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**ACT.  
CONNECT.  
PERFECT.** 

# ERNI CONNECTORS FOR LIGHTING TECHNOLOGY





# ERNI Connectors for Lighting Technology

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## ERNI in the Lighting Industry

### ■ AREAS OF APPLICATION

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#### Solutions for the lighting industry.

As demands for energy efficiency increase, modern lighting technology is becoming increasingly important. The efficiency of semiconductor light sources (Solid State Lighting, or SSL) in particular has improved by leaps and bounds in recent years. These light sources open up completely new areas of application. LEDs, for example, are increasingly expanding into the general lighting market, as well as into several applications in the automotive industry. Moreover, LEDs do not simply function as substitutes for conventional light sources; they provide advantages in efficiency, meaning they contribute to sustainable energy use.

The new lighting technologies have a high capacity for integration and offer a multitude of possibilities for electrical control, making it possible to provide 'intelligent' system solutions that adapt to complex and variable lighting situations.

The diverse areas of application for modern lighting solutions range from dashboard illumination and accent lighting for homes and businesses right through to energy-saving street and building lighting – and they demand sufficiently efficient controls and connection solutions. It is this broader range of applications that ERNI Electronics addresses with its various connector solutions. Extreme reliability, highly compact designs and high current-carrying capacity meet the requirements of modern lighting technology – especially LED applications.





## AREAS OF APPLICATION



### LIGHTING INDUSTRY





## Our Product Portfolio

### ■ MAXIBRIDGE 2.54 mm



#### STREET LIGHTING



#### Ideal for heavy-duty, space-saving connections.

Modern lighting solutions often have to combine very compact designs with high current-carrying capacity, for example, for power LEDs. The MaxiBridge cable connector system is the ideal solution for this type of application. It makes it possible to establish efficient, space-saving connections between PCBs and decentralized functional units such as lamps, displays, panels, LEDs, switches, or sensors. The system is extremely versatile thanks to straight and angled male multipoint connectors and female multipoint connectors with 180-degree cable outlets. Robust interlocking ensures a high level of safety, even in the event of vibrations.

#### PRODUCT SPECIFICATIONS

- Number of pins: 2, 3, 4, 5, 6, 8, 10, and 20
- Current-carrying capacity: Up to 12 A per contact
- Terminals: Male multipoint connector SMT, female multipoint connector crimp
- Single-strands: AWG 18, 20, 22, 24, and 26
- Primary and secondary locking of crimp contacts
- Four-color coding per number of poles
- Temperature range of up to 150°C

## MINIBRIDGE 1.27 mm

### Small model for extremely compact designs.

Single-row MiniBridge connectors with 1.27 mm pitch are ideally suited for various lighting applications where space is often limited. Examples include LCD/TFT/LED displays, hand-held devices, control panel elements, LED front and rear lamps, infrared distance sensors, and head-up displays in vehicles. MiniBridge components are particularly well suited for LED lighting systems. Purpose-built MiniBridge cable connectors enable simple, flexible, and cost-effective installation. Like its MaxiBridge counterpart, the MiniBridge connector is also available with non-colored (white) insulators, which prevents the formation of shadows in lighting applications.



### LED FRONT LIGHTS

#### PRODUCT SPECIFICATIONS

- Number of pins: 2, 3, 4, 6, 8, 10, and 12
- Current-carrying capacity: Up to 8 A per contact
- Terminals: Male multipoint connector SMT (straight and angled), female multipoint connector IDC (Insulation Displacement Connector)
- Two forms of interlocking
- Ribbon cable for AWG 26, single conductor (wire) for AWG 22, 24, and 26
- Coplanarity < 0.1 mm





## Our Product Portfolio

### ■ SMC 1.27 mm

#### Versatile line of connectors with high contact density.

Limited space and high performance demands characterize modern lighting applications, for example, illumination in shelving, store windows, or panels. The highly reliable double-row Small Multiple Connector (SMC) range offers a high degree of design flexibility on account of the diverse range of modules – such as straight and angled male and female connectors (12 to 80-pins) in combination with SMT, pressfit technology and IDC connectors. The SMC connectors are available in various heights for creating variable component assemblies, making it possible to achieve an infinitely variable stacking height of 8 to 20 mm.



#### GLOWING PANEL

#### PRODUCT SPECIFICATIONS

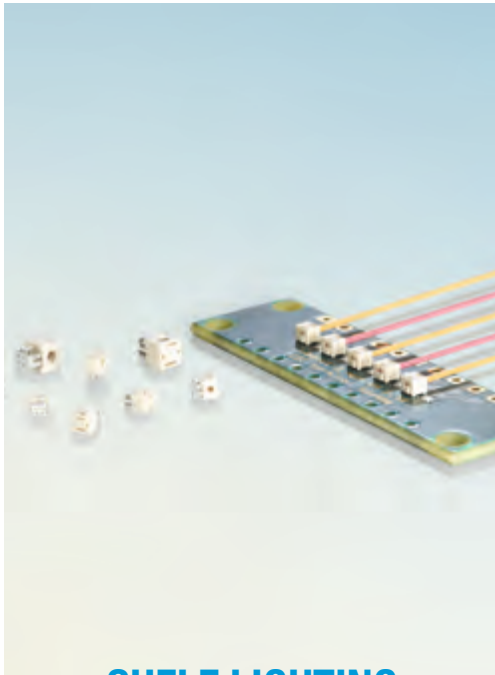
- Number of pins: 12, 16, 20, 26, 32, 40, 50, 68, and 80
- High contact density
- Dual beam spring contacts
- Various heights for PCB distances of 8 to 20 mm (up to 40 mm with adapters)
- Wipe length of up to 2.5 mm
- Lockable variants
- Cabling assembly with insulation displacement technology







## IDC PCB TERMINALS



### SHELF LIGHTING



#### Miniaturized PCB connections.

The IDC PCB terminals with a total height of just 2 mm in IDC technology do not require any manual preparation of the wires prior to connection. The dual insulation displacement connector guarantees gas-proof connection and high contact reliability. This way, it is possible to eliminate expensive hand-soldered joints. The IDC PCB terminals can create reliable wire-to-board connections and take up considerably less PCB space than comparable products – even in highly miniaturized applications such as light bulbs (such as retrofit lamps) or LED applications for illuminated product displays and sales.

#### PRODUCT SPECIFICATIONS

- Extremely small, permanent cable-to-PCB connection
- Cost-effective and highly reliable
- High current-carrying capacity 6 A (AWG24), 17 A (AWG22)
- Enhanced temperature range of up to +150°C
- Can be used for daisy-chaining SSL modules or as wire stop
- Fully automated assembly and processing on SMT lines
- Robust guide part for additional cord grip





## Our Manufacturing Locations

### GLOBAL PRODUCTION CONCEPTS





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