

we-ef

FLC200 PROJECTORS

High performance illumination



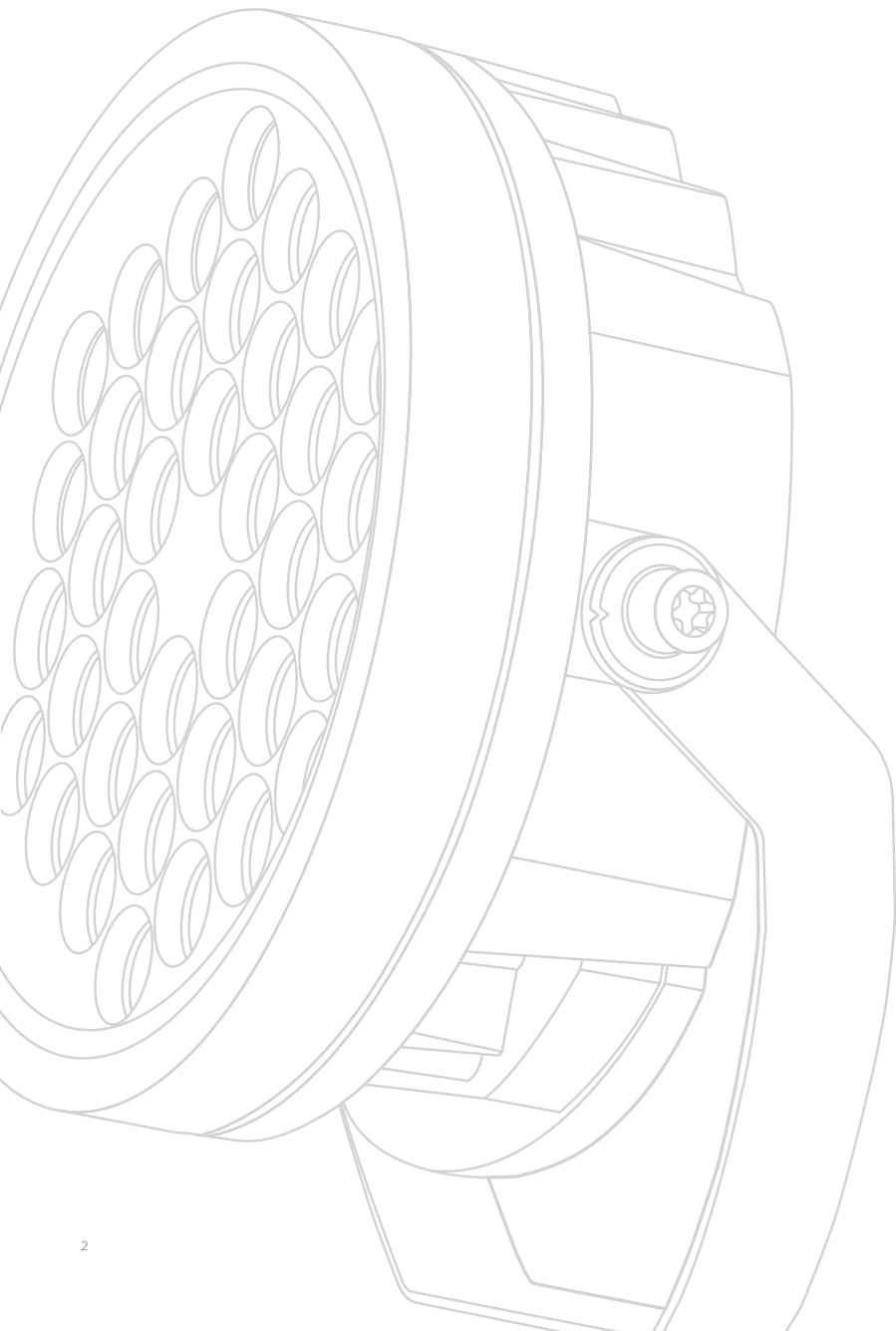
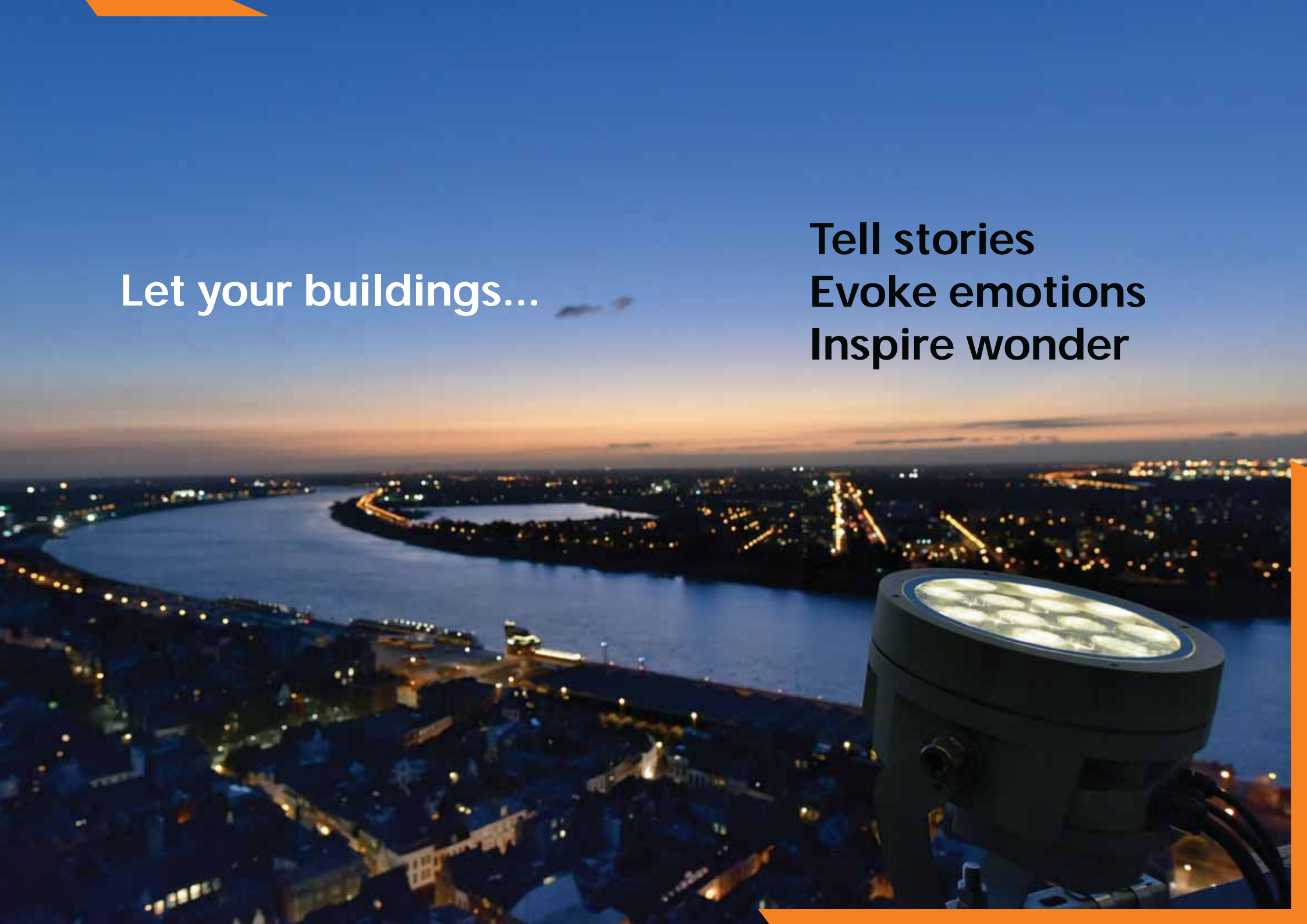


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Let your buildings...

Tell stories
Evoke emotions
Inspire wonder



PRODUCT OVERVIEW



FLC200 options

FLC200

[Factory-sealed] **Standard White**



FLC200-TW

[Factory-sealed] **2200-6000 K Tunable White projector**



FLC200-CC [RGBW]

[Factory-sealed] **RGBW Colour Changing projector**



FLC200-CC [RGBA]

[Factory-sealed] **RGBA Colour Changing projector**



Colour Boost Technology



- All colour changing projectors are equipped with colour boost technology.
- Depending on the colours used, this increases the luminous efficacy by up to 40%

Tunable White Technology



- Combine white LEDs of different colour temperatures which can be controlled separately

FLC200 projectors

Family:

FLC201, FLC210, FLC220, FLC230, FLC240, FLC260

Light source:

LED 6 -155 W

Nominal lumen:

615 -20,702 lm

Colour temperatures:

2700 K, 3000 K, 4000 K (2200 K on request)

CRI: ≥80

Available distributions:

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

Optical accessories:

Wallwash lens*, linear spread lens, flood lens*, honeycomb louvre, glare shield, snoot

*Wallwash and flood lens not available for FLC201/FLC210

Dimming:

1-10 V analogue dimming and DALI interface

FLC200-TW projectors

Family:

FLC201-TW, FLC210-TW, FLC220-TW, FLC230-TW, FLC240-TW, FLC260-TW

Light source:

LED 4 -132 W

Nominal lumen:

420 -15,120 lm

Colour temperatures:

2200-6000 K (2700-6000 K for [EES] only)

CRI: ≥80

Available distributions:

[B] [M] [E] [EES]
[EES] not available for FLC201/210/220-TW

Optical accessories:

Wallwash lens*, linear spread lens*, honeycomb louvre**, glare shield, snoot

*Wallwash and linear spread lens not available for FLC210/ FLC220

**Honeycomb louvre not available for FLC201-TW only

Dimming:

DALI interface

FLC200-CC projectors

Family:

FLC210-CC, FLC220-CC, FLC230-CC, FLC240-CC, FLC260-CC

Light source:

LED 12 -144 W

Nominal lumen:

825 -12,240 lm

Colour temperatures:

RGBW | RGBA

CRI: ≥80

Available distributions:

[B] [M] [E] [EES]
FLC210-CC available [B] [M] only [EES] not available for FLC210/220-CC

Optical accessories:

Wallwash lens*, linear spread lens*, flood lens, honeycomb louvre**, glare shield, snoot

*Wallwash and linear spread lens not available for FLC210-CC

**Honeycomb louvre not available for FLC210-CC/FLC220-CC/FLC230-CC

Dimming:

DMX interface



FLC200 family

Standard White

FLC201



1 LED

FLC210



3 LED

FLC220



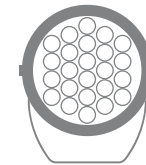
6 LED

FLC230



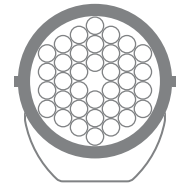
12 LED

FLC240



24 LED

FLC260



36 LED

Families	Diameter	Wattage	Lumens	Light distributions
FLC201	75 mm	6 W	615 - 720 lm	[B] [M] [E] [EE] [EES]
FLC210	150 mm	6 - 12 W	720 - 1590 lm	[B] [M] [E] [EE] [EES] linear spread lens
FLC220	190 mm	12 - 26 W	1295 - 3450 lm	[B] [M] [E] [EE] [EES] linear spread lens, wallwash lens
FLC230	260 mm	24 - 52 W	2756 - 6900 lm	[B] [M] [E] [EE] [EES] linear spread lens, wallwash lens
FLC240	340 mm	48 - 104 W	5178 - 13800 lm	[B] [M] [E] [EE] [EES] linear spread lens, wallwash lens
FLC260	385 mm	72 - 155 W	7767 - 20720 lm	[B] [M] [E] [EE] [EES] linear spread lens, wallwash lens

FLC200-TW family

Tunable White

FLC200-CC family

Colour Changing

FLC201-TW

FLC210-TW
FLC210-CC

FLC220-TW
FLC220-CC

FLC230-TW
FLC230-CC

FLC240-TW
FLC240-CC

FLC260-TW
FLC260-CC



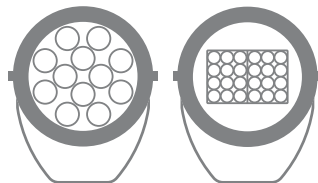
1 LED



3 LED

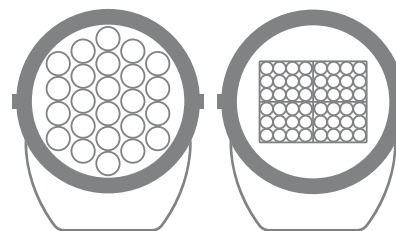


6 LED



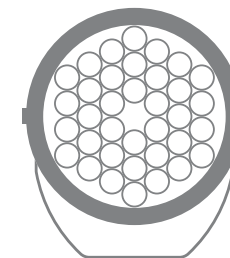
12 LED

24 LED
[EES]

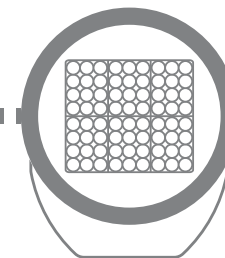


24 LED

48 LED
[EES]



36 LED



72 LED
[EES]

Families	Diameter	Wattage	Lumens	Light distributions
FLC201-TW	75 mm	4 W	420 lm	[B] [M] [E]
FLC210-TW	150 mm	11 W	1260 lm	[B] [M] [E]
FLC220-TW	190 mm	22 W	2520 lm	[B] [M] [E] linear spread lens
FLC230-TW	260 mm	24 - 44 W	2280 - 5040 lm	[B] [M] [E] [EES] linear spread lens, wallwash lens
FLC240-TW	340 mm	48 - 88 W	4560 - 10080 lm	[B] [M] [E] [EES] linear spread lens, wallwash lens
FLC260-TW	385 mm	72 - 132 W	6840 - 15120 lm	[B] [M] [E] [EES] linear spread lens, wallwash lens

Families	Diameter	Wattage	Lumens	Light distributions
FLC210-CC	150 mm	12 W	825 - 1020 lm	[B] [M]
FLC220-CC	190 mm	24 W	1650 - 2040 lm	[B] [M] [E] linear spread lens, wallwash lens
FLC230-CC	260 mm	42 - 48 W	2550 - 4080 lm	[B] [M] [E] [EES] linear spread lens, wallwash lens
FLC240-CC	340 mm	84 - 96 W	4500 - 8160 lm	[B] [M] [E] [EES] linear spread lens, wallwash lens
FLC260-CC	385 mm	126 - 144 W	6750 - 12240 lm	[B] [M] [E] [EES] linear spread lens, wallwash lens

FEATURES AND CONSTRUCTIONS

IP66 | Class I | IK07



1 Safety glass main lens

2 CCG® Controlled Compression Gasket

- Weatherproof, non-ageing, high temperature rated rubber
- Provides long-term, maintained, high IP rating

Corrosion protection



5CE

5CE
quality checks on finish part up to 3,000 hours salt spray exposure test



5CE
+PRIMER

5CE + Primer
is suitable for coastal and aggressive environments

Standard colours options



RAL9004 Signal Black
RAL9007 Grey aluminum
RAL7016 Anthracite grey
RAL9016 Traffic white



3 Two cable glands* for improved wiring flexibility
*To be specified at the time of order

4 Factory installed LED circuit board

5 **Body**
Marine-grade, die-cast aluminium alloy

6 Integral driver with integrated surge protection 6/6 kV (optional SP10)

7 **Fasteners**
Poly Coated Stainless Steel Hardware protect against galvanic corrosion and ensures longevity



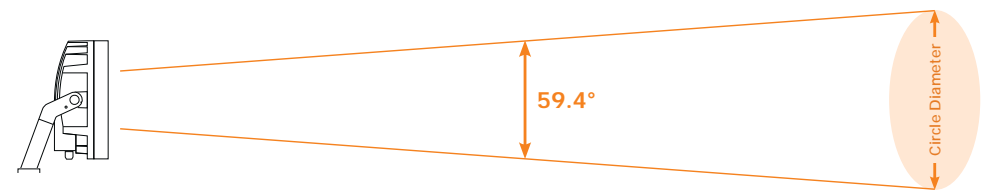
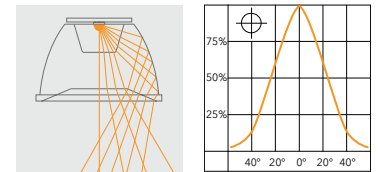
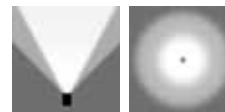
PCS

LIGHTING DISTRIBUTION



Phoenix Bridge, Germany

[B] Wide beam



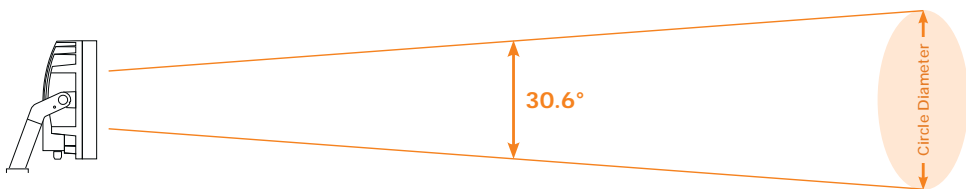
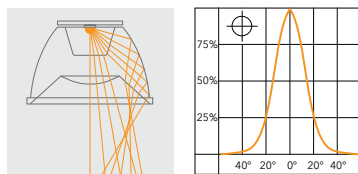
Purpose/Usage

Very large areas 6 - 30 m
Figures based on 3000 K



'The Sprinter' Sculpture at Olympic Park, Australia

[M] Medium beam



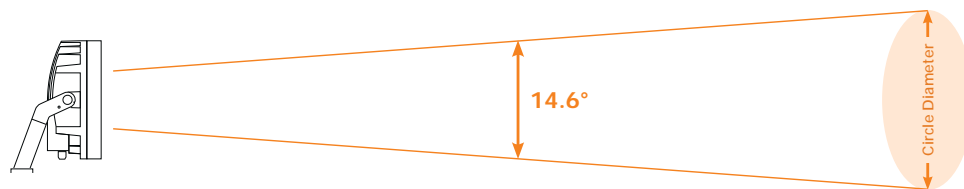
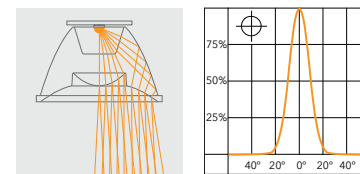
Purpose/Usage

Very large areas 9 - 30 m
 Figures based on 3000 K



Old Parliament House, Australia

[E] Narrow beam



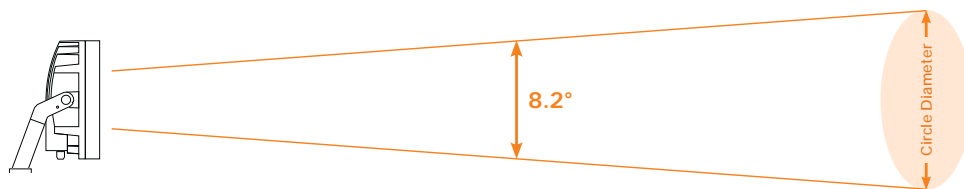
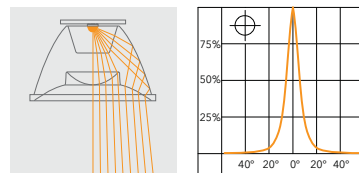
Purpose/Usage

Very large areas 15 - 60 m
 Figures based on 3000 K



Neuschwanstein Castle, Germany

[EE] Very narrow beam



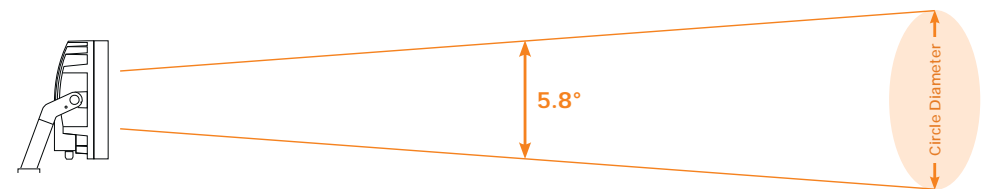
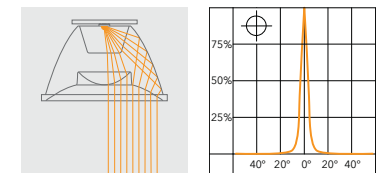
Purpose/Usage

Very large areas 30 - 90 m
 Figures based on 3000 K



Kurilpa bridge, Australia

[EES] Very narrow beam, sharp cut-off



Purpose/Usage

Very large areas 30 - 150 m
 Figures based on 3000 K

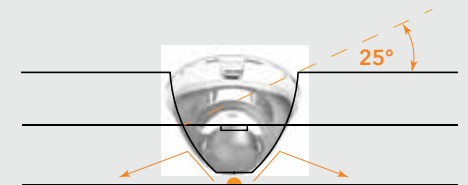
SUPERIOR GLARE CONTROL



Lenses

- In-house CAD design
- Highly efficient LEDs, lenses made of PMMA developed by WE-EF
- Glare-free light distributed uniformly with great visual comfort
- Individual shielded lenses
- Single piece lens holder for easy maintenance and upgrade

Lenses are designed so that any stray light from the DIODE bounces back into the luminaire

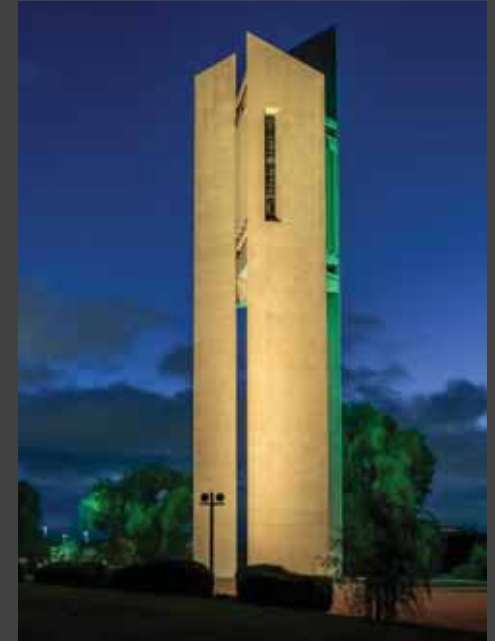


WE-EF's OLC® One LED Concept

OLC® prevents shadowing from any obstruction on the main lens



Uniform illumination through luminaires lifetime



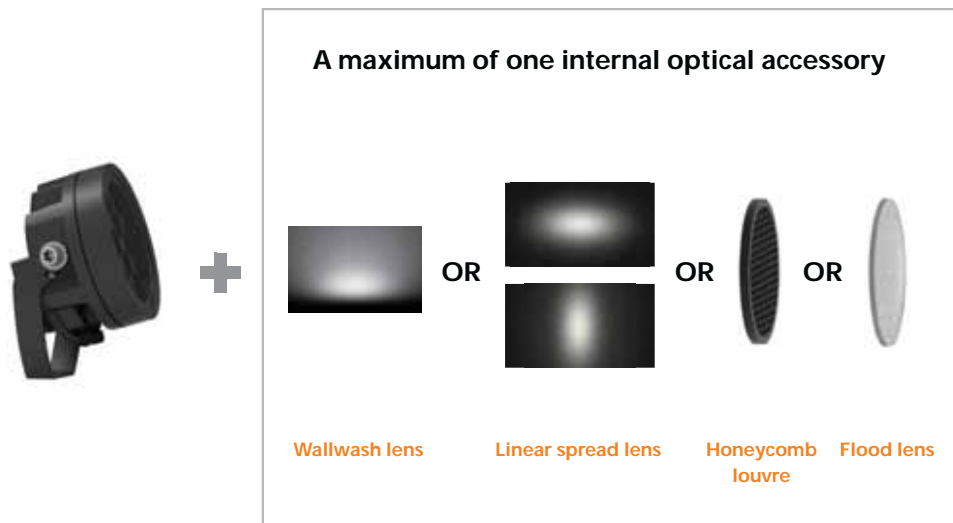
WE-EF's OLC®

- Multi-technique layer where individual LED illuminated the same area creating lighting layer - uniformity illumination
- Uniformity retains when an LED fails and the light level drops
- A sustainable energy saving lighting solution

OPTICAL OPTIONS AND ACCESSORIES

FLC200 Standard White

Internal optical accessories are factory-installed means the products are factory-sealed, qualities and the advantages of the luminaire are fully maintained.



IO-20 Wallwash lens:

Great uniformity and broad corner-to-corner coverage.
Suitable for luminaires with [M] distribution (20°/ 20°)

IO-180 linear spread lens:

Can accommodate both vertical and horizontal orientation
Suitable for luminaires with [M] [E] [EE] [EES] distribution

IW Honeycomb louvre

Suitable for luminaires with [E] [EE] [EES] distribution

Flood lens

Suitable for luminaires with [M] [E] [EE] [EES] distribution

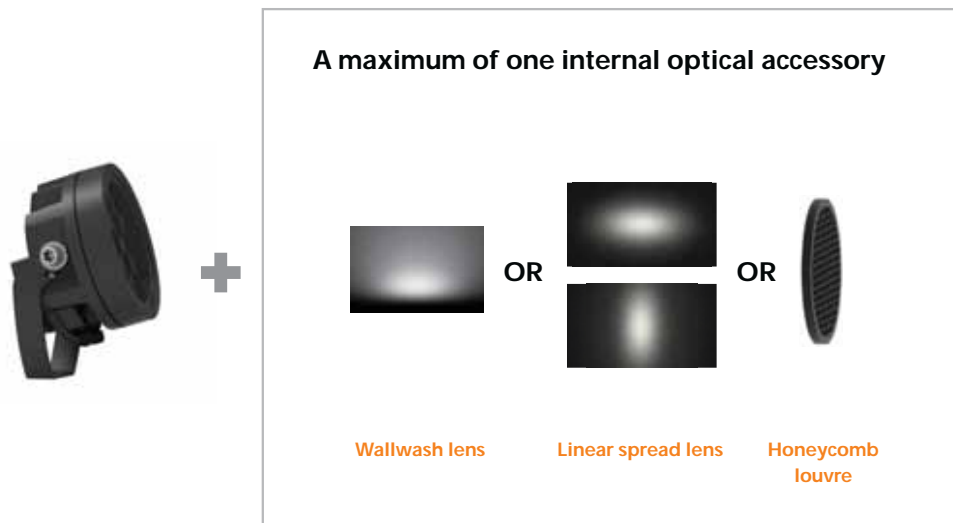


Shields and snoots are incorporated into **separate frame designs**.

OPTICAL OPTIONS AND ACCESSORIES

FLC200-TW | FLC200-CC

Internal optical accessories are factory-installed means the products are factory-sealed, qualities and the advantages of the luminaire are fully maintained.



IO-20 Wallwash lens:

Great uniformity and broad corner-to-corner coverage.
Suitable for luminaires with [M] distribution (20°/ 20°)

IO-180 linear spread lens:

Can accommodate both vertical and horizontal orientation
Suitable for luminaires with [M] [E] [EE] [EES] distribution

IW Honeycomb louvre

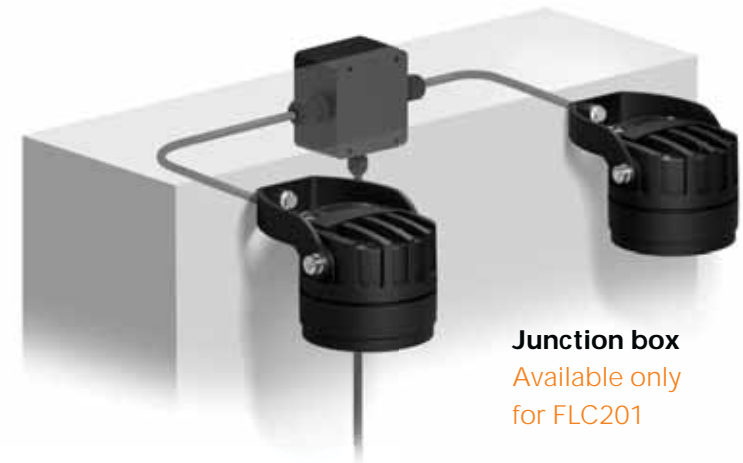
Suitable for luminaires with [E] [EE] [EES] distribution



Shields and snoots are incorporated into separate frame designs.

MOUNTING OPTIONS AND ACCESSORIES

FLC200 Standard White | FLC200-TW | FLC200-CC



MOUNTING OPTIONS AND ACCESSORIES

FLC200 standard white | FLC200-TW | FLC200-CC

Mounting bracket TA

TA1
For mounting
one projector



TA1 bracket
is available in
marine grade
aluminium alloy

TA2
For mounting
two projectors



TA2 brackets
are available in
marine-grade
aluminium alloy and
hot dipped galvanised steel

TA3
For mounting
three projectors



TA3/TA4 brackets
are available in
hot dipped galvanised steel

TA4
For mounting
four projectors



COLOUR AND CONTROL OPTIONS



Control options

FLC200 Standard White



ECO STEP
DIM®

DALI interface

Equipped with a DT6 Dali driver (Dali 2.0)

Benefits

- Improved interoperability
- Easier installation/maintenance
- Less wiring
- Cost-effective
- Increase comfort and flexibility

Eco Step Dim® Basic

Factory-programmed-one-step dimming only

Eco Step Dim® Advanced

- Factory-programmed
- Operated in a standalone mode
- Up to five different dimming levels (D1-D5)
- Up to five time periods (T1-T5)
- Possible to reprogram on site

Control dynamic

DALI interface

Standard White scenarios and **Tunable White scenarios** can be individually controlled via DALI addresses for each projector or a defined group of projectors.

They can be synchronised over a set period of hours or selected days in the week.

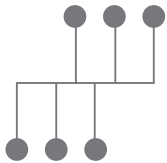
Standard White offers dimming light output

Tunable White offers dimming and change of colour temperature

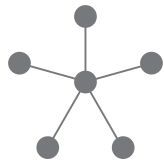
Use application:

For static light or occasional changes

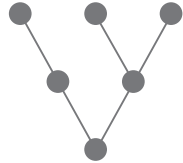
DALI offers flexibility for the wiring topology.



Bus network



Star network

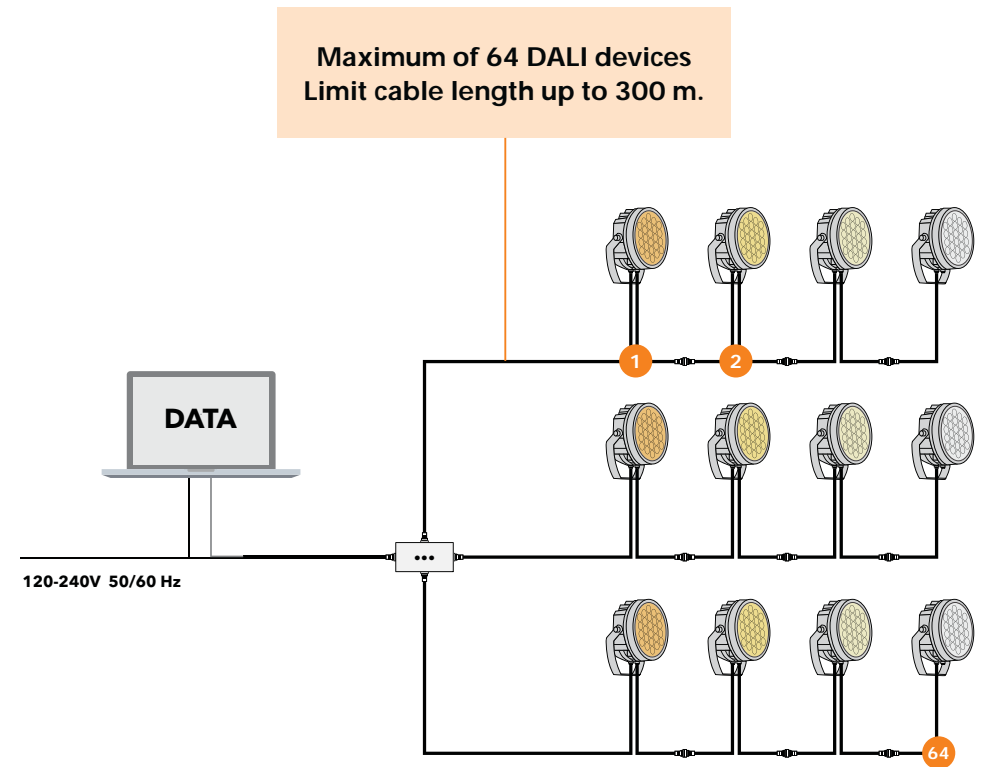


Tree network



Daisy chain

Avoid mesh, ring, mixed, or fully connected networks.



Control dynamic

Application scenarios

Colour-changing scenarios can be individually controlled via DMX addresses for each projector or a defined group of projectors.

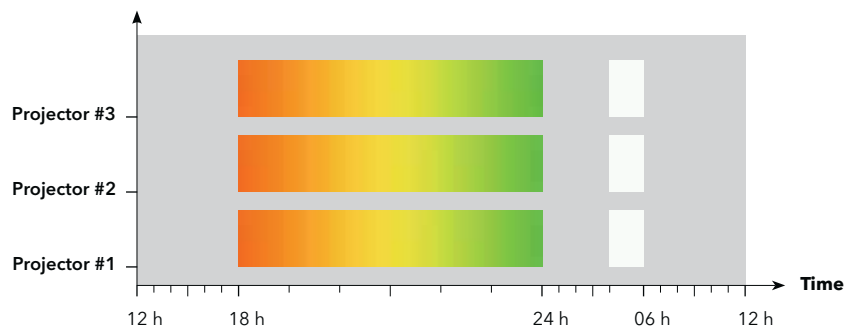
They can be synchronised over a set period of hours or selected days in the week.

	1-10V	DALI	DMX	Wireless DMX
FLC200	✓	✓	-	-
FLC200-TW	-	✓	-	-
FLC200-CC	-	-	✓	✓

Scenario 1

- All projectors are uniformly addressed
- Synchronised colour changing over a set period of hours

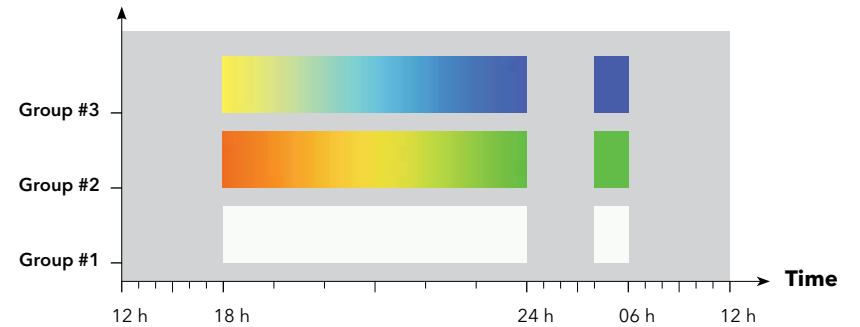
Example 1



Scenario 2

- Separate groups of projectors are defined and differently addressed
- Each group performs a specific scenario over a set period of hours

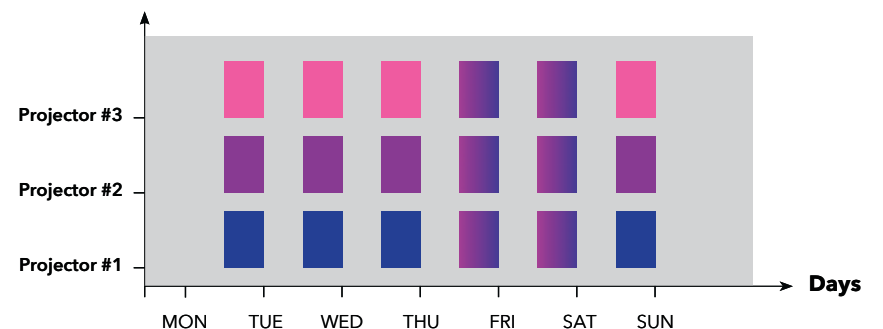
Example 2



Scenario 3

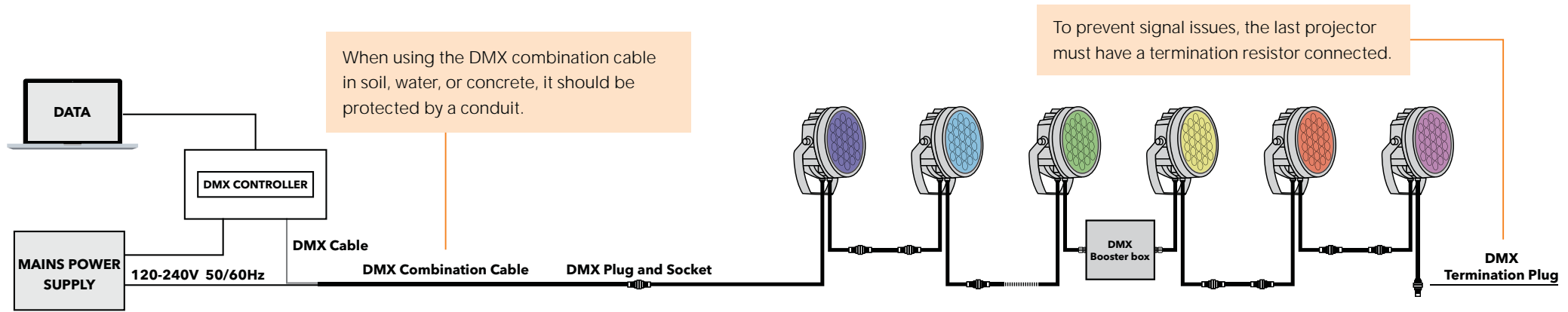
- Specific projectors are differently addressed
- Each projector performs a specific scenario over a set number of days

Example 3



Wiring schematic

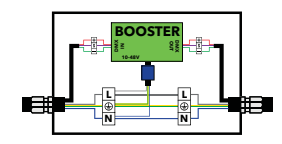
Single layout -FLC200-CC



A DMX network consists of a DMX controller (the master) and one or more projectors in a DMX universe. **If the projectors come with a combination cable, there's no need to open them for an electrical connection.**

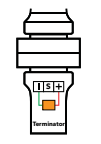
If the projectors are delivered without a combination cable, the termination chamber must be opened on-site, and a suitable crimping tool is needed for assembly.

To prevent signal issues, the last projector must have a termination resistor connected.



DMX BOOSTER BOX

- LINE
- GROUND
- NEUTRAL
- DMX +
- DMX -



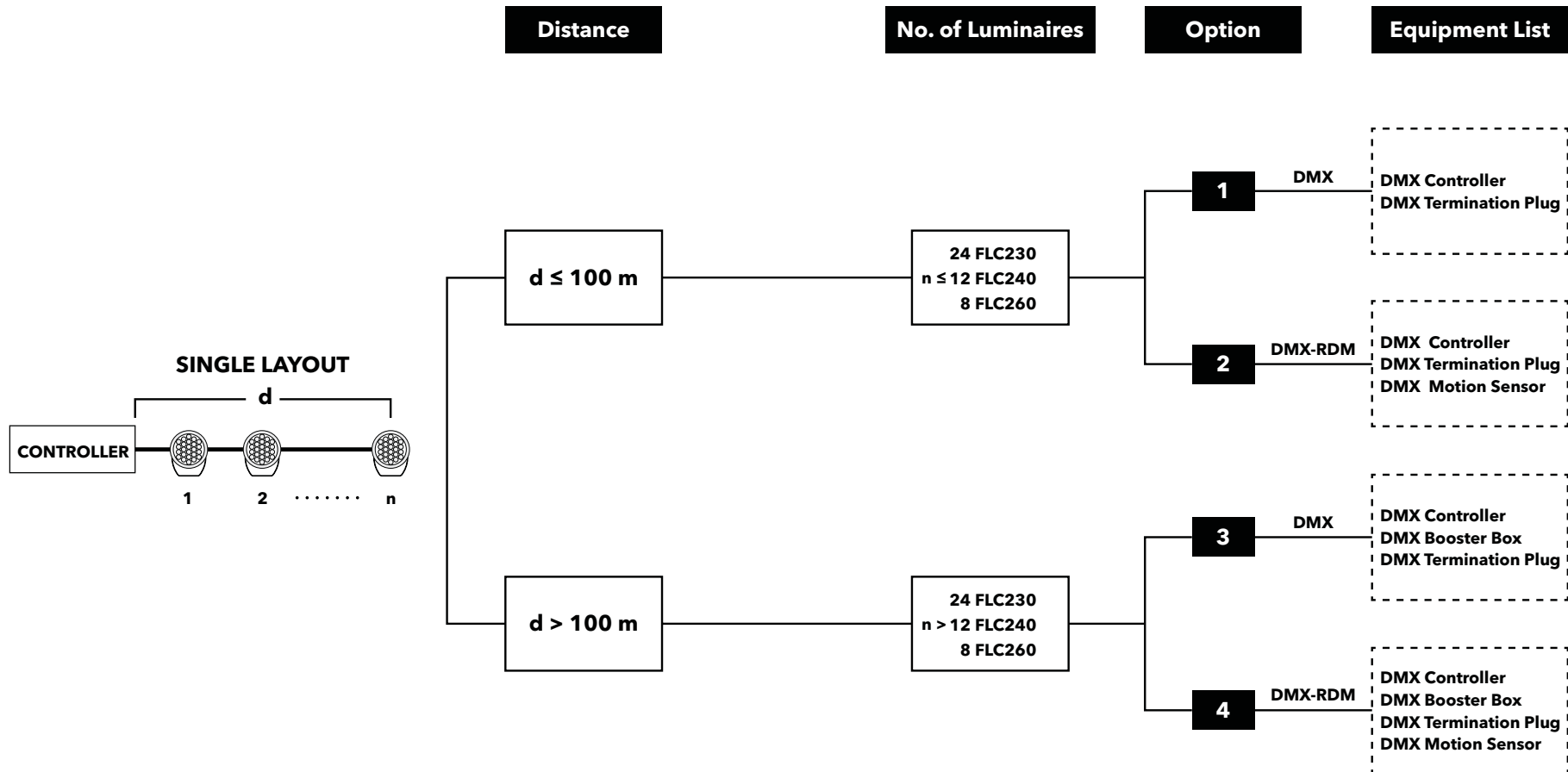
DMX TERMINATION PLUG

The cable contains three power cords and one twisted pair for the DMX signal, along with shielding. If optional sensors or switching devices are used, follow the manufacturer's instructions for the cable size. Any external sources must be connected to the DMX controller via a relay.

Equipment list

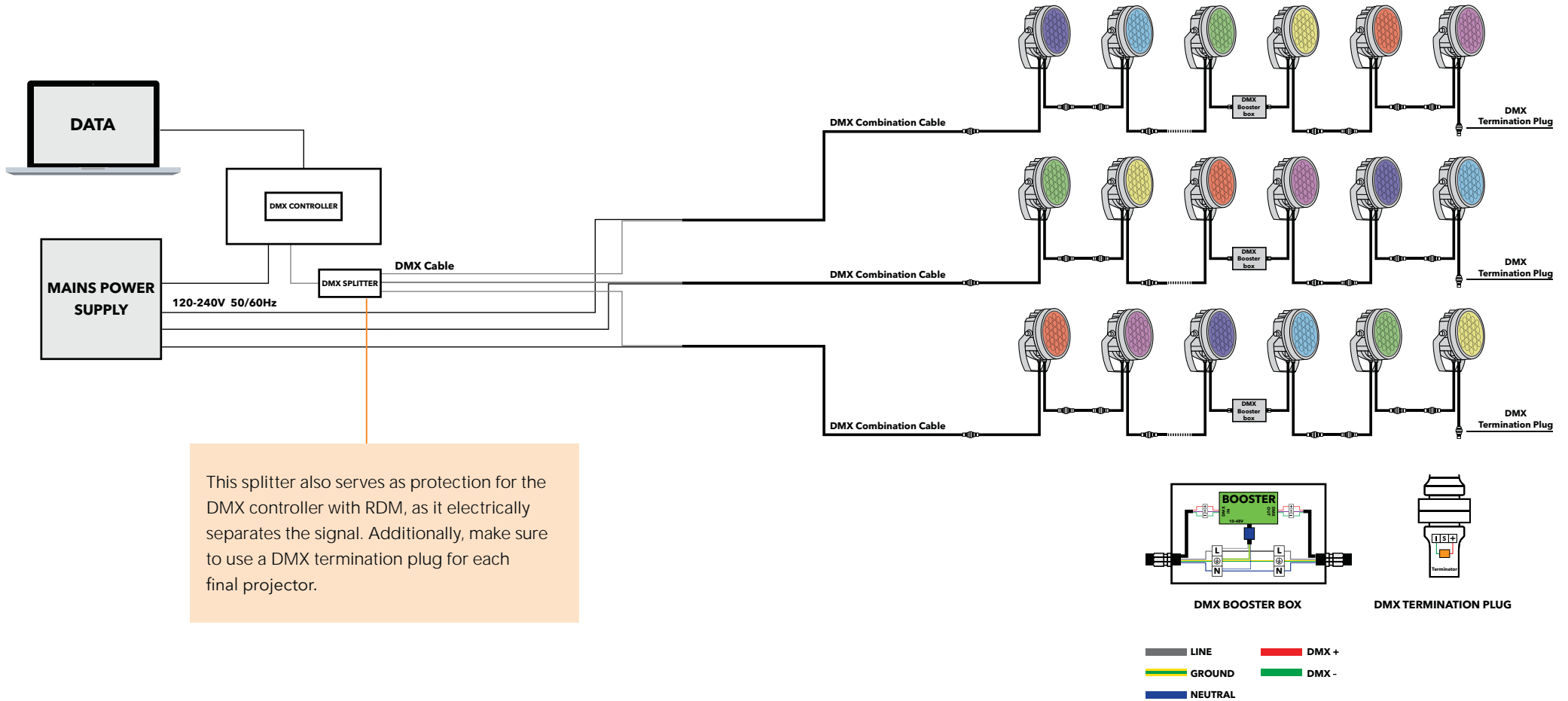
Single layout -FLC200-CC

Standard DMX is **unidirectional**, flowing only from the controller to the projectors.
 With RDM (Remote Device Management), the DMX system becomes **bi-directional**, allowing data to flow both to the projectors and back. This simplifies installation and address allocation.



Wiring schematic

Multiple layout -FLC200-CC



This splitter also serves as protection for the DMX controller with RDM, as it electrically separates the signal. Additionally, make sure to use a DMX termination plug for each final projector.

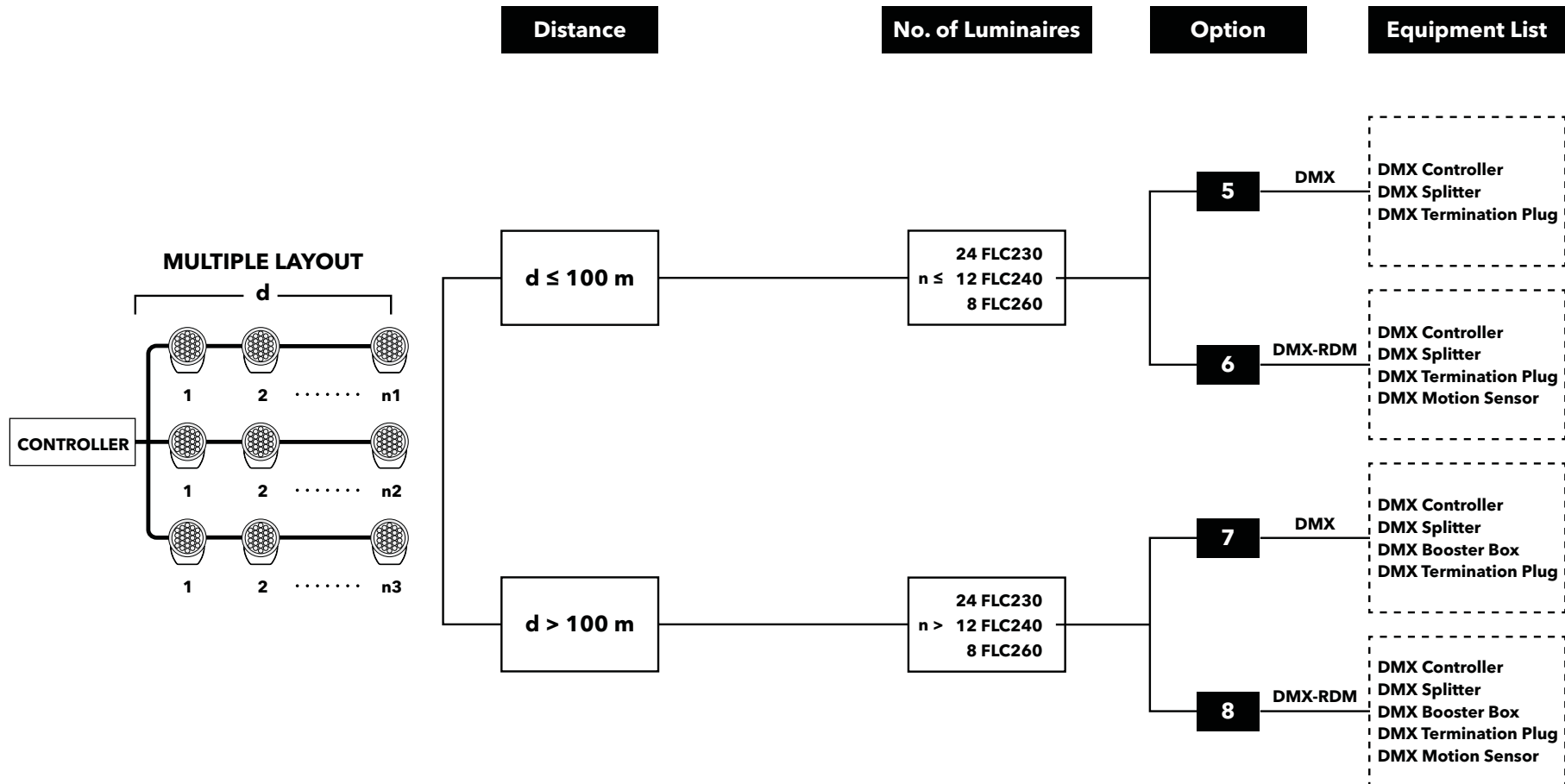
In a multiple layout, use a splitter as a multiplexer for the DMX signal.

Equipment list

Multiple layout -FLC200-CC

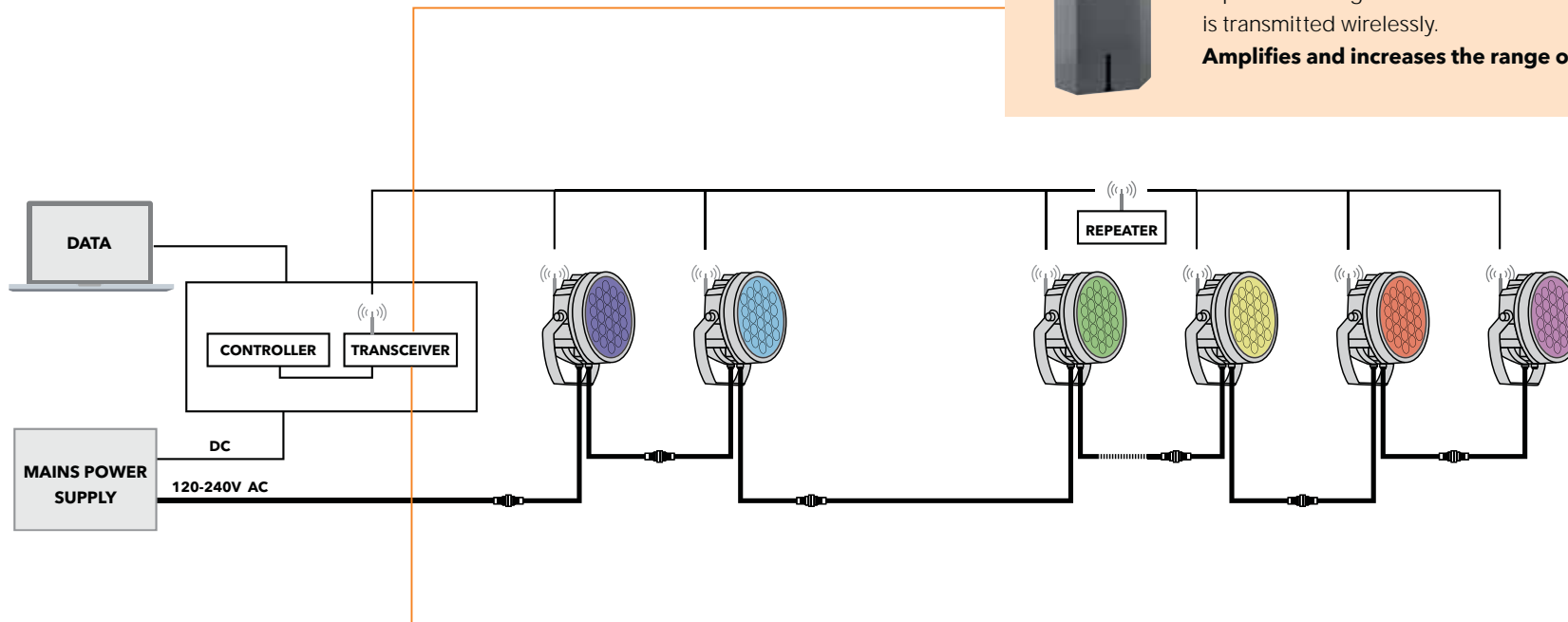
For applications with 50 or more projectors, we recommend using the bi-directional DMX controller*.

* Necessary when installing external sensors



Wiring schematic for wireless system

FLC200-CC



In the wireless system, **transceivers** and **repeaters** replace DMX signal cables. Colour control information is transmitted wirelessly.

Amplifies and increases the range of the DMX signal



The transceiver, which functions as a receiver too, sends the encrypted DMX signal wirelessly to all network subscribers.

Transmission of signal up to 300 m.

💡 **This is advantageous for large outdoor applications as no extra wiring is required.**

Each projector has a built-in transmitter and receiver that converts the wireless signal back to a classic DMX signal, enabling bi-directional communication (RDM).

FLC200-CC colour changer equipped with a **DMX-RF wireless antenna** and a transceiver. DMX-RF **transmits radio frequency at 2.4 GHz band** (harmonised worldwide), this enables **direct communication between luminaire and transceiver.**

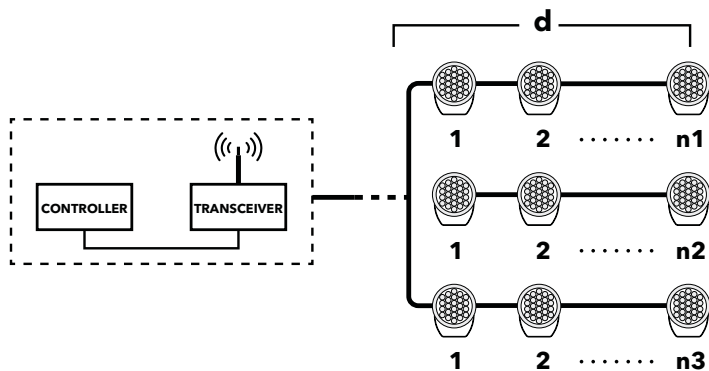


Equipment list for wireless system

FLC200-CC

The maximum distance between the transceiver and the final projector is 300* m (line-of-sight)

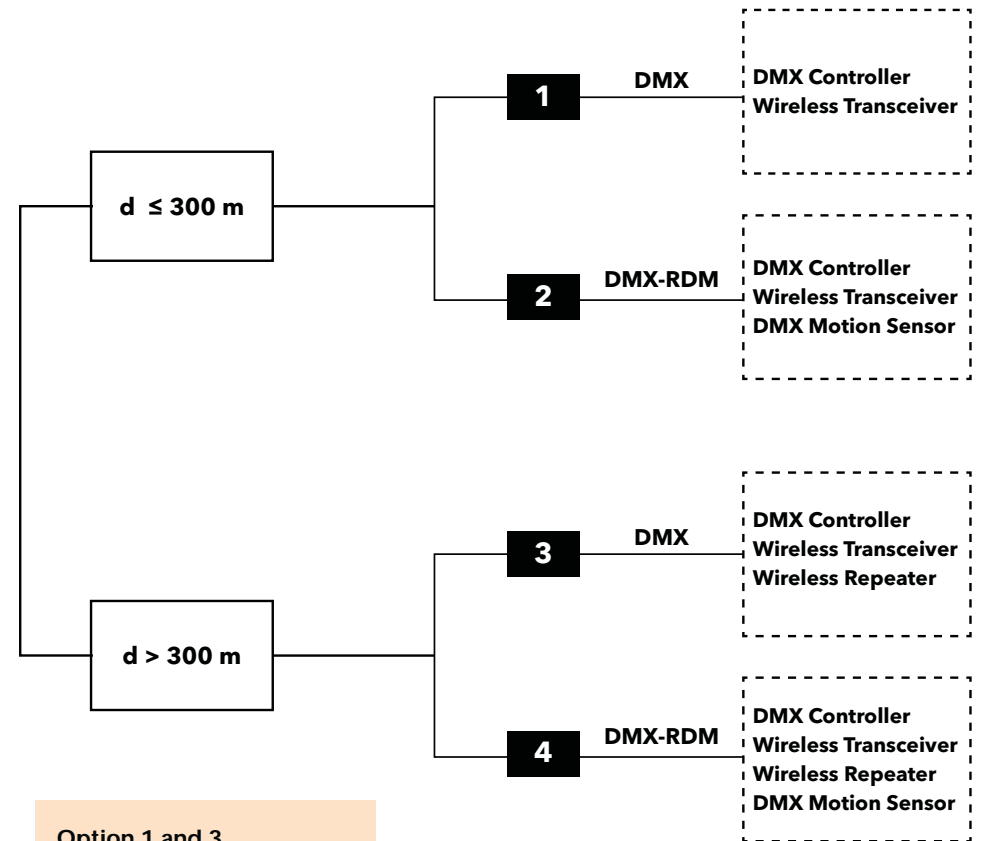
*Trees, buildings may reduce the maximum distance



For projects that demand longer distancing, an optional DMX wirelessrepeater can be used to **amplify and increases the range of the DMX signal**

With a wireless transmitted DMX signal - no mirroring can occur and no termination plug is needed.

Distance	Option	Equipment List
----------	--------	----------------



Option 1 and 3
Use a unidirectional DMX controller

Option 2 and 4
Use a bi-directional DMX controller (RDM ready)

we-ef

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