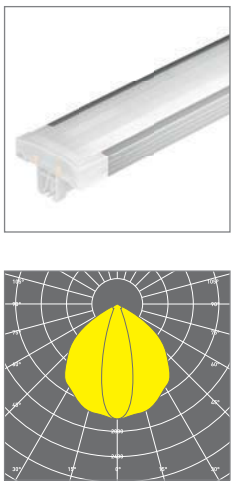
Single asymmetrical



Double asymmetrical



Wide-beam



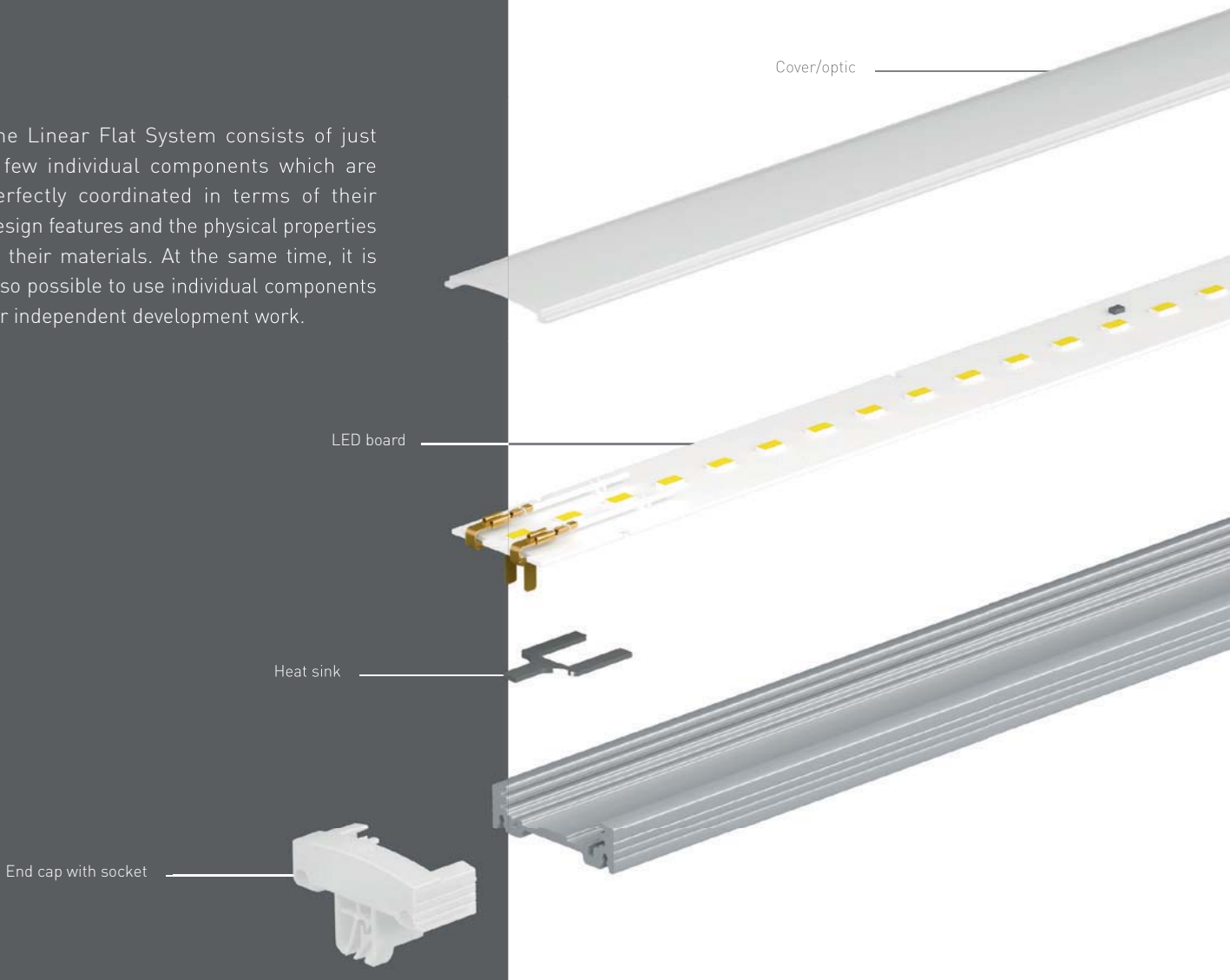
Narrow-beam

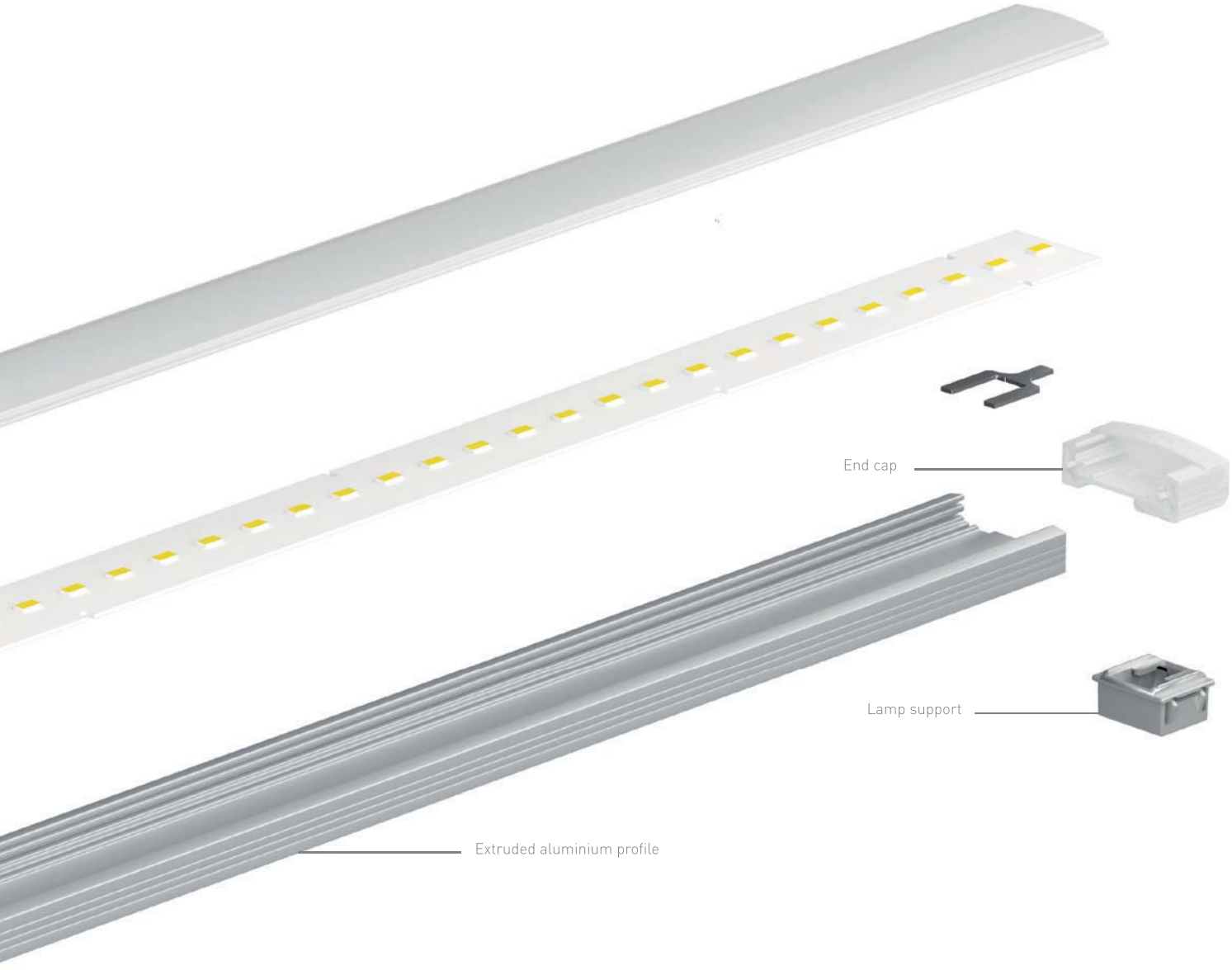
Lengths of 565 mm, 1166 mm and 1466 mm

Individual lighting requirements can be realised with defined light distribution curves in the smallest possible space using the Linear Flat System.
Further information is available at bjb.com or direct from you contact person.

Individually or collectively. Everything is possible

The Linear Flat System consists of just a few individual components which are perfectly coordinated in terms of their design features and the physical properties of their materials. At the same time, it is also possible to use individual components for independent development work.





Further information on these and other products from the BJB///OEM-Line is available at bjb.com or direct from your contact person.

LFS adapter for track lighting

For use with track lighting systems, we have developed a support system for the LFS module. It consists of GR6d lampholders, coded for various LFS versions, and a counter-support.

28.701.U303

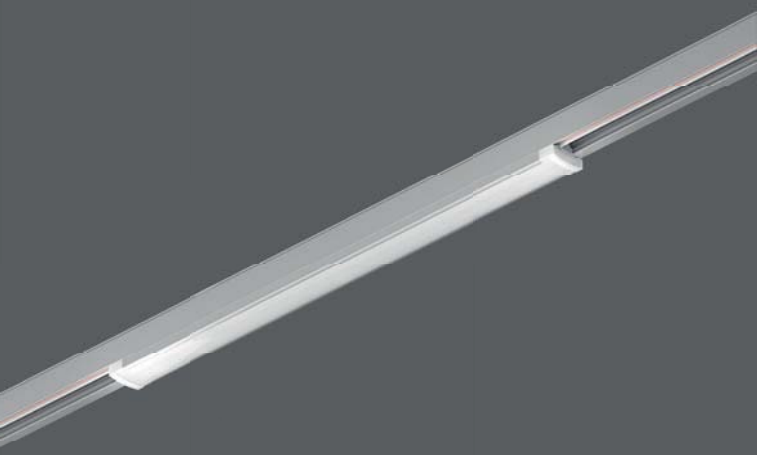
Counter-support

28.701.2001

GR6d lampholder

LED module for power tracks

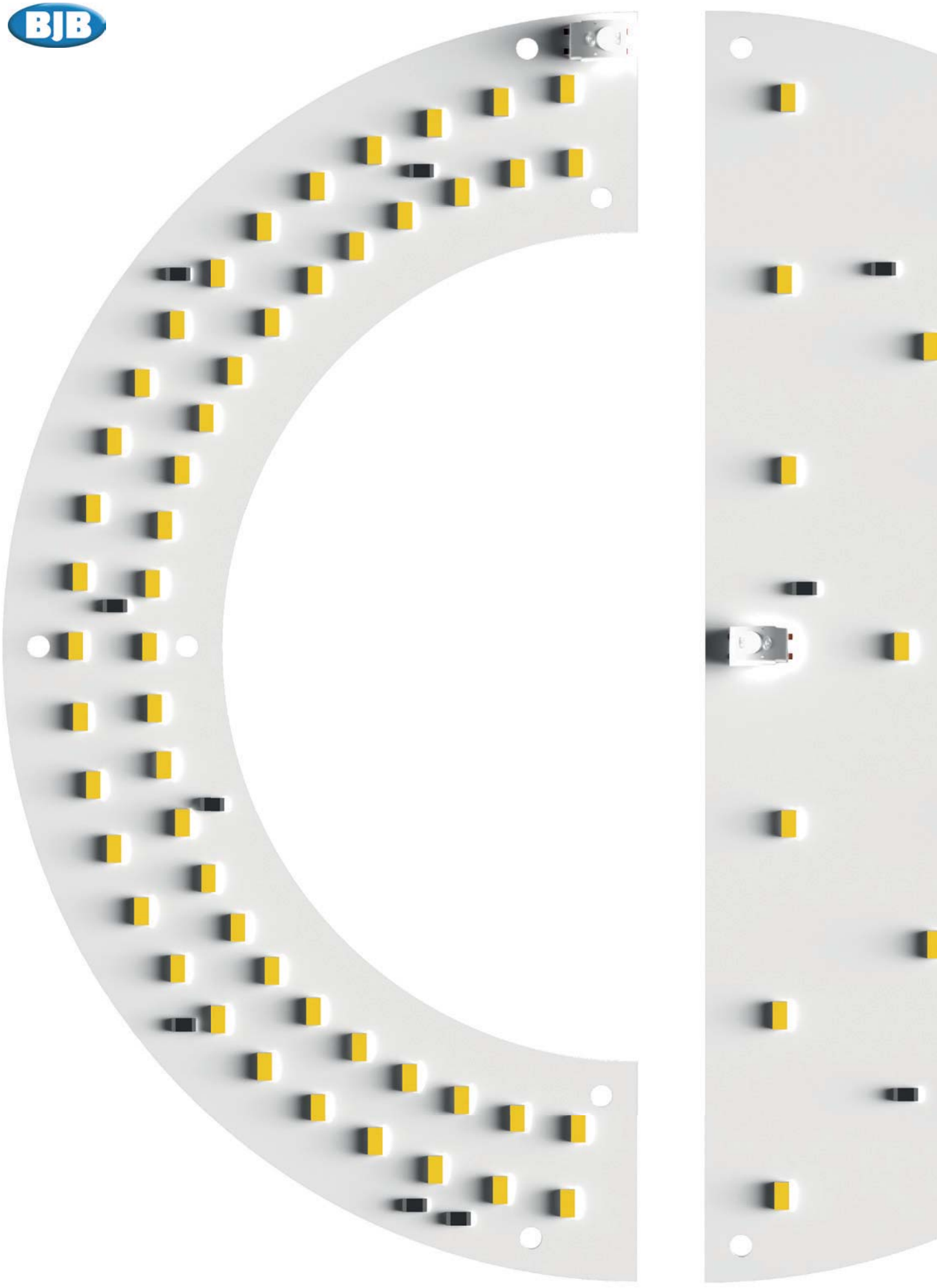
Adapted to special drivers which fit into a power track, this module, together with the lampholder and counter-support, is a complete modular system for linear lighting in the shop field.



32.130

LED module

Further information on this and other products from the BJB///OEM-Line are available at bjb.com or direct from your contact person.



LED BOARDS
BJB///OEM-Line

INDIVIDUAL LED BOARDS AND ACCESSORIES

For luminaire projects which are “out of the ordinary”: Customer-specific PCBs

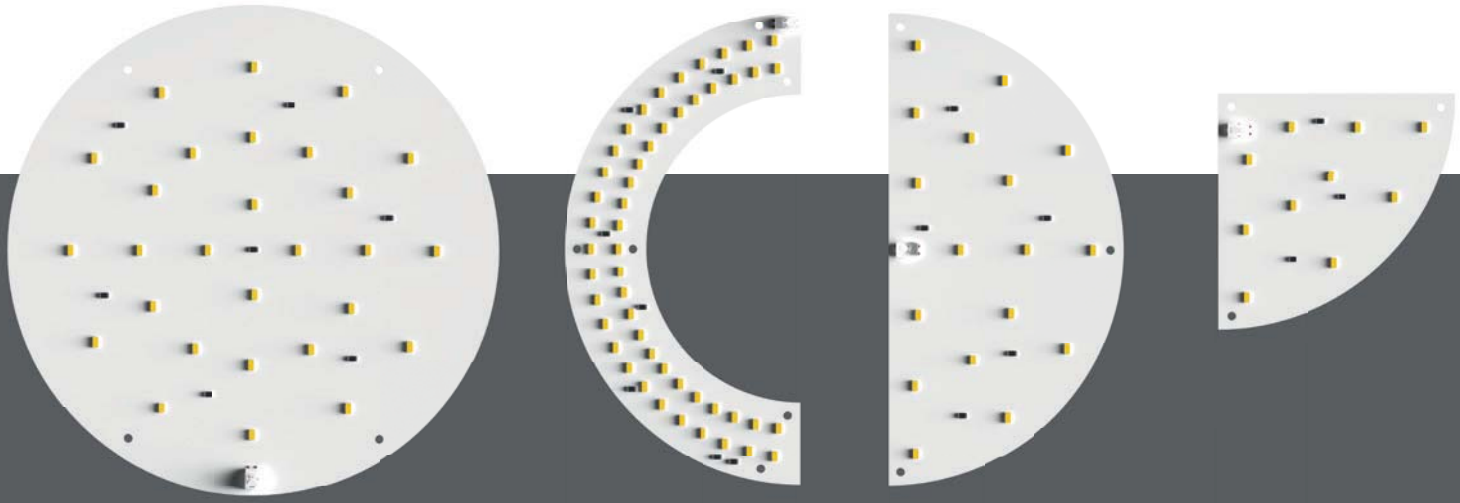
An important new area within the current BJB///OEM-Line is LED boards, which we produce to your specifications and which we can equip with connection, termination and fixing elements. Non-standard geometries are no obstacle, in fact they are welcome.

Optionally, your product can be supplied with documented tests or approvals (VDE/UL). Everything you need for your “extraordinary” luminaire project.

On request, BJB supplies pre-tested, ready-to-install units consisting of PCB and fixing, connection and termination elements.

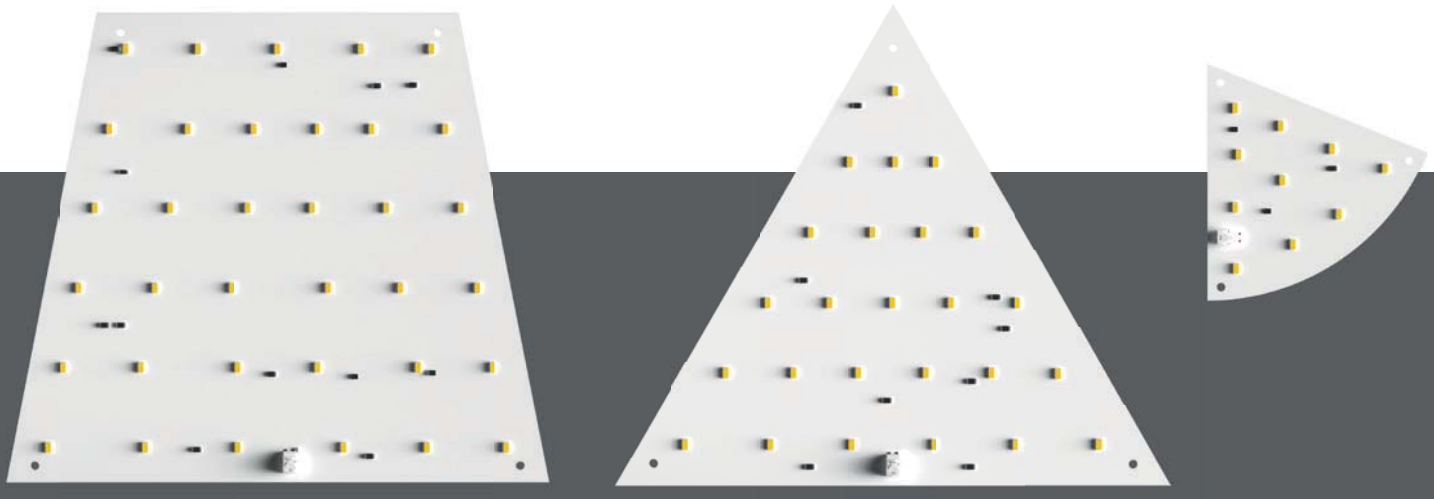
From the initial consultation, via the offer, layout development and prototype stages and through to series production, we support you every step of the way.

Extremely short delivery times of approx. 2 weeks are possible for prototypes, depending on specification. Our machine pool, with the latest measurement and testing equipment, ensures BJB’s usual high standard of quality, safety and reliability.



An overview of the most important features

· Consultation and non-binding quotation
· Layout development and rapid prototype creation in approx. 2 weeks
· Dimensions up to 650 x 400 mm
· Finishing with BJB SMD terminal block and pre-assembled Push-to-Fix (P2F) fixing elements
· Various test possibilities
· Batch measurements and documentation
· Approvals possible on request (VDE/UL)

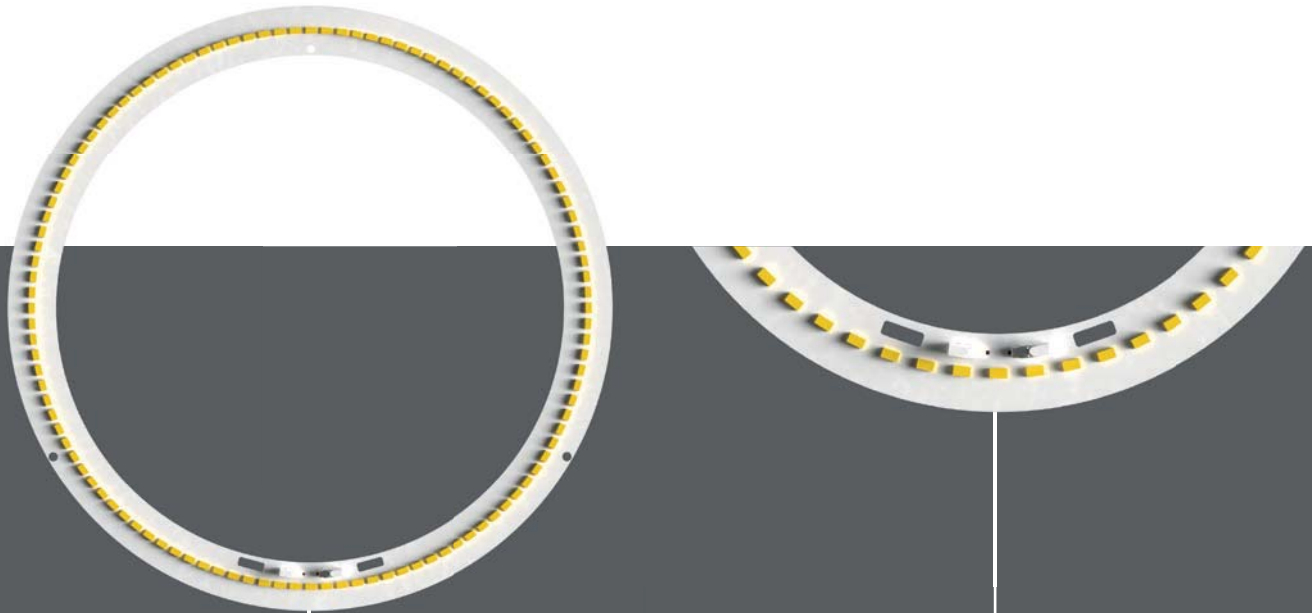


Customer-specific PCBs, also with unusual geometric forms, can be fitted with fixing and connection elements on request.
Prompt prototype production, testing and approval optional. Further information is available at bjb.com or direct from your contact person.

New technology for established shapes: BJB Discus circular PCBs

There are shapes that cannot be improved on - according to a familiar advertising spot for a car. And this sometimes also applies in the lighting sector, especially when the shape in question is a circle. There are numerous luminaires with this shape, fitted with circular lamps for the purpose.

There are therefore good reasons to keep an established design and equip it with new and more efficient technology. For this purpose, we produce our circular PCBs which, incidentally, also fit perfectly into our BJB///OEM Line modular system. They too can be equipped with our appropriate fixing and connection elements. This simplifies installation and enables luminaire manufacturers to integrate new technology into existing designs without difficulty.

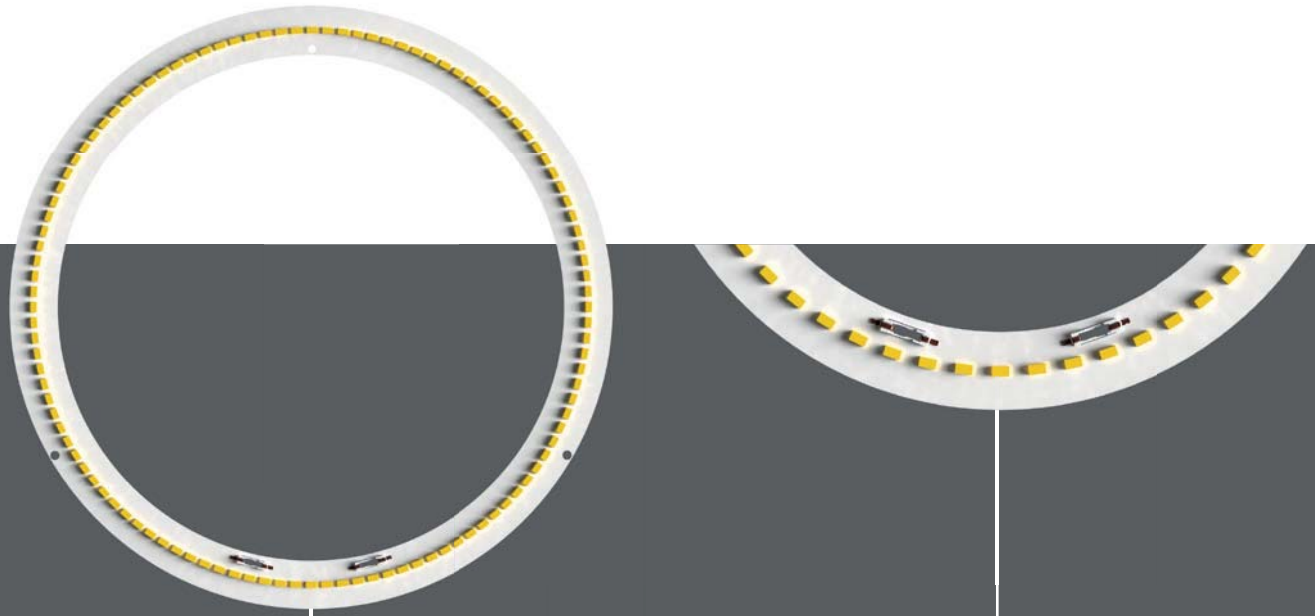


Version for standard wiring

An overview of the most important features

Highly efficient circular modules with uniform light distribution as replacement for circular fluorescent lamps with 2GX13 caps

· Up to 47 % energy saving compared to conventional fluorescent lamps
· Energy efficiency class A++
· Available in two diameters (225 and 300 mm)
· Efficiency up to 157 lm/W
· Colour temperatures 3,000 and 4,000 K
· Colour deviation of 3.5 SDCM
· Service life 50,000 hours
· Easy installation with BJB Push-to-Fix (P2F) fixing elements
· Connection with BJB SMD terminal blocks



Version for rear-side wiring

Accessories: BJB SMD terminal blocks, standard or for rear-side wiring, and Push-to-Fix fixing elements (P2F)

New Push-to-Fix fixing elements

Push-to-Fix (P2F) fixing elements are increasingly proving their worth for the installation of LED components. The standard version is intended for fixing PCBs. Further versions have now been added.

One of these new versions, the P2F-SMD, simplifies the final installation of PCBs, regardless of whether this is performed manually or automatically. It does this with the use of pre-attached fasteners, which are soldered onto the PCB during the SMD process. And because this component is so slimline, disturbing shadow formation is avoided.

A further version of the P2F for fixing PCBs to extruded sections provides an alternative to screw fixing. This P2F element is quick to install, ensures a secure connection, cannot tilt and is easy to remove should a repair be necessary. It also eliminates the possibility of damage to the PCB as a result of excessive torque exerted by a screw. Disturbing shadow formation is reliably avoided because the fixing element only protrudes minimally above the PCB. It is employed in linear applications in which aluminium profiles are used.

Finally, we also offer the combination of a standard P2F with a plastic holder element for freeform optical profiles. This is used in linear luminaires and striplights.

28.904

Push-to-Fix
fixing element SMD
(P2F-SMD)

28.903

Push-to-Fix fixing element
for screw profile groove
(P2F-Profil)

28.901

Standard Push-to-Fix
fixing element
(Standard-P2F)

31.930

Push-to-Fix fixing element
with optical profile holder
(P2F with optical profile holder)

Mini Flex SMD terminal block

Our new Mini Flex SMD terminal block is intended for rigid and flexible conductors and now has a release function. It is also suitable for use with wiring robots and is used in SMD assembly by PCB manufacturers in the lighting industry as well as in the engineering, domestic appliance manufacturing and consumer electronics industries.

46.132

Mini Flex SMD terminal block
2-pole

46. 131

Mini Flex SMD terminal block
1-pole

Further information on these and other products from the BJB///OEM-Line are available at bjb.com or direct from your contact person.

BJB mains connection terminal block Flat Connect. With an overall height of 11 mm to suit the new, slimline ECG generation

A new ECG generation is making a considerably more slimline luminaire design possible. It is therefore also necessary to have components which follow this trend.

We have responded to this requirement with the mains connection terminal block "Flat Connect" and are extending our series with the addition of a particularly slimline version with an overall height of 11 mm.

46.433.1100

Mains connection terminal block Flat Connect with release function from the side

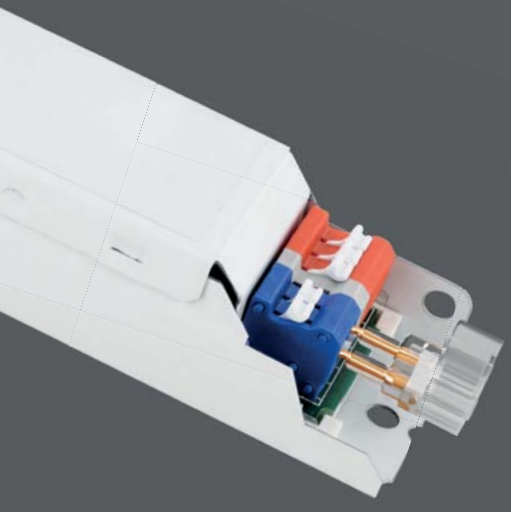
46.433.1400

Mains connection terminal block Flat Connect with release function from above

Next generation Set'n'Drive resistor for configuring electronic control gears

Electronic control gears can also be configured by inserting a resistor on the secondary side.

To make this method as easy as possible, we have further developed the Set'n'Drive resistor. It is now even more compact and can be inserted both manually and automatically.



47.902

Set'n'Drive resistor

Further information on these and other products from the BJB///OEM-Line are available at bjb.com or direct from your contact person.

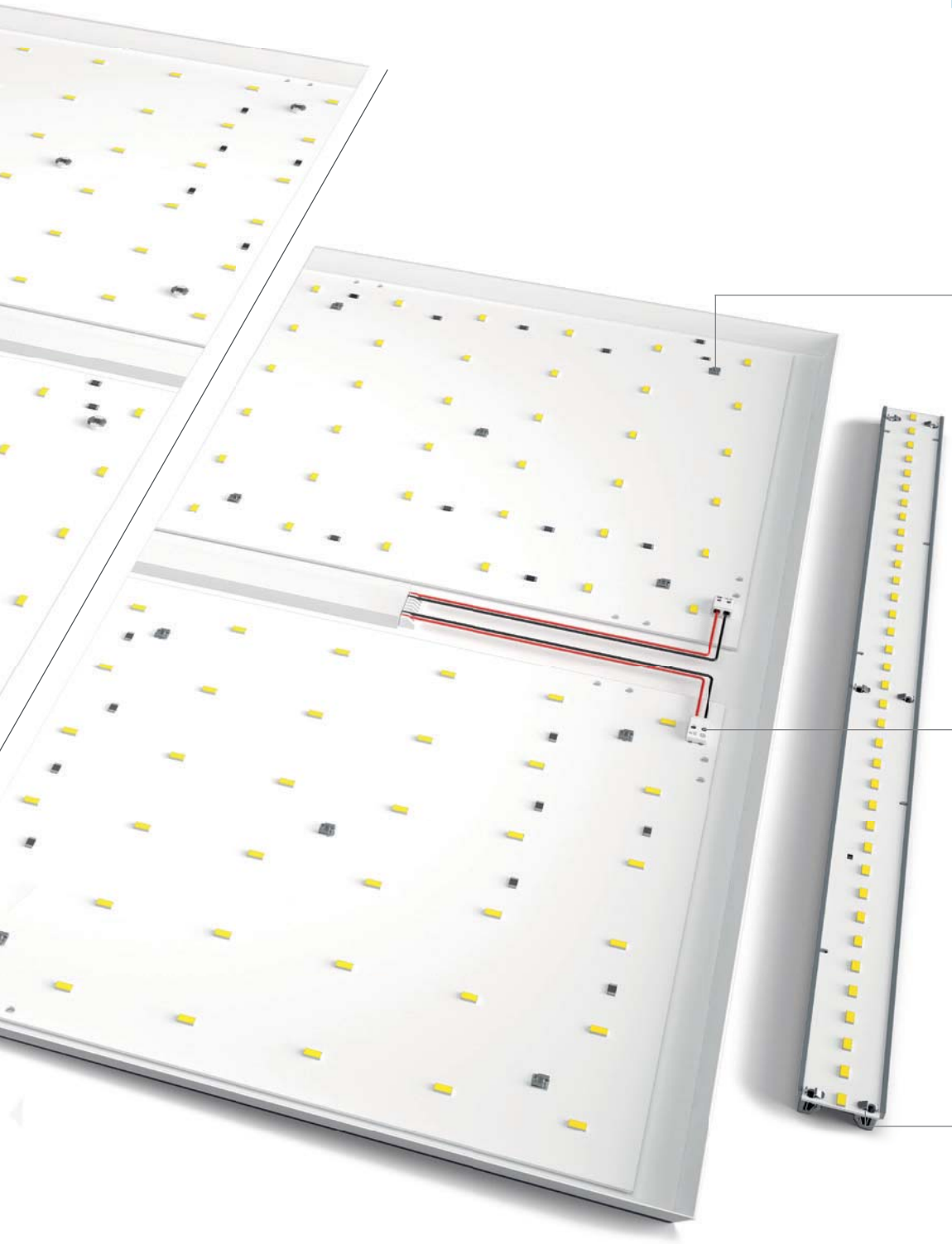
From the individual to the whole

Flat Connect, slimline mains connection terminal block with an overall height of 11 mm

Standard Push-to-Fix fixing element (Standard-P2F)

SMD terminal blocks with rear-entry wiring

Set'n'Drive resistor



Push-to-Fix
fixing element
SMD (P2F-SMD)

Mini Flex SMD
terminal block

Push-to-Fix
fixing element for
screw profile groove
(P2F-Profil)

The components of the BJB///OEM-Line together form a modular system catering for almost all subsections of which LED applications typically consist. Here we show PCBs and their peripheral equipment for fixing, connecting and contacting. Easy to handle and safe to use, our products help to produce good-quality light. Further information is available at bjb.com or direct from your contact person.

OPTICS
BJB///OEM-Line

BJB optical systems. The perfect addition

Light control, light distribution and glare control have presented the lighting industry with fundamental new challenges since the advent of LEDs. In addition to the original aluminium louvres, optical elements made of plastic are playing an increasingly important role.

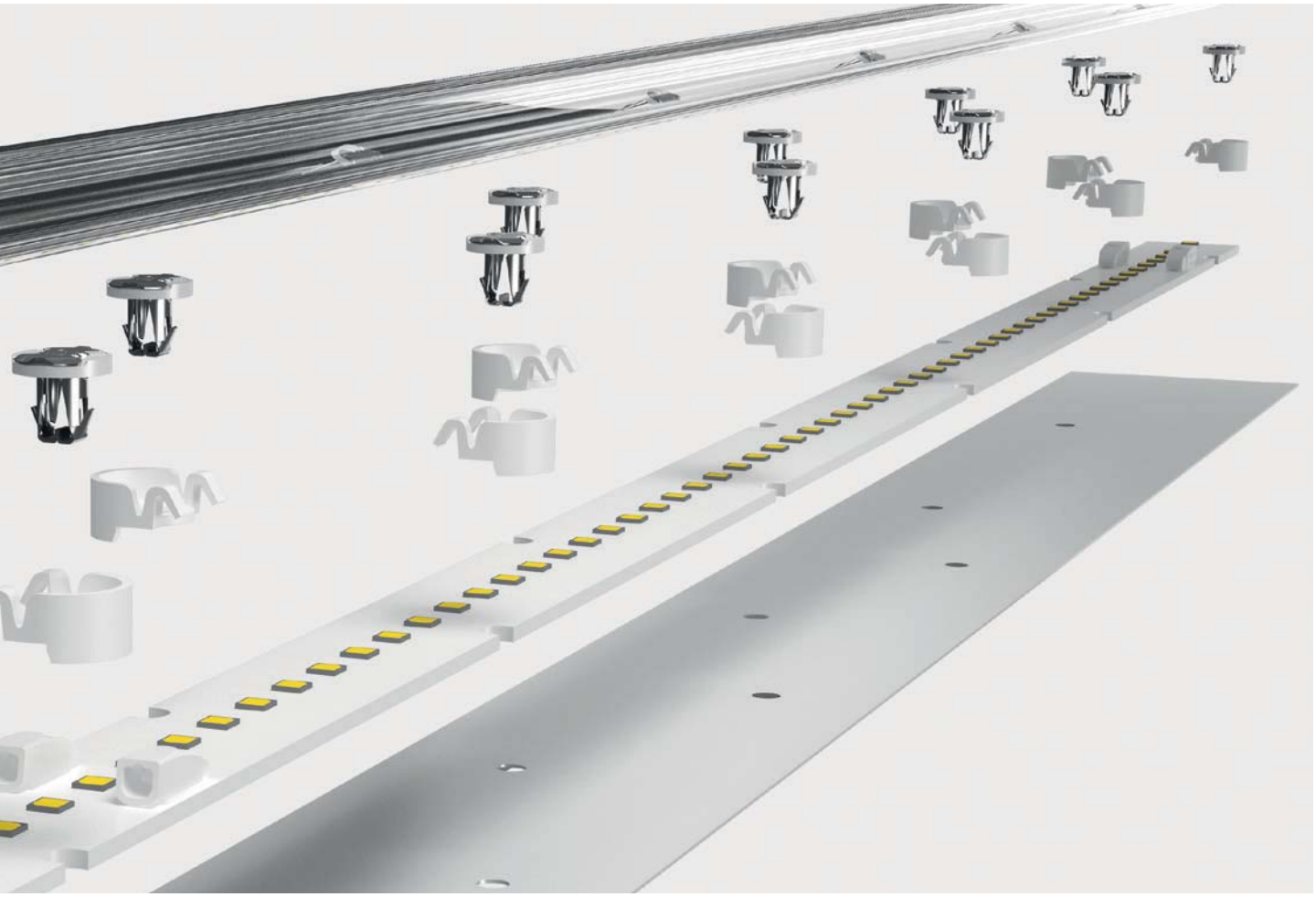
Consequently, as well as its products in the component and automation fields, BJB has also integrated a comprehensive range of optical systems into its BJB///OEM-Line modular system. As elements of this range, these simple and useful additions will assist you on the route to your LED application.

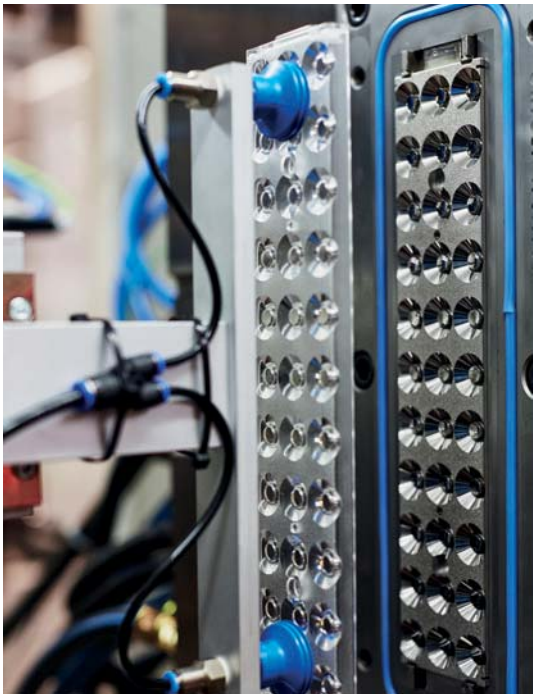
Standard optics, for example for Spots and Downlights, as well as covers with special light distribution characteristics for our Linear Flat System can be supplied ex works. We also develop and produce individual optics for your projects as well as entire solutions consisting of PCB, light control and fixing and connection technology. With the establishment of a new department and the extension of our research and development unit, we now offer you the complete process from the first consultation to the design and prototyping phases and onto series production.

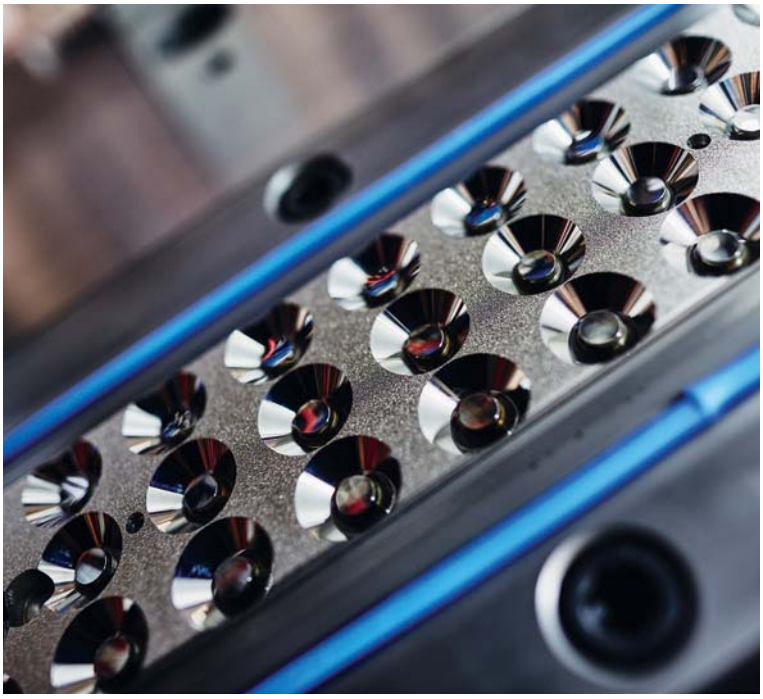
Optics for your LED lighting

Through their design and varied lighting features, modern high-performance LEDs are opening up completely new possibilities in general lighting. Plastic optics enable a coordinated light distribution and light control to be achieved, which responds to customer-specific wishes and ideas. In the past, we have devoted a great deal of attention to the subject of optics in particular.

Our established development team has been extended to include highly skilled experts in this field. From the list of requirements, via the design phase and through to the realisation stage for optical systems, we now offer you our support in all project phases. For evaluation purposes and for the transfer of knowledge, we also cooperate closely with plant and material manufacturers as well as the Institute of Plastics Processing (IKV) at RWTH Aachen University.







Light control for Spots and Downlights

In the BJB///OEM-Line modular system you will find a variety of reflectors and diffuser plates for frequently requested LED applications in the Spot and Downlight fields. Compatible with our LED modules and connectors, they provide precise light control and are easy to install.

Reflectors

47.950.-301

47.950.-302

47.950.-303

47.940.-311

47.940.-312

47.940.-313

47.940.-351

47.940.-352

Diffusor plates

47.950.-401

47.950.-402

47.950.-403

47.950.-404

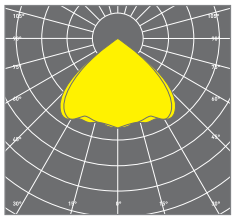
Examples of reflectors and diffusors from the BJB range for Spots and Downlights.

Further information on optics and light control is available at bjb.com or direct from you contact person.

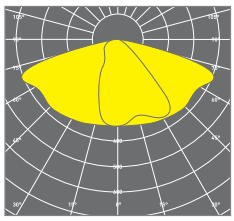
Customer-specific solutions

Luminaire manufacturers often work on individual projects for which they also require special optics. From the list of requirements and the results of a simulation, we can reach a joint decision with you regarding series production.

The examples given here show the results of two projects which we realised for well-known luminaire manufacturers.

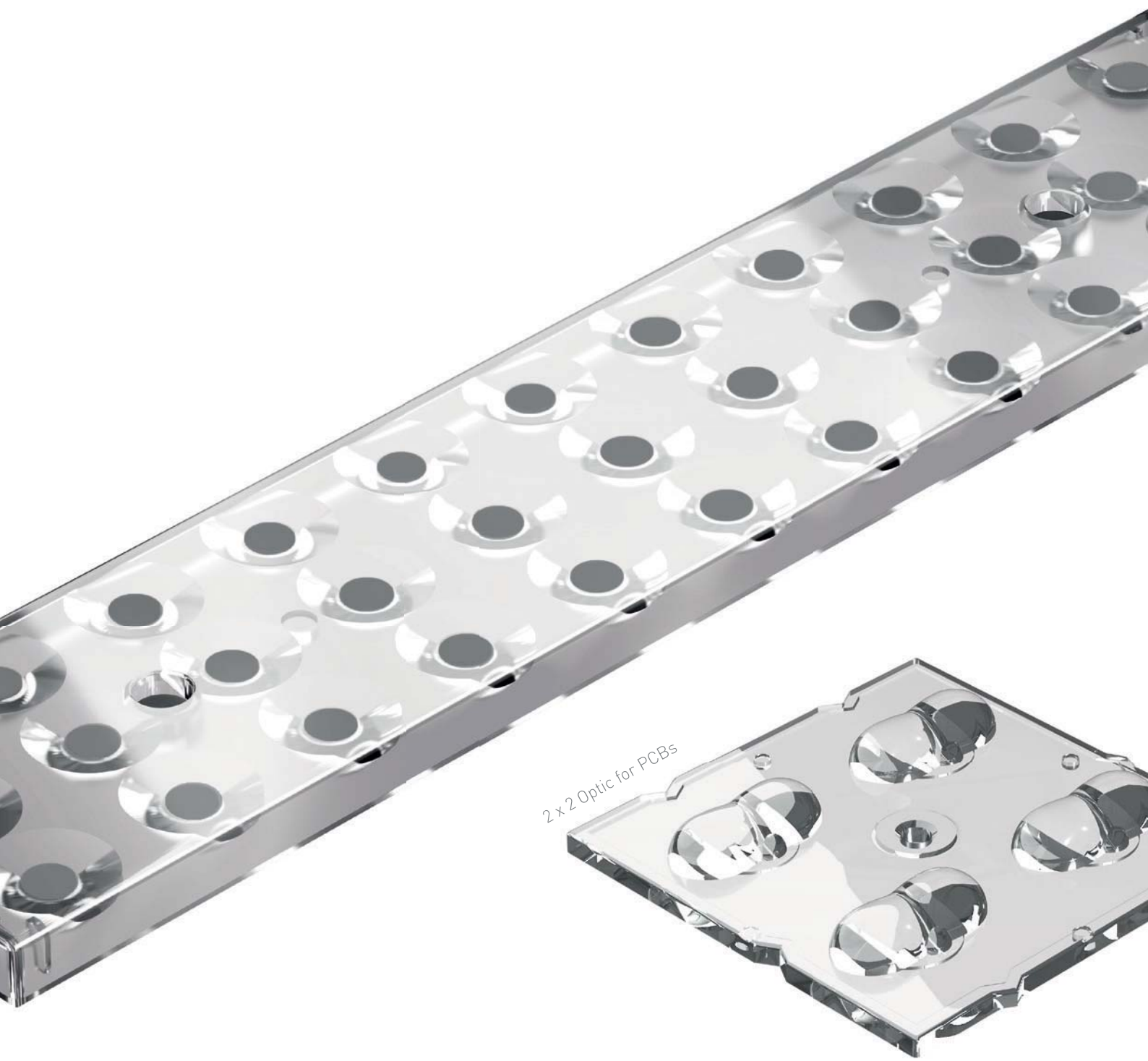


3 x 11 Optic for linear luminaires and lighting strips according to Zhaga Book 7



2 x 2 Optic for PCBs in outdoor luminaires according to Zhaga Book 5

3 x 11 Optic for linear luminaires



2 x 2 Optic for PCBs

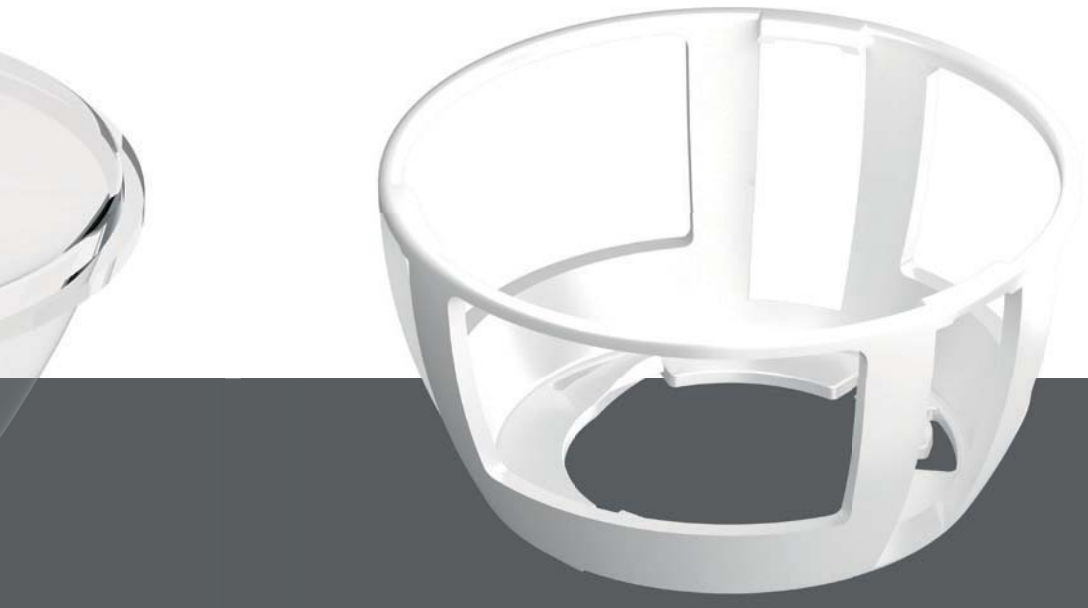
BJB lensholder for Gaggione silicone lenses

A newcomer to the BJB///OEM-Line range is our lensholder for silicone lenses from the French manufacturer Gaggione. This opens up numerous further possibilities for the design of high-quality Spots and Downlights. We decided to cooperate with Gaggione in order to be able to offer suitable solutions using applications with optical silicones. Gaggione is regarded as one of the technological leaders in this field and offers its optics in numerous versions.

Our adapter for this has a simple design and is supplied with the selected lens and our connector 47.319 as a component set. All components are compatible with each other and can be installed without screws or soldering.

An overview of the most important features

· Adapter for Gaggione silicone lenses
· Supplied with connector 47.319 and silicone lens
· For high-quality Spots and Downlights
· Numerous light control possibilities



Further information on optics and light control is available at bjb.com or direct from your contact person.


BJB

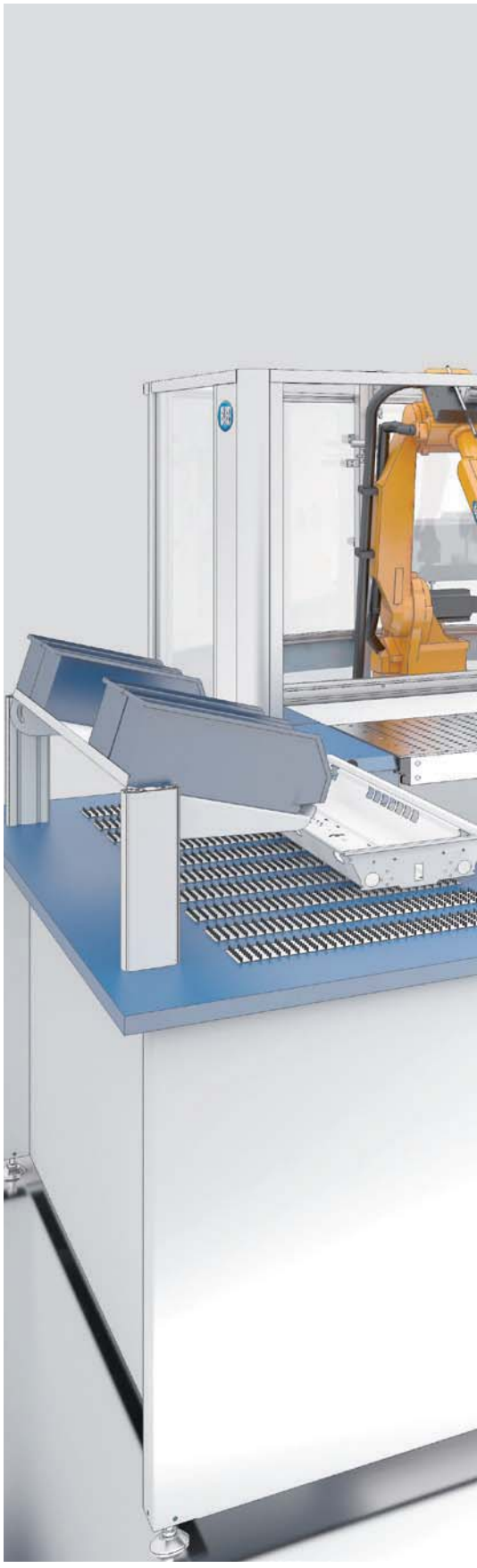
BJB AUTOMATION
BJB///OEM-Line

MACHINE MANUFACTURER FOR THE LIGHTING INDUSTRY

Our individual automated solutions are called BJB Automation

At BJB, Technology for Light also means manufacturing machines for luminaire production. Also known as: BJB Automation. A success story which began in the mid-1990s with a wiring robot and is still continuing today with new concepts and systems.

For the automated production of LED applications, we develop and supply individually configurable, ESD-protected systems for automatic assembly, wiring and testing. Based on our many years of experience, we advise and support manufacturers of all sizes in the creation of suitable solutions for their respective requirements. Whether small single modules, scalable solutions and optional extensions, or complete production lines for large and very large production volumes, all conceivable versions are possible. Whether manual workstations, camera systems, tools for configuring electronic control gear or automatic assembly machines for complete Downlight and PCB assembly, the options are as diverse as your wishes.




BJB
ADS Basic
BJB

For example, two in one: Automatic placement of PCBs with soldered P2F or assembly of a Spot or Downlight

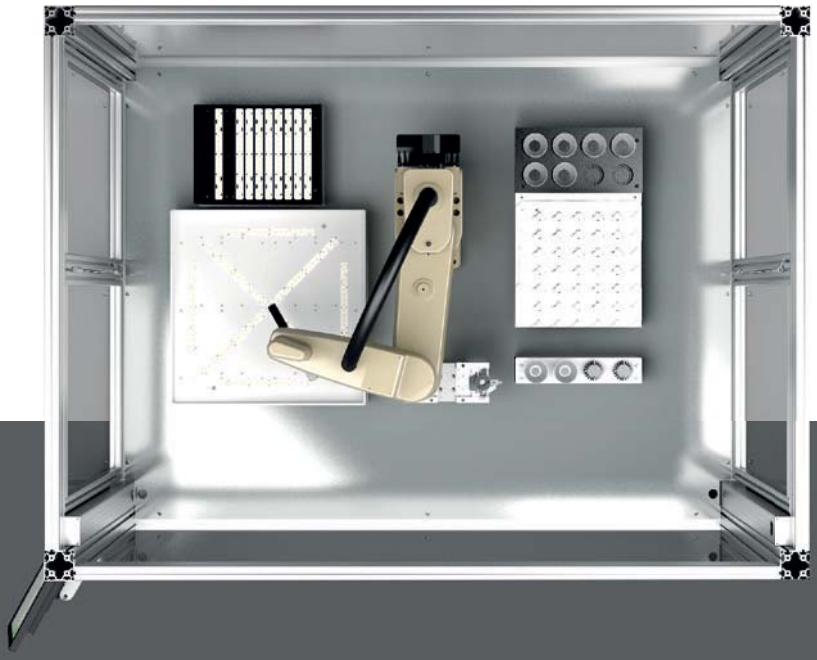
This system from BJB shows an automated production concept in which various components from the BJB///OEM-Line are used. LED modules are being mounted on heat sinks by means of Push-to-Fix (P2F) blind hole fixing elements and a reflector is being attached. In this way, the system supplies a Spot-Downlight module which is ready to install and only has to be placed in a housing and wired.

An overview of the most important features

The opposite side of the assembly table shows the automatic fixing of PCBs equipped with a pre-soldered Push-to-Fix element, which are fed in from an SMD process.

This system is only one example of the numerous possibilities which can be realised with BJB Automation. All designs are specially tailored to luminaire manufacturing requirements and can therefore make a contribution to efficient production from small batch sizes to large and very large volumes.

- ESD-protected system for LED processing
- Compact design, easy to operate
- Two luminaire types in one production process
- Perfectly designed for use with components from the BJB///OEM-Line
- Easy changeover to new processes
- Can be combined with other automation technology



Further information on BJB Automation is available at bjb.com or direct from your contact person.

To supplement automated processes: Manual assembly aid

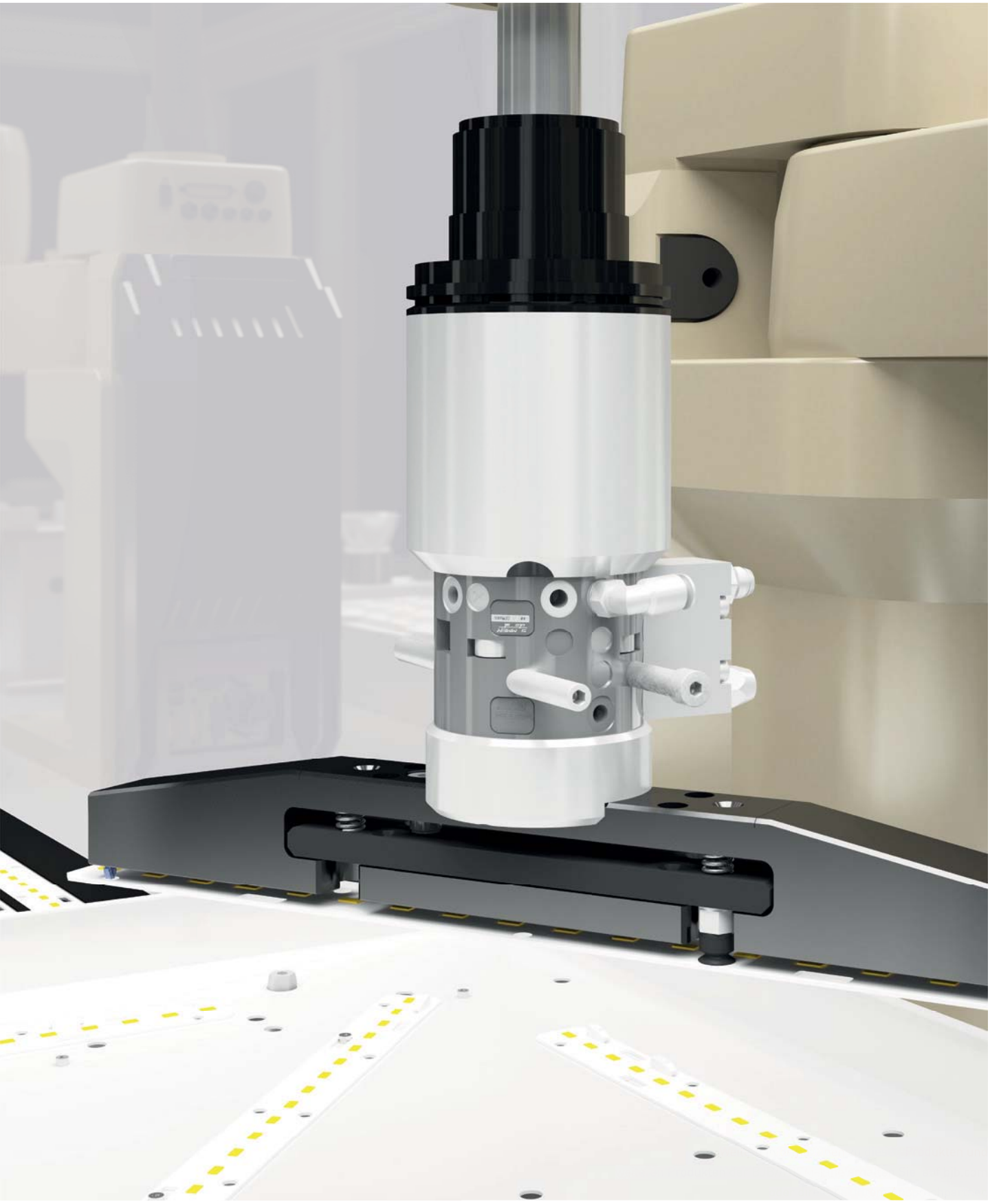
With this small appliance, the assembly of COBs and the appropriate connector is child's play. Such solutions are especially useful for small batch production.

Manual assembly device for fixing connectors to a heat sink by means of a Push-to-Fix blind hole fixing element. For small batches, this device ensures a consistent quality.

Assembly aid for COBs

Assembly device for easy placement of the P2F for blind holes 28.902

Automatic press machine for placement of the P2F for blind holes 28.902



DATA & FACTS

BJB was founded in 1867 by Friedrich Wilhelm Brökelmann, Franz Jäger and Gustav Busse. The business began as a factory for petroleum lamps and developed into a company which manufactured components for establishing the connection between power supply and light. Today, BJB is a lighting technology brand which supplies innovative solutions to the lighting and domestic appliance industries worldwide.

BUSINESS SECTORS

- BJB Lighting: Lighting solutions and components for luminairs
- BJB Appliance: Lighting solutions for domestic appliances
- BJB Automation: Machines and equipment for automating luminaire and domestic appliance manufacturing processes

EMPLOYEES

700 worldwide

BJB International

Headquarters: Arnsberg (Westphalia, Germany) Subsidiaries in China, Spain, England, Japan, Italy, Hong Kong, Taiwan and the USA. Representatives in 50 other countries. Products supplied to 70 countries.

RESEARCH & DEVELOPMENT

Every year, there are numerous new developments and improvements to the 3000 different products that we sell. In an effort to achieve continuous progress, our engineers carry out detailed studies of products, markets and customer expectations. They work with the latest technical materials, devices and processes, including:

Rapid Prototyping

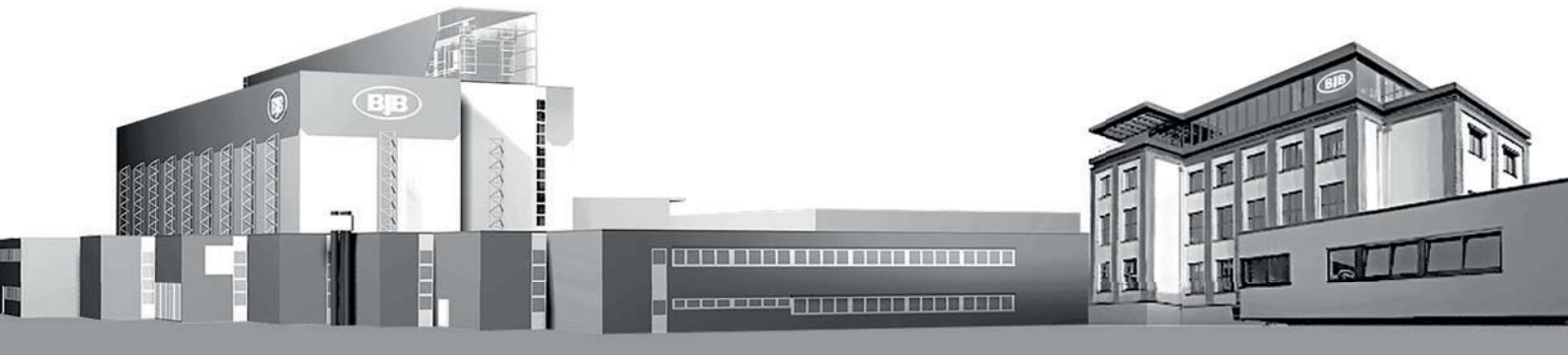
Laser sintering processes and 3D printers enable us to produce finished models based on design data very quickly without manual intervention.

Computer Aided Technologies

Computer-aided design enables precise results to be obtained more quickly. Models are designed, simulated and optimised on the computer. The analysis functions, which examine components at an early stage to determine their robustness, performance and other characteristics, are particularly useful:

- Computer Aided Inspection
- Computer Aided Engineering
- Computer Aided Design

About BJB



Light laboratory

For the measurement of luminous flux, light spectrum, luminous intensity, colour temperature, colour rendering, chromaticity coordinate, luminous flux curves and colour shift. The integrating sphere enables particularly precise measurements to be carried out. It has almost ideal diffuse radiation. This makes it perfect for measuring the total luminous flux of various light sources and laser and light radiation. It even creates a reference source which can be used to compare detectors.

Equipment used in the design process

In order to be able to ensure 100 per cent quality at all times, we test our materials and products with machines from Zwick, the leading manufacturer of test equipment worldwide.

PRODUCTION

From the idea to the finished product, we cover the entire value-creation chain in-house. Production, as the main process, includes:

- Plastic injection moulding incl. toolmaking
- Metalworking
- Assembly
- Circuit board production with automatic placement machine, screen printing system, reflow oven and testing technology

QUALITY MANAGEMENT

International certification organisations confirm the quality of our processes and products.
Quality management: ISO 9001
LED standardisation: Zhaga
Safety & quality:

- VDE
- ENEC certificate of the VDE
- CQC (China Quality Certification)
- cULus (Underwriter Laboratories)
- JET (Japan Electrical Safety & Environment Technology Laboratories)
- X-ray computed tomography (CT) for layer, defect and wall-thickness analysis, etc.

Technology for Light – worldwide

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Technology for Light