



WE-EF LEUCHTEN

Projectors
FLC200 LED Series
2019



COLOUR CHANGER VERSION

WE-EF has developed the FLC200 LED colour changer series for dynamic coloured lighting, with a total of three different standard light distributions: wide, medium and narrow beam. Various LED combinations are available:

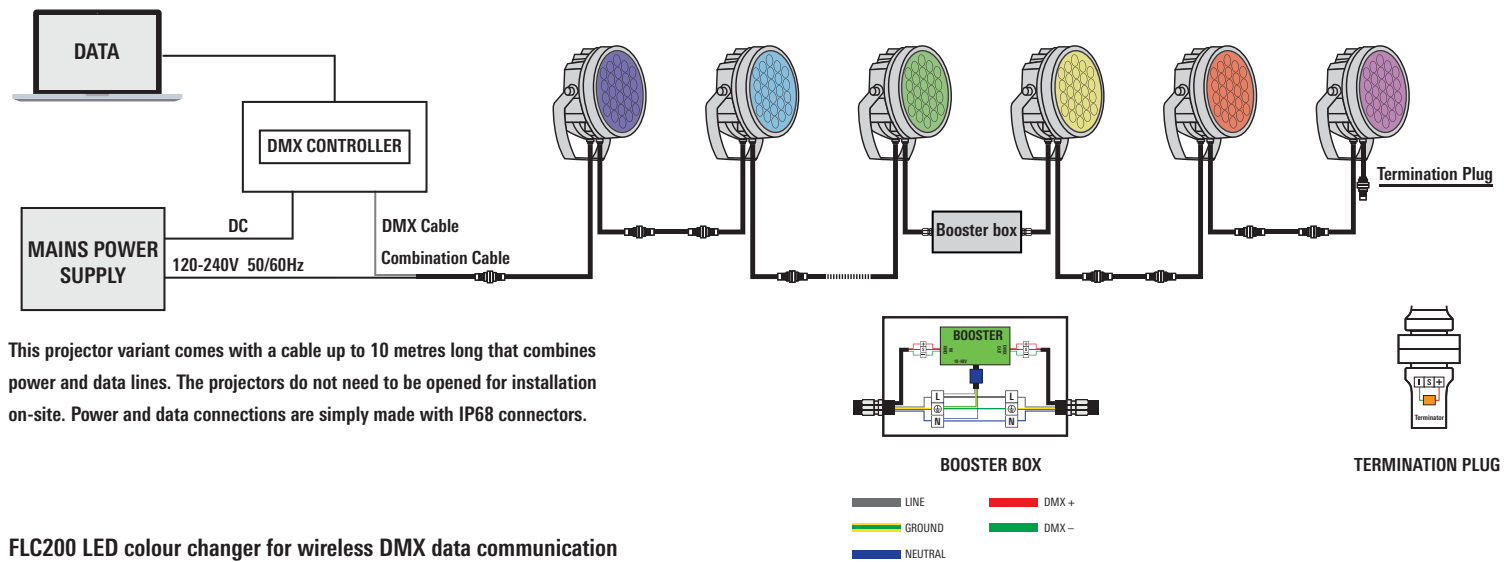
- RGBW (LEDs in red, green, blue and white)
(white with a colour temperature of either 3000 K or 4000 K)
- RGBA (LEDs in red, green, blue and amber).

The colour changer is controlled by an internationally standardised DMX 512 interface that is integrated in the projector, enabling simple amalgamation into an existing DMX 512 installation. For new installations, WE-EF offers perfectly co-ordinated DMX systems and components. Different DMX controllers, DMX splitters, DMX booster boxes

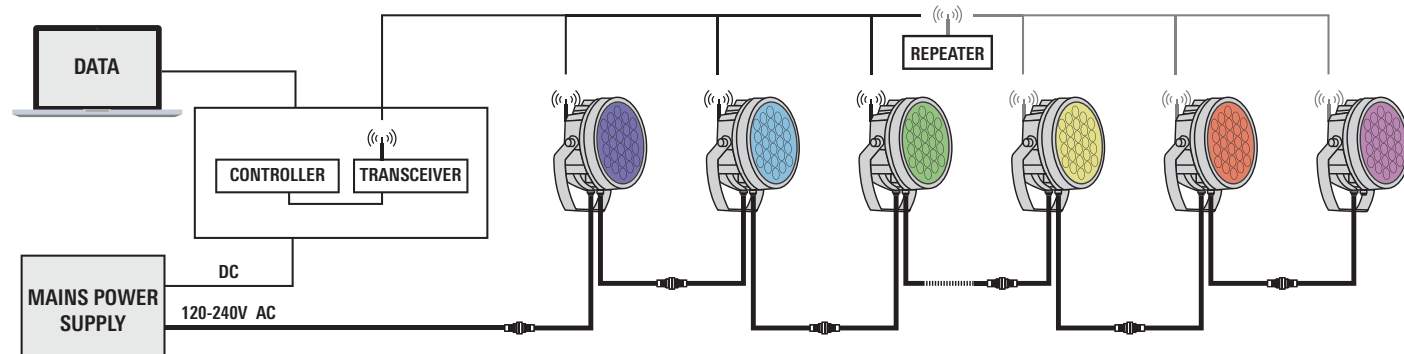
for signal amplification, motion detectors and suitable connection systems ensure that lighting management systems can be configured to suit a wide variety of project specifications and system sizes. Wired DMX networks with uni- or bidirectional (DMX RDM) data communication are possible, as are radio-based solutions, in-series installation or a star structure. The circuit diagrams on this page show two of the many possibilities.

In the DMX network all projectors can be addressed individually or grouped together. This enables both synchronous light sequences and control, and individual behaviour. On request, WE-EF can provide support in the design and configuration of the DMX network.

FLC200 LED colour changer with DMX combination cable



FLC200 LED colour changer for wireless DMX data communication



All projectors are equipped with an antenna and a transceiver. Depending on the number, the distance and the local topography, repeaters may have to be used for radio transmission.

COLOUR BOOST TECHNOLOGY

WE-EF colour boost technology enables 30% to 40% higher luminous efficacy than the usual standard. The lens optics developed by WE-EF, and matched to the coloured LEDs, enable homogeneous colour mixing, smooth colour transitions, high efficiencies and maximum control of the light.

With four channel colour mixing, the available electrical power of the projector is normally distributed evenly across all four channels. This means that a maximum of 25% of the electrical power is available to each channel. As a rule, however, a maximum of three channels are used for colour mixing. This means that only a maximum of 75% of the electrical power is available to them. This is where WE-EF colour boost technology

comes in. When only three channels are used it distributes 100% of the electrical power to the three active channels, so that 33% instead of 25% of the total electrical power is available to each channel. Depending on the colours used, this increases the luminous efficacy by up to 40%.

In order to ensure optimum operating parameters for the LEDs at all times, and to avoid overloading, the built-in driver reliably limits the respective rated current per channel. If the maximum rated current per colour in a four-channel operation is set at 100%, dynamic power management can increase this to a maximum of 140%.

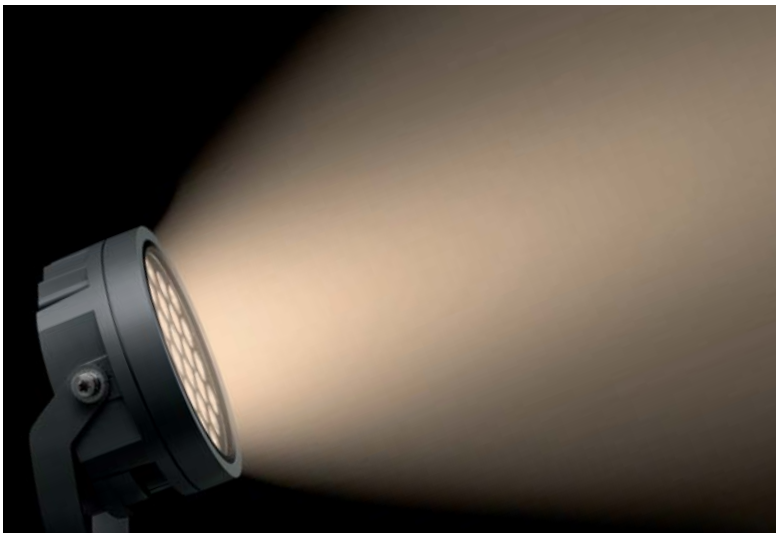


TUNABLE WHITE VERSION

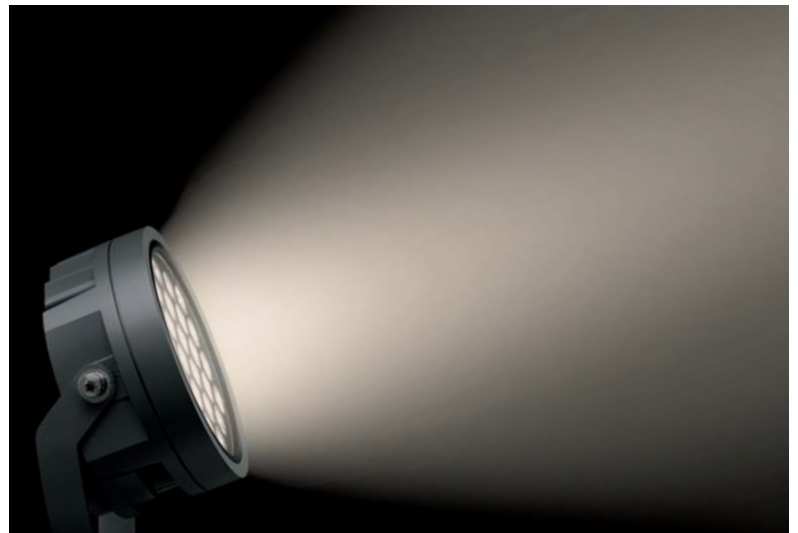
Tunable white technology combines white LEDs of different colour temperatures and enables them to be controlled separately. As a result, in addition to being able to dim their luminous flux up and down, tunable white luminaires can also vary infinitely between warm white, neutral white and cold white light. This functionality can be used to program light progression – for example, based on the dynamics of daylight. Indoors, tunable white luminaires can promote wellbeing and performance.

Outdoors, tunable white opens up new aesthetic and functional possibilities. For example, the use of dynamically changing light colours can attract attention and facilitate orientation. For example, as a result of a change in colour temperature, increased attention could be drawn to stairs, thus directing the flow of visitors.

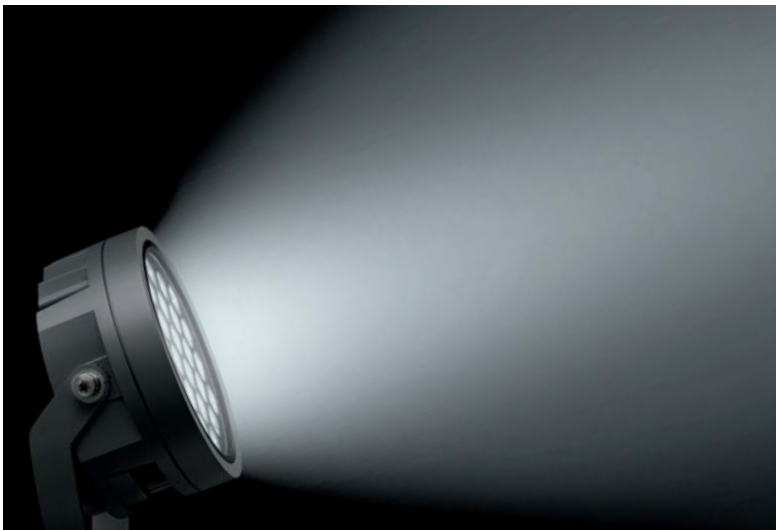
Tunable white outdoor lighting could vary with the changing seasons, presenting vegetation in different ways or changing during the course of a night and creating different atmospheres in one place. The colours and textures of surfaces are perceived differently with different colour temperatures, and tunable white luminaires can be used to showcase architecture in ever-changing ways.



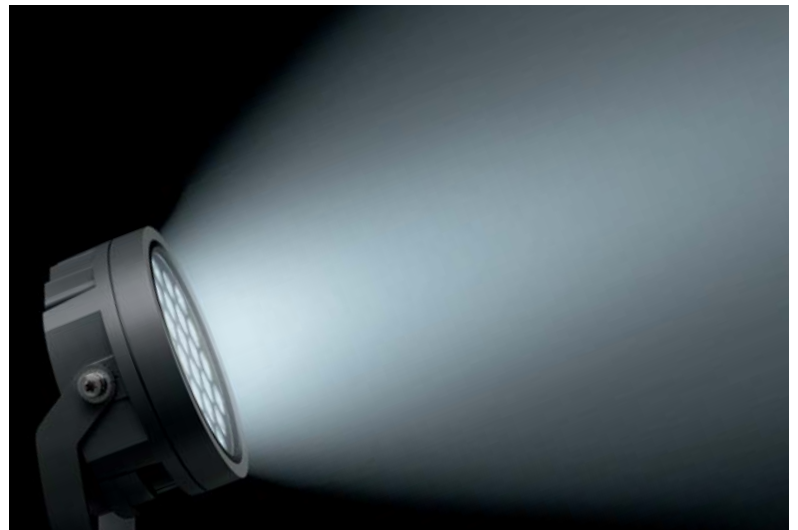
2700 K – 3500 K



4000 K – 4500 K



5000 K – 5500 K



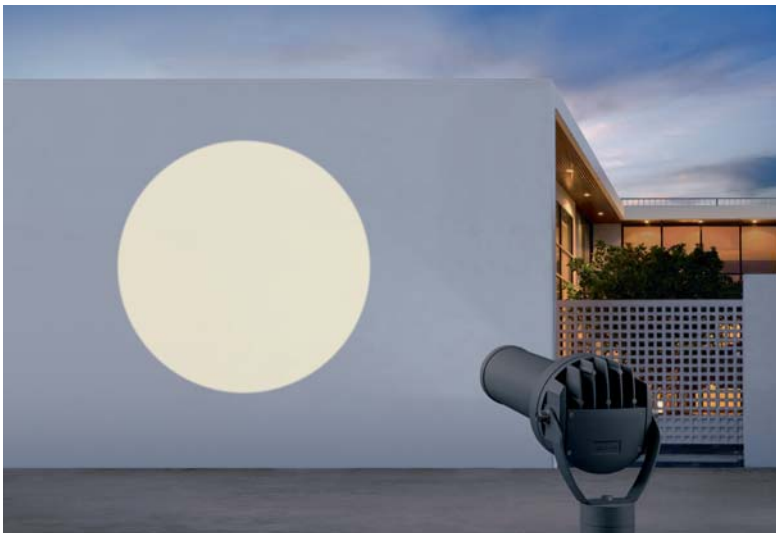
6000 K

PROFILE PROJECTOR VERSION

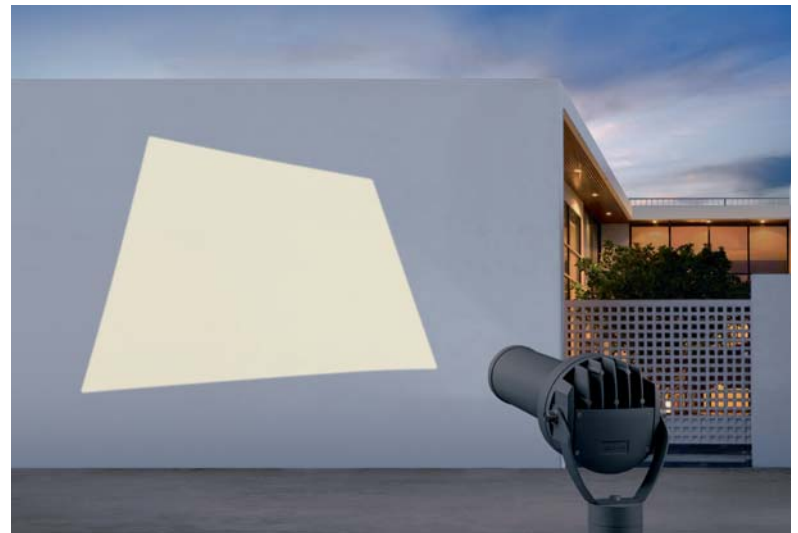
Towns and cities are increasingly using light to raise their profile and make them more attractive. In addition to classic lighting for streets, paths and public spaces, greater use is being made of the possibilities offered by lighting that showcases the objects illuminated. Atmospheric lighting accents in a park, a monument with sharply illuminated contours, effective façade projection – when used carefully and in a targeted manner, such elements not only contribute to creating a special ambience, but also an atmosphere in which people feel comfortable. With the new FLC200 LED profile projectors, WE-EF offers suitable instruments for the precise realisation of lighting with a showcasing effect in outdoor spaces.

The profile projectors comprise a spherical flat convex lens system to produce a parallel light beam. Three models are available – the FLC220 LED profile projector, the FLC230 LED profile projector and the FLC230 LED colour changer / tunable white profile projector.

Each comes as a zoom spot projector [ZP] for producing sharply defined circles of light, a frame projector [FP] for illuminating polygon surfaces, or a gobo projector [GP] for projecting gobos onto surfaces.



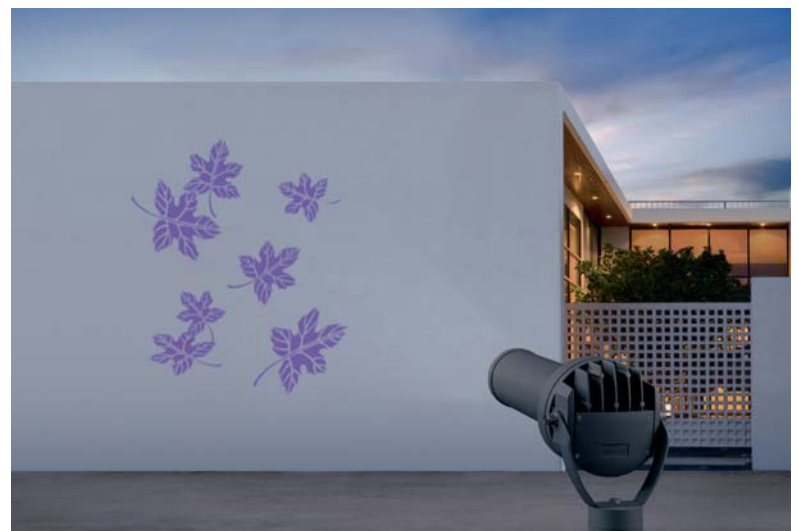
Profile Projector [ZP] for zoom-spot.



Profile Projector [FP] for framing applications, polygon shape.



Profile Projector [GP] for projection of gobos on a surface.




Profile Projector [GP] for projection of gobos on a surface with colour changer.

THE BEST LIGHT FOR ARCHITECTURE

LED technology enables new ideas and concepts for showcasing buildings, monuments or landmarks. With simple technical adaptations, white and/or coloured light can be used both statically and dynamically. The FLC200 LED product family from WE-EF is a versatile LED projector series that combines the special requirements for showcasing architecture. The FLC200 LED series has a modular structure. It comprises four basic sizes with different wattages, lumen packages and white light with various colour temperatures.

Models with tunable white, RGBW and RGBA colour-changing LED boards incorporating colour boost technology are also available. In addition, there are profile projectors for zoom, gobo or framing applications. Furthermore, optional optical accessories such as wallwash and linear lenses, honeycomb and glare shields, and snoots enable the creation of any desired lighting effect.

	Diameter	Wattage	Lumens	3000 K / 4000 K Version*	Colour Changer Version	Tunable White Version	Profile Projector 3000 K / 4000 K Version*	Profile Projector Colour Changer / Tunable White Version
 FLC220	190 mm	12-37 W	1378 – 4900	●	●	●	●	—
 FLC230	260 mm	24-52 W	2756 – 6907	●	●	●	●	●
 FLC240	340 mm	48-104 W	5512 – 13813	●	●	●	—	—
 FLC260	385 mm	72-155 W	8268 – 20720	●	●	●	—	—



IOS® Innovative Optical System
CAD-optimised symmetric lens system for 'Projected Light' applications. WE-EF's high-precision lenses for symmetric light distribution have been designed to take utmost advantage of high power LEDs by leading manufacturers.



Five anti-corrosion properties

- Substrate – marine grade aluminium alloy
- Conversion coating – multi-step pre-treatment
- Powder coating – UV stabilised, architectural grade coating
- PCS hardware
- Process control – tightly controlled process and quality checks, up to 2,000-hour salt spray tests



PCS hardware

- Austenitic stainless steel
- Tough, impregnated polymer coating
- Non-metallic barrier, protects against galvanic corrosion

* 2700 K / 3500 K on request

FLC200 LED SERIES FEATURES



3000 K / 4000 K Version*

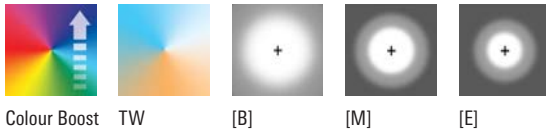
- Four sizes
- Five standard beam distributions
- Additional lenses IO-20° (wallwash) and IO-180° (linear spread)



[B] [M] [E] [EE] [EES]

Colour Changer Version / Tunable White Version

- Four sizes
- Three standard beam distributions
- Additional lenses IO-20° (wallwash) and IO-180° (linear spread)
- Colour boost technology, 30-40% higher lumen output, wired / wireless DMX interface
- Innovative PCB design, 80% lumen output, DALI interface



Colour Boost TW [B] [M] [E]

Profile Projector Version

- Two sizes
- Three optical options; Gobo, Zoom, Framing
- Colour boost technology, 30-40% higher lumen output, wired / wireless DMX interface
- Tunable White, 80% lumen output, DALI interface

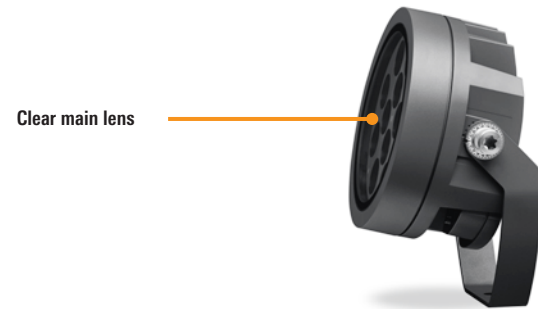


Colour Boost TW GP ZP FP

Beam distribution with additional lenses IO-180° and IO-20°



[M] + IO-180° [E] + IO-180° [EE] + IO-180° [EES] + IO-180° [M] + IO-20°



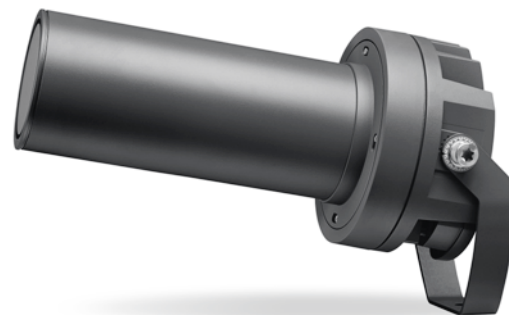
Clear main lens

3000 K / 4000 K*



Patterned main lens to enhance colour mixing

Colour Changer / Tunable White



Profile Projector
3000 K / 4000 K*
Colour Changer / Tunable White

* 2700 K / 3500 K on request

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