

# TUGRA

CONNECTING SPACES



## THE DIRECT CONNECTION OF AESTHETICS AND FUNCTIONALITY

TUGRA is the modular solution for the highest demands on displaying rooms and quality of light. Thanks to maximum variability and scalability in terms of wattages, optics and lengths, the luminaire offers timeless design for linear lighting concepts across all rooms.

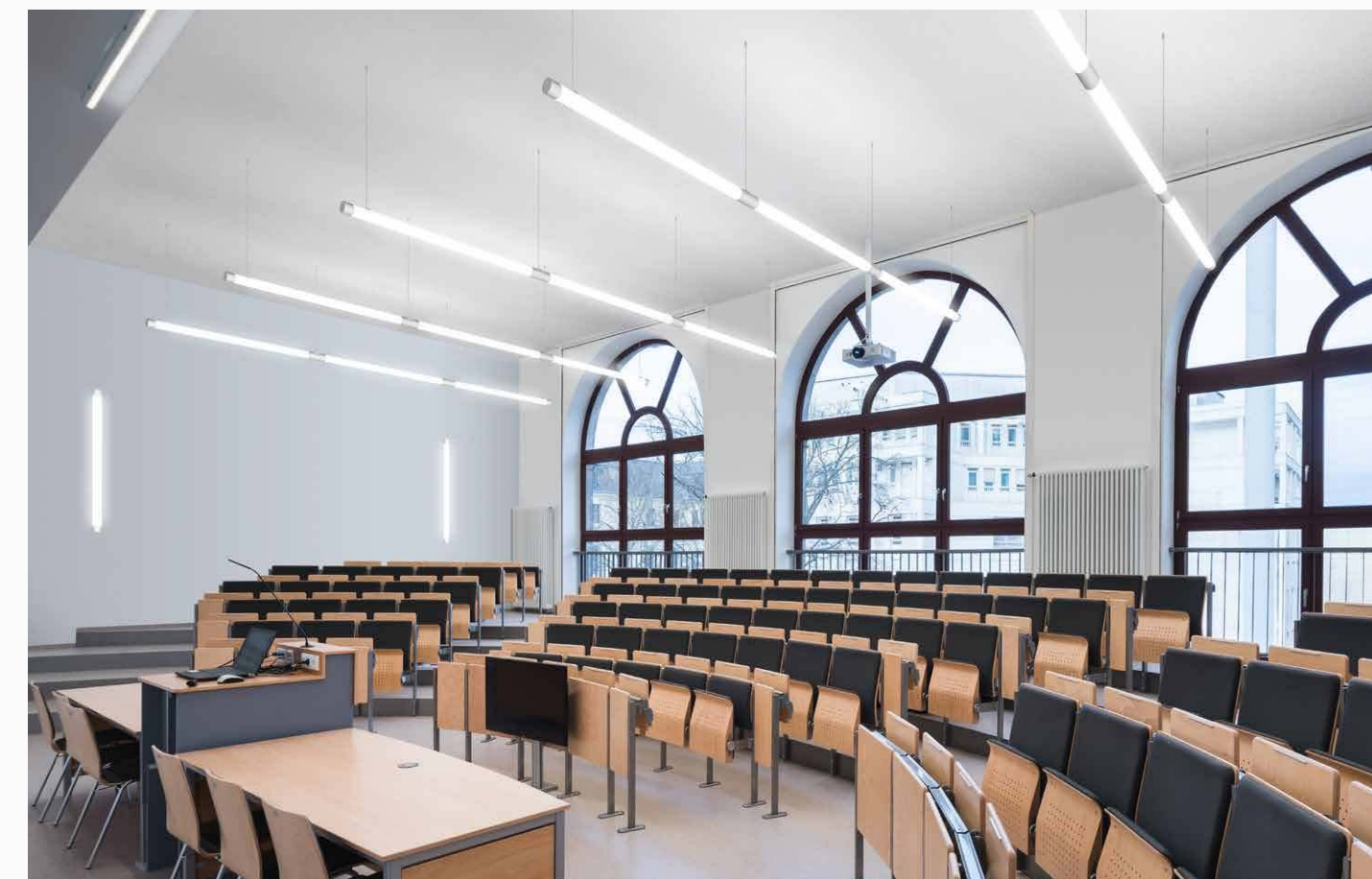
Flexible connection and mounting options, smart additional functions, maximum efficiency and the simplest installation make TUGRA an aesthetic and robust solution for rooms of all sizes.



## MULTIPLE CHALLENGES. A SINGLE SYSTEM THAT RESPONDS TO THEM.

The demands on room-specific quality of light have increased. A distinctive, formally appealing and robust solution is needed that is easy to install, durable and future-proof.

TUGRA solves these challenges with a timeless design for modern lighting concepts with a high protection rating. Modular additional functions are combined with maximum efficiency for individual luminaires and light lines. TUGRA thus brings a new look to demanding areas. The concept allows smart building blocks to be integrated into the system in a flexible and future-proof way, as TUGRA offers innovative connection options for easy installation and retrofitting.



The intelligent luminaire system ensures harmonious lighting of administrative and conference rooms as well as educational buildings. At the same time, TUGRA responds to the wide range of demands for lighting displays in retail and realises high-performance lighting concepts in industrial applications: the IP69K variant will also be approved for non-canopied outdoor areas.

## TUGRA CONNECTING APPLICATIONS

TUGRA combines ideas for spatial design and utilisation, simple handling and limitless variety, abstract planning and concrete implementation, diversity and linearity. Thus, TUGRA is a universal solution for the versatile aspects of living and working with light.

### OFFICE

The design harmonises perfectly with the industrial charm of modern new work architecture. Thanks to the high quality of light (UGR19), TUGRA is also suitable for VDU workstations – and can drive digitalisation in offices with its smart modules.

### MULTI-STOREY CAR PARKS

With car park optics with indirect light component, a high protection rating and smart additional functions, TUGRA sets new standards in car park lighting.

### PRODUCTION AND LABORATORIES

TUGRA defies heat, cold and vibration just as reliably as dust and humidity. It achieves with highest quality of light

(CRI 90, up to 189 lm/W) in demanding areas.

### LOGISTICS

With a narrow distribution optic, TUGRA adapts perfectly to logistics warehouses with high racks and narrow aisles – optionally with highbay sensor systems for running light.

### RETAIL

TUGRA scores with customised light, e.g. with specific optics and CRI 90 for optimum merchandise displays or UGR19 for checkout areas, as well as with an attractive design and optional smart modular components.

### EDUCATION

High quality light, individual optics and flexible mounting options make TUGRA the all-round solution for schools, colleges and other educational institutions.

### OUTDOOR

With an IP66 protection rating (optionally IP69K), TUGRA is also suitable for use in outdoor areas around buildings, e.g. above entrances and exits and canopied and non-canopied areas.

## TUGRA CONNECTING BENEFITS ON A PAR WITH YOUR NEEDS

TUGRA is a lighting system that goes beyond the illumination of rooms.

It is a holistic concept that reflects and synchronises the different dimensions and functions of design with light.



### A flexible system for efficient lighting design

Thanks to TUGRA's extremely flexible configuration options ranging from lengths, luminous flux and beam characteristics to mounting methods and smart modules, it is possible to implement extensive projects with a single system and with high precision.

### The master of easy installation

Designed for efficient installation with just one person: clever features such as the seamless mounting channel, innovative end caps and the modular concept make installation a simple and safe job, even as a light line. Also ideal for 1:1 refurbishments in record time.

### Efficient, durable and controllable – for low operating costs

With high efficiency of up to 189 lm/W and a long service life of up to 100,000 h, TUGRA is particularly attractive from an economic point of view. Control by sensors and a light management system further reduce operating overheads.

## TUGRA CONNECTING FEATURES

### EFFICIENT AND DURABLE:

economically attractive with up to 189 lm/W and a service life of up to 100,000 h

### GLARE-FREE VDU SCREEN WORK:

as UGR19 variant with glare-free light for VDU workstations

### LENGTHS IN 300 MM INCREMENTS:

always fits perfectly – available in lengths from 300 mm to 2100 mm in 300 mm increments, expandable with modules with additional functions such as sensor systems, beacons, Wi-Fi, LiveLink SwarmSens and emergency lighting available in IoT modules.

### IP66 AND IK10 – ROBUST ALL ROUND:

With IP66, optimal protection against dust and heavy splash water, and IK10 impact resistance gives TUGRA high protection against knocks and vandalism.

### IP69K – FROM TOUGH APPLICATION CASE TO HACCP:

dust-tight, protected against the ingress of water (high pressure, steam jets) and protected against high water temperatures – the IP69K variant of TUGRA meets high industry standards and HACCP requirements for the food industry. Resistant in aggressive atmospheres due to PMMA profile.

### SUSTAINABILITY:

made in Europe, project-specific packaging, interchangeability of components, sustainable material (on request)

### COLOUR DIVERSITY:

four standard colours (white, light grey, anthracite grey and black) and individual special finishes for maximum colour freedom

### VERSATILE MOUNTING OPTIONS:

anything goes – whether surface-mounted, wire suspension, vertical or horizontal wall mounting, on continuous line trunking via trunking accessories or with tube clips in more unusual locations.

### ALWAYS FROM THE RIGHT MATERIAL:

available in PC, PMMA or innovative, sustainable plastic

### TUGRA

#### Mounting type

Surface-mounted, suspended, wall

#### Light module lengths

300, 600, 900, 1200, 1500, 1800, 2100 mm

#### Energy efficiency

150 lm/W up to 189 lm/W

#### Lumen packages

1,200 – 17,000 lm

#### Service life

L80 50,000 h tq 25°  
L80 70,000 h tq 25° (HE)  
L80 100,000 h tq 25° (HE+)

#### Colour temperatures

3000 K, 4000 K, 6500 K, 5000 K (on request)  
Active (HCL), RGBW

#### Colour rendering

CRI > 80, CRI > 90

#### Light distribution

8 different light distributions  
PL – Lambertian  
PN – narrow distribution  
PW – wide distribution  
PWW – very wide distribution  
PXW – extremely wide distribution  
PAW – asymmetric  
PW19 – wide distribution, UGR < 19  
PW19-IL – wide distribution, UGR < 19 indirect component

#### Colours of end caps and modules

White [RAL9016], light grey [RAL7035],  
anthracite grey [RAL7026] and black [RAL9005]

#### Protection rating

IP66 / IP69K (gas-tight)

#### Operating mode

Switchable and dimmable (DALI)

#### Connectivity

LiveLink Wi-Fi control unit for daylight-dependent control and presence detection, LiveLink SwarmSens, emergency light capable, sensor technology, monitoring ready (MOR)

#### Additional equipment

Smart additional modules, 3h emergency light module

#### Accessories

Universal mounting plate, mounting accessories, blind modules

## TUGRA CONNECTING FUNCTIONS INTELLIGENT MODULES. VERSATILE APPLICATIONS.

The TUGRA system offers numerous advantages for architects, builders, installation technicians and users of commercial premises. An overview of the highlights.



### PERFECT LIGHT

Thanks to Varizon technology, a total of eight different light distributions can be implemented with TUGRA. Based on primary optics, prisms in the luminaire profile and prismatic foils, TUGRA can be precisely configured to ensure maximum quality of light for specific applications.



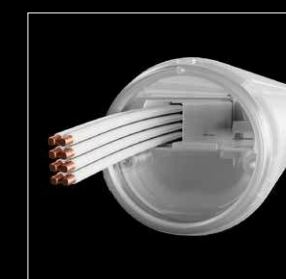
### REDESIGNED IP66 END CAP

TUGRA keeps tight: Thanks to the combination of conventional plastic and thermoplastic material for the end caps, TUGRA already achieves IP66 protection in its standard version without an additional classic grommet. The end cap features five different feed options.



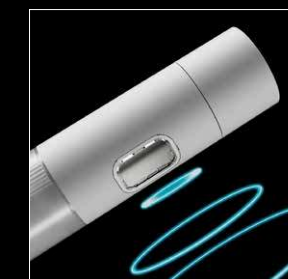
### SMART MODULE WITH SENSOR TECHNOLOGY

TUGRA is available with sensor modules, e.g. for detecting persons. Here, the sensor technology controls the individual luminaire or individual luminaire groups and can implement smart applications such as running light in car parks and logistics facilities. Subsequent conversion is quick and easy via the end caps.



### INTEGRATED BARRIER-FREE CABLE CHANNEL

A barrier-free cable channel in TUGRA provides the required free space for non-lighting cables, e.g. for data transmission, but also for use for through-wiring or emergency lighting wiring.



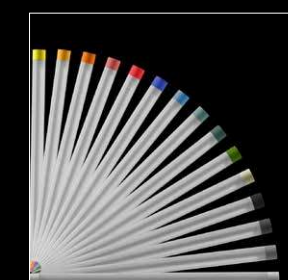
### MODULE WITH WI-FI REPEATER

Using a module with Wi-Fi repeater, a stable Wi-Fi can be set up right into the last corner even under difficult architectural conditions – for example in parking garages and supermarkets.



### UNIVERSAL MOUNTING PLATE

Up for any job: a universal mounting plate allows the easy and flexible integration of additional systems into the lighting network, e.g. external emergency lighting signs or cameras.



### COLOUR DIVERSITY

The standard version of the TUGRA end cap is available in four colours: white, light grey, anthracite grey and black. Special designs in any RAL colour are also possible, for example individual corporate colours.

## TRILUX LIGHTING SOLUTIONS AND SERVICES

### INFORMATION AND ADVICE:

find your perfect solution with an extensive offer of intelligent tools and individual consultation services.

### DIGITAL SERVICES:

with TRILUX Digital Services, customers benefit from the full potential of digital lighting solutions. The result is more convenience, more transparency and reduced costs.

### FINANCING:

benefit from the advantages of an efficient and powerful lighting system – with a form of financing that suits your individual needs.

### PROJECT MANAGEMENT:

we assume complete project management if desired – this simplifies the path to a customised lighting solution and a perfectly coordinated chain of systems.

### TECHNICAL SERVICES:

all mounting and installation work for example is carried out by a reliable supplier from our partner network.



An excellent connection. TUGRA combines form and function to perfection. The luminaire system has already received multiple awards.  
trilux.com/tugra



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Find further information on our website. There you can also contact us directly.