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FX 48V
Track Series

Product Guide

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Sharing new knowledge.

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Contents

The endless possibilities of a 48V track system

The FX 48V Track Series knows no bounds when it comes to illumination capabilities. With a variety of compatible luminaires, diverse in sizes, finishes and optics, you have the option to mix and match from the narrowest to a wide beam angle. As a 48V track system, the FX allows swift installations through magnetic connectors, eliminating the need for tools. The innovative lighting solution provides versatility from its modular range while guaranteeing safety with the low DC voltage. At 48V, the FX Series is safe to touch (SELV), so you can simply plug and play with suitable luminaries to create the ideal lighting environment. Perfect for wall and ceiling applications, the FX Track opens the possibilities for creative lighting design in any project, from residential to commercial.

A Comprehensive Luminaire Range

THE DEFINITIVE SUITE OF 48V LUMINAIRE

Spotlight

Perfect for minimal and contemporary settings, the spotlight is an all-rounder solution with diverse applications. Complementing its adaptable nature, the FX Spotlight is ideal in its ability to provide concentrated and focused illumination that can rotate in all directions.

Darklight

Engineered with excellent glare control capabilities, the Darklight is low glare, unobtrusive and discreet, perfect for projects that demand visual comfort while delivering optimal light output.

Wallwasher

Paint your walls with the soft illumination from the FX Wallwasher. The luminaire works to add visual interest to any space through an even spread of light, accentuating wall surfaces and textures. Designed with flexibility, the Wallwasher is available in two distinct sizes.
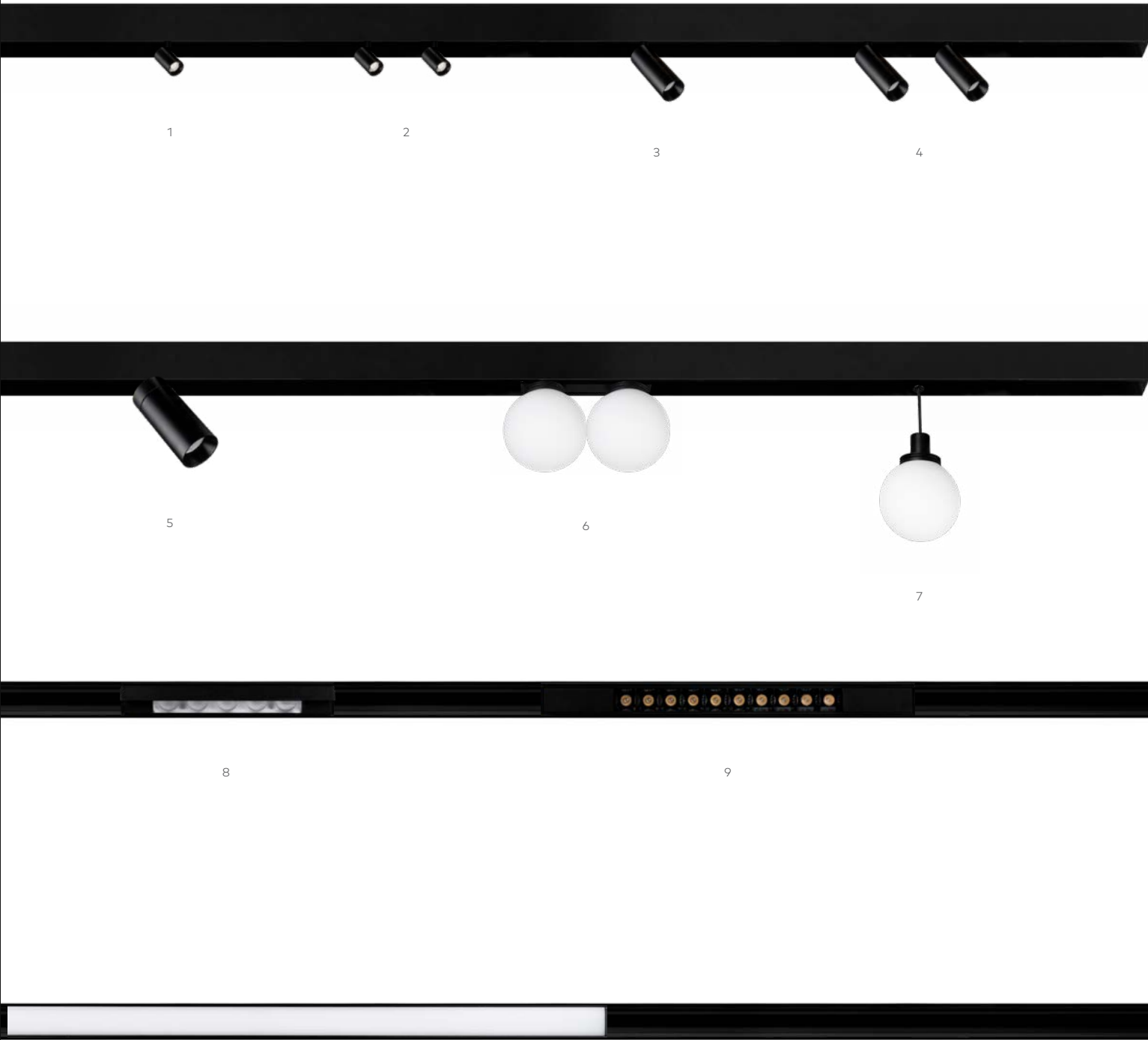
Linear

Follow the lines with this linear profile range. The FX Linear Light emanates a continuous flow of illumination, allowing creative geometric play with light to create dynamic patterns on wall and ceiling surfaces.

Orb

With 360° of gentle illumination, the Orb can be mounted or suspended in a setup of single or double glass spheres. The Orb makes for a stunning feature in any space as a modern addition to the range.

| 1 | S26 Single Spotlight |
2	S26 Double Spotlight
3	S40 Single Spotlight
4	S40 Double Spotlight
5	S60 Single Spotlight
6	R100 Double Orb Light
7	P100 Orb Pendant
8	W02 Wallwasher
	W03 Wallwasher
9	D02 Darklight
	D03 Darklight
10	L05 Linear Light
	L11 Linear Light

Actual Size
43x26mm

Enter the world of miniaturised luminaires

Every effort was made to create a spotlight collection that could bear the name "miniature". The latest optics, miniaturised DALI technology and refined materials have been used to create the FX spotlight variations. With the freedom that only a clip-in track solution can offer, these petite luminaires can now be added, removed or adjusted whenever and wherever needed. Ideal for a minimal aesthetic, where luminaire design should remain unobtrusive, these miniaturised fixtures come refined like never before. Perfecting the balance between size and luminous flux, the FX Spotlight provides a clean aesthetic while ensuring optimal visual comfort and minimal glare from its compact form.
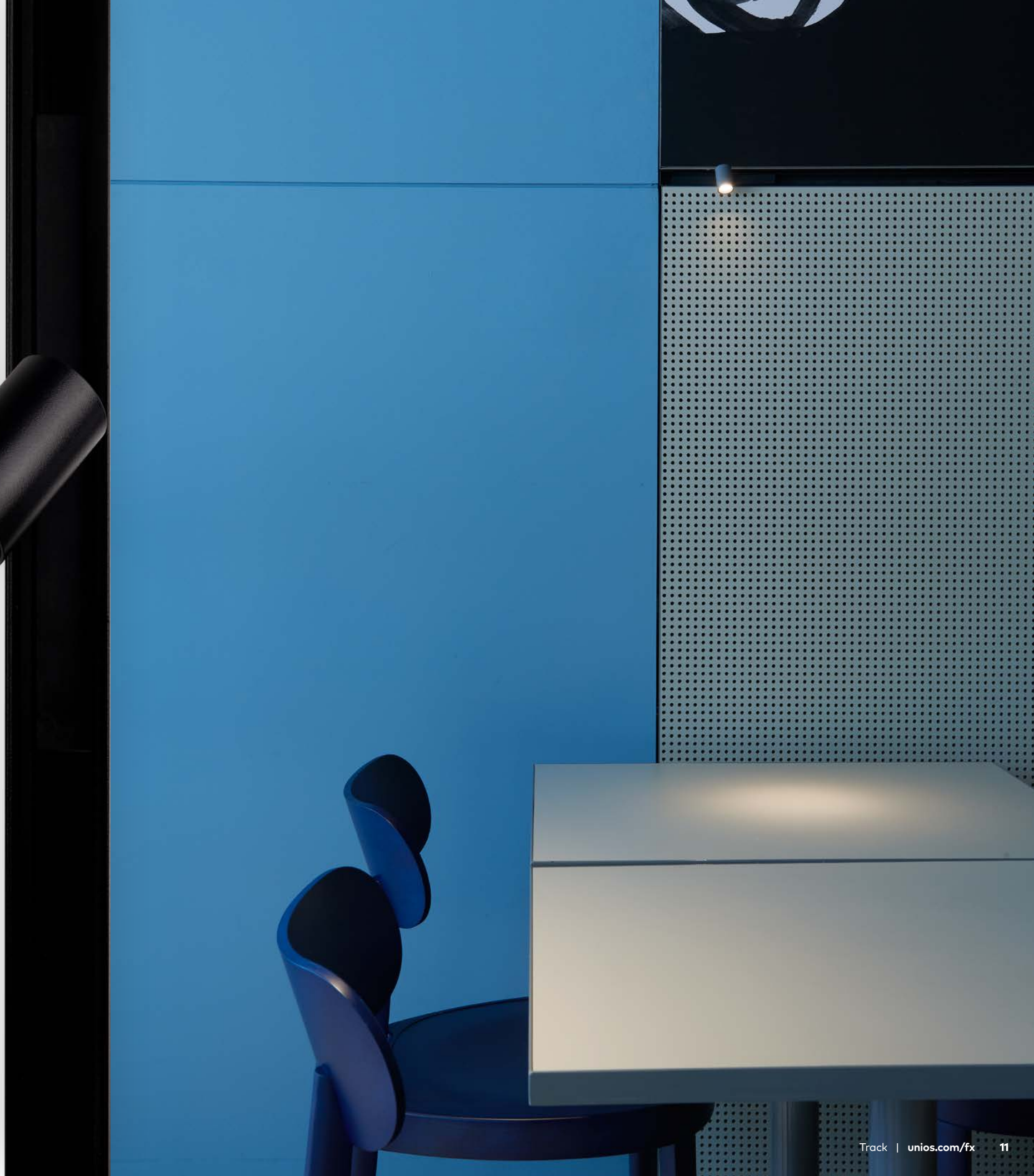
Mounting

With trimless recessed, surface mounted and suspended options available, the FX 48V Track Series is the perfect example of adaptable and flexible architectural lighting. These three mounting options allow for even more versatility and personalisation to contemporary environments.

Trimless Recessed

Draw lines through space by running the FX Track across walls and ceilings. With the FX Recessed option, multiple shapes can take form. Designed with a trimless aesthetic, the track sits flush into surfaces while creating seamless lines of light.

Surface Mounted

The surface-mounted variation of the FX 48V Track is simple in installation and ideal for projects that desire a sleek and elegant aesthetic. This surface-mounted solution will introduce shapes to surface planes while illuminating and emphasising architectural elements.

Suspended

The FX Suspended is ideal for design applications with elevated ceiling heights or in occasions where a linear pendant appearance is desired. Create a customised suspended pendant track system by mixing and matching the FX linear profiles, wallwashers, orb lights, spotlights and darklights.

Add a layer of ambience with the FX 48V Indirect Track

Designed to cast light upwards, the FX Indirect Track brings brightness into the space via light reflections on the ceiling. This indirect light source seamlessly complements the direct illumination provided by FX Spotlight, Wallwasher, Darklight, Linear Light or Orb fixtures, introducing layers of depth and visual interest to the space.

With the FX Indirect Track, there's added flexibility in how a space may be perceived. When undertaking activities that require focus, the FX Darklight or Spotlight meet task lighting needs, while the FX Indirect adds ambience, subtly brightening the area. In times of leisure and comfort, the FX Indirect assumes the role of a primary light source, as it is low glare with adjustable brightness to build a gentle and relaxing ambience.

A standard DALI track mounted luminaire

An FX 48V DALI track mounted spotlight

Track mounted DALI without the bulk

Traditionally, DALI track mounted luminaires would require a sizable gearbox to house the driver. The FX 48V Track Series forgoes the need to have a gearbox by embedding the DALI componentry directly into the track adaptor. The result is a DALI track mounted luminaire that is visually indiscernible compared to a standard track mounted luminaire. This miniaturisation of DALI componentry has been accomplished through Tridonic DALI DC-String technology, reducing the standard 4-wires required for DALI to 2. Achieve all the benefits of DALI control without any of the bulk with the FX 48V Track Series.

↑
A comparison between a standard track mounted luminaire (top) and a FX 48V track mounted spotlight (bottom)

DALI DC-String for more control than ever

Tridonic DALI DC-String technology allows 48V power and control signals to pass through the same circuit while physically separating the DALI bus from the FX Track. This system reduces the number of conductors required in the FX Track components and enables individual luminaire control on the same circuit. The remote 48V DC-String power supply is available in 75W and 150W. It delivers all the control benefits of DALI and still retains the Safety Extra Low Voltage (SELV) classification of the track.

	1-10V Dimming	**DALI DC-String** Technology	**Casambi** Bluetooth
Mounting Compatibility	Recessed, Surface Mounted, Suspended	Recessed, Surface Mounted, Suspended	Recessed, Surface Mounted, Suspended
Voltage	48V Safe to touch	48V Safe to touch	48V Safe to touch
Dimming Control Location	Remote	Remote, In-Track	In-Track
Additional Wiring	Required	Required	Not Required
Max Driver Capacity	720W	150W	720W
Luminaire Compatibility	All FX 48V luminaire range	All FX 48V luminaire range	All FX 48V luminaire range except for S26 Spotlight
Availability	Stocked	Assembled	Assembled

1-10V

2 Power Cables, 2 Dimming Cables

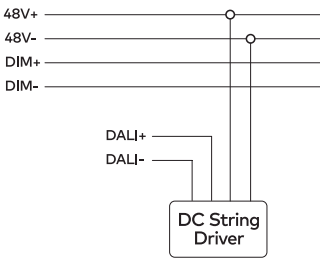Allows for basic dimming control of the entire track as a single group

Polarised dimming
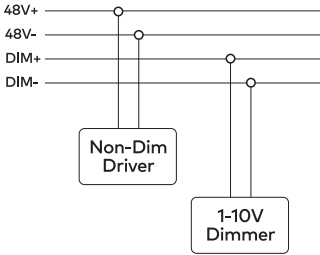
DALI DC-String

2 Power Cables

Each luminaire on the track can be individually addressed and controlled
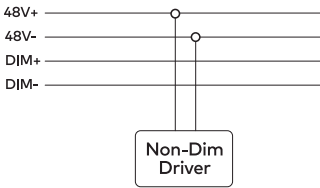
Non-polarised dimming

Casambi

2 Power Cables

Individual and/or grouped control of luminaires via the Casambi app

Non-polarised dimming

1-10V Dimming and polarity

As the FX 48V luminaires come standard as 1-10V dimmable, the track system must accommodate for these dimming channels. Consequently, there is a DIM+ and DIM- side, which is labelled along the inside of the track. Each luminaire must be installed into the system with the right orientation for the dimming to function correctly. A 1-10V analogue dimming module can be wired directly to the track through the Live Power Feed.

DALI DC-String

Tridonic DALI DC-String technology allows 48V power and control signals to pass through the same circuit while physically separating the DALI bus from the FX Track. This system reduces the number of conductors required in the FX Track components and enables individual luminaire control on the same circuit. The remote 48V DC-String power supply is available in 75W and 150W. It delivers all the control benefits of DALI and still retains the Safety Extra Low Voltage (SELV) classification of the track.

Casambi

The FX 48V luminaires operate seamlessly through Casambi, offering individual luminaire control without the need for a complex control system. Each FX luminaire features an in-track Casambi driver, eliminating the need for any additional wiring for dimming control. The track and luminaire system can be effortlessly managed and commissioned via the user-friendly Casambi app, allowing users to create personalised scenes, set up automation, and configure luminaire groupings.

Accessories

The FX 48V Track comes in three key types: Track and accessories, mechanical joiners and electrical components. See how it all works together with each component colour coded as below:

Track and Accessories

Accessories for mounting, end caps and track covers available for track.

Mechanical Joiners

Components to create shapes and joining tracks together.

Electrical Components

Electrical components used to power the whole configuration.

Surface Mounted/Suspended Track & Accessories
FX 48V Surface Track
FX Surface End Cap
FX Stainless Steel Suspension Wire

Trimless Recessed Track & Accessories
FX 48V Trimless Recessed Track
FX Trimless Recessed Mounting Brackets
FX Recessed End Cap

Accessories
FX Track Cover

Surface Mechanical Joiners
FX Surface Mechanical Track Joiner
FX Surface Mechanical L Joiner
FX Surface Mechanical Ceiling to Wall L Joiner

Trimless Recessed Mechanical Joiners
FX Trimless Recessed Mechanical Track Joiner
FX Trimless Recessed Mechanical L Joiner
FX Trimless Recessed Mechanical Ceiling to Wall L Joiner
FX Trimless Recessed Mechanical T Joiner
FX Trimless Recessed Mechanical Cross Joiner

Power Feeds
FX 48V Live Power Feed
FX 48V Suspended Canopy Kit

Power Connectors
FX 48V Straight Power Connector
FX 48V L Power Connector
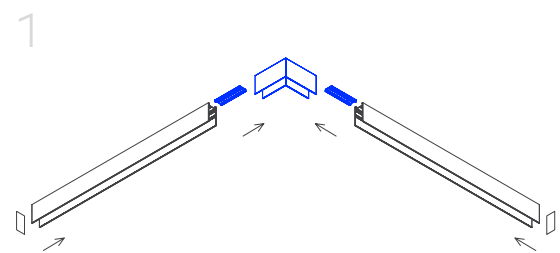
1
Use Mechanical Joiners to join two tracks together
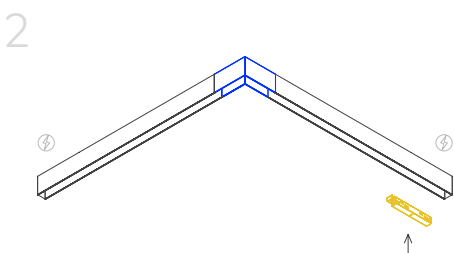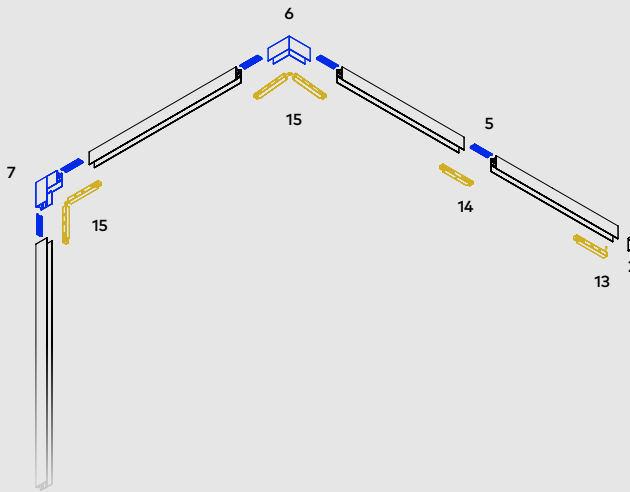
2
Use Live Power Feed to connect to power
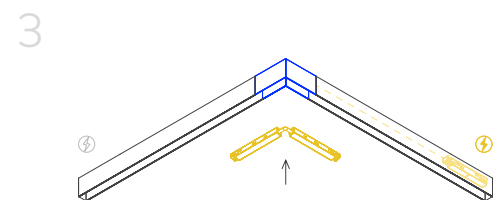
3
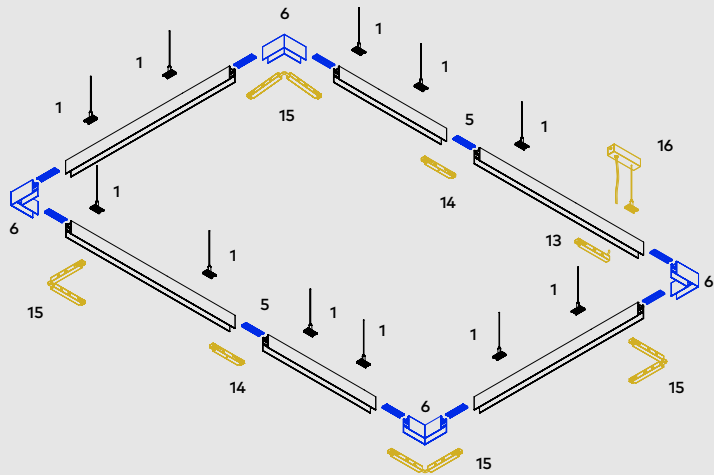*Use Power Connectors to continue power to another track*
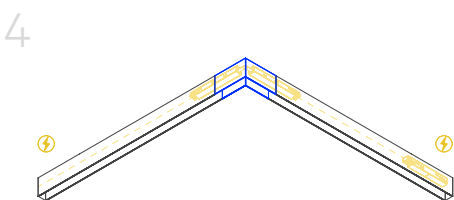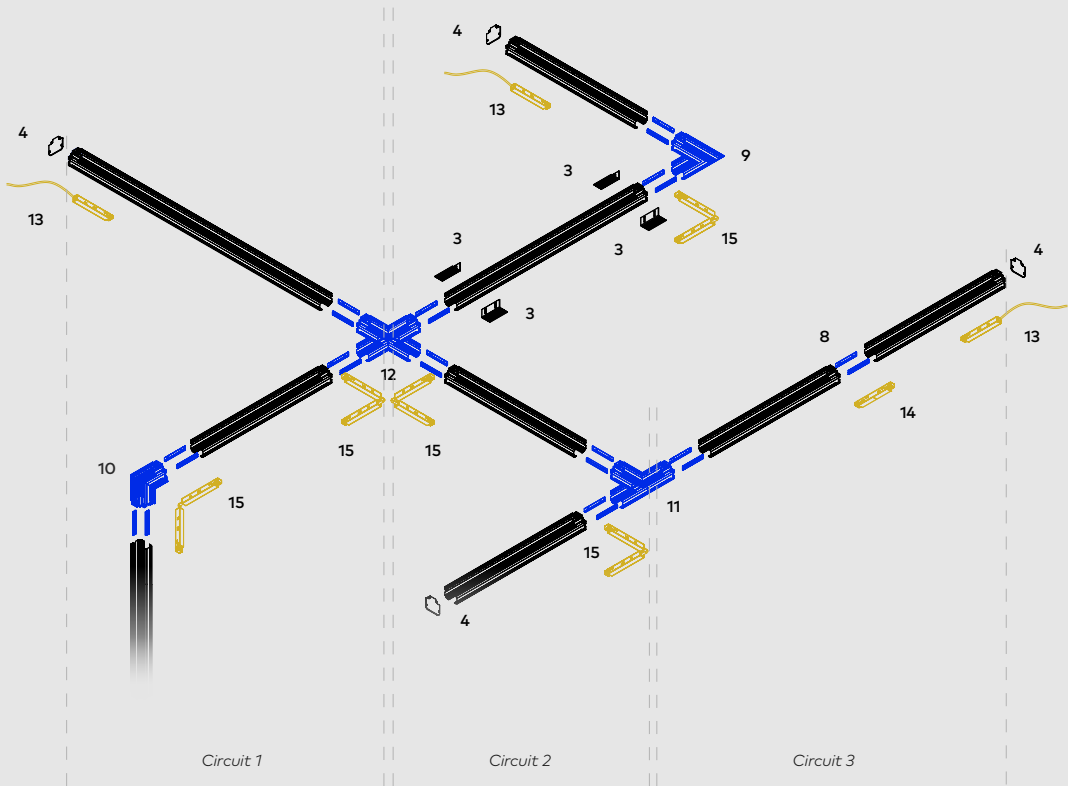
4
The configuration is now powered throughout

Surface Mounted Track

Suspended Track

Trimless Recessed

Circuit 1   *Circuit 2*   *Circuit 3*

Track and Accessories
1   FX Stainless Steel Wire
2   FX Surface End Cap
3   FX Trimless Recessed Mounting Brackets
4   FX Trimless Recessed End Cap

Mechanical Joiners
5   FX Surface Mechanical Track Joiner
6   FX Surface Mechanical L Joiner
7   FX Surface Mechanical L Joiner (Ceiling to Wall)
8   FX Trimless Recessed Mechanical Track Joiner
9   FX Trimless Recessed Mechanical L Joiner
10 FX Trimless Recessed Mechanical L Joiner (Ceiling to Wall)
11 FX Trimless Recessed Mechanical T Joiner
12 FX Trimless Recessed Mechanical Cross Joiner

Electrical Components
13 FX 48V Live Power Feed
14 FX 48V Straight Power Connector
15 FX 48V L Power Connector
16 FX 48V Suspended Canopy Kit

Note: Both mechanical joiners and power connectors are required to complete a track set-up.

Building the FX configuration

Follow the steps below to get started on your FX 48V Track configuration:

1 Track and Mounting Accessories

Select the track based on the desired mounting application along with suitable track mounting accessories and end caps that are available.

For trimless track, ensure that space for trimless configurations are considered in the build plans. Trimless track can not be installed in locations where there are solid objects located in the path of the track.

For suspended installations ensure that suspension points are spaced at a maximum of 1000mm apart.

2 Mechanical Joiners

Choose from a straight, L, T and Cross (pending on the track selection) mechanical joiners to create the desired shape of your track configuration.

Ensure that an L Ceiling to Wall Joiner is selected for locations requiring the track to transition from ceiling to wall.

Please note luminaires are not able to be installed at mechanical joins

3 Electrical Components

Select the electrical components required. Every configuration will need a Live Power Feed and power connectors on each track to maintain electrical continuity.

The separated physical and electrical joiner components allow the isolation/separation of electrical circuits in the same configuration.

Power Feed and Connectors are universal and can be used for both surface and trimless recessed tracks.

Configurations with T and Cross mechanical joiners will require multiple Live Power Feeds.

4 Luminaires

Select the luminaires from the FX 48V luminaire range. The FX Series allow combinations of luminaires in a single track for creative applications.

See the product general specification sheet for the complete list of FX 48V luminaire range.

For 1-10V dimmable applications, ensure that the polarity of luminaire aligns with the polarity of the Live Power Feed.

5 Drivers

Select the 48V driver for your configuration.

Use this simple formula to see if your power source is suitable for light requirements (Note: It is recommended to have at least 20% head room for the driver to avoid triggering the overcurrent protection):

Number of fittings x Fitting Wattage x 1.2 = Driver Wattage Required

6 Dimming and Smart Control

Select between 1-10V and DALI dimming. Casambi can be added for dimming flexibility with minimal installation cost as it eliminates the need for wall dimmers and a DALI control system.

1-10V dimming requires an extra 2-core cable from the 48V Live Power Feed to the dimmer which needs to be considered prior to installation

DALI dimming and Casambi allows the individual control of luminaires.

① S26 Single Spotlight

② S40 Single Spotlight

③ S60 Single Spotlight

④ S26 Double Spotlight

⑤ S40 Double Spotlight

		LED Power	Lumens (at 3000K)	Beam	Weight	UGR	SDCM
①	S26 Single Spotlight	2W (700mA)	103lm	12° | 20°	100g	<16	≤3
②	S40 Single Spotlight	11W (350mA)	761lm	18° | 33°	300g	<10	≤2
③	S60 Single Spotlight	18W (500mA)	1652lm	24° | 36°	500g	<10	≤2
④	S26 Double Spotlight	4W (700mA)	2x 103lm	12° | 20°	140g	<16	≤3
⑤	S40 Double Spotlight	22W (350mA)	2x 761lm	18° | 33°	500g	<10	≤2

Key Information

Mounting	48V Track
Finish	■ Textured Black
	□ Textured White
	■ Textured Black/Gold
	□ Textured White/Gold
	■ Textured Black/White
	□ Textured White/Black
LED CCT	■ 2700K
	■ 3000K
	■ 4000K
Warranty	5 Year

Design

Product Family	FX 48V
Adjustability	355° Rotation, 90° Tilt
Material	Powder Coated Aluminium
IP Rating	IP20
Class Rating	Class III

Performance

Lumen efficacy	Up to 90lm/W
CRI (Ra/R9)	90+ (R9: >50)
Lifetime (Ta 25°C)	>60,000h L80B10
Ambient Temperature Range	10°- 30°C
COI Compliance model requirements	4000K

Driver

1-10V	In-Track
DALI (DC-String)	In-Track
Bluetooth	In-Track

Driver Notes

S26 Spotlights are not bluetooth compatible.

Available Accessories

Honeycomb Lens (for reduced glare)

Available Accessories

Honeycomb Lens (for reduced glare)

18°   33°

D02 Darklight

D03 Darklight

		LED Power	Lumens (at 3000K)	Beam	Weight
❶	D02 Darklight	8W (500mA)	614lm	40°	160g
❷	D03 Darklight	15W (500mA)	1180lm	36°	220g

Key Information

Mounting	48V Track
Finish	■ Textured Black □ Textured White/Black
LED CCT	■ 2700K ■ 3000K ■ 4000K
Warranty	5 Year

Design

Product Family	FX 48V
Material	Powder Coated Aluminium
IP Rating	IP20
Class Rating	Class III

Performance

Lumen efficacy	Up to 83lm/W
CRI (Ra/R9)	90+ (R9: >50)
UGR	<10
Lifetime (Ta 25°C)	>60,000h L80B10
Ambient Temperature Range	10°- 30°C
SDCM	≤3
COI Compliance model requirements	4000K

Driver

1-10V	In-Track
DALI (DC-String)	In-Track
Bluetooth	In-Track

36°

W02 Wallwasher

W03 Wallwasher

		LED Power	Lumens (at 3000K)	Beam	Weight
❶	W02 Wallwasher	11W (700mA)	437lm	95°	210g
❷	W03 Wallwasher	21W (700mA)	944lm	70°	300g

Key Information

Mounting	48V Track
Finish	■ Textured Black □ Textured White
LED CCT	■ 2700K ■ 3000K ■ 4000K
Warranty	5 Year

Design

Product Family	FX 48V
Material	Powder Coated Aluminium
IP Rating	IP20
Class Rating	Class III

Performance

Lumen efficacy	Up to 47lm/W
CRI (Ra/R9)	90+ (R9: >50)
Lifetime (Ta 25°C)	>60,000h L80B10
Ambient Temperature Range	10°- 30°C
SDCM	≤3
COI Compliance model requirements	4000K

Driver

1-10V	In-Track
DALI (DC-String)	In-Track
Bluetooth	In-Track

77°

L05 Linear Light

L11 Linear Light

		LED Power	Lumens (at 3000K)	Beam	Weight
❶	L05 Linear Light	13W (700mA)	879lm	115°	320g
❷	L11 Linear Light	25W (500mA)	1711lm	115°	610g

Key Information

Mounting	48V Track
Finish	■ Textured Black □ Textured White
LED CCT	■ 2700K ■ 3000K ■ 4000K
Warranty	5 Year

Design

Product Family	FX 48V
Material	Powder Coated Aluminium
IP Rating	IP20
Class Rating	Class III

Performance

Lumen efficacy	Up to 73lm/W
CRI (Ra/R9)	90+ (R9: >50)
UGR	<22
Lifetime (Ta 25°C)	>60,000h L80B10
Ambient Temperature Range	10°- 30°C
SDCM	≤3
COI Compliance model requirements	4000K

Driver

1-10V	In-Track
DALI (DC-String)	In-Track
Bluetooth	In-Track

115°

R100 Double Orb Light

P100 Orb Pendant

		LED Power	Lumens (at 3000K)	Beam	Weight
❶	R100 Double Orb Light	12W (700mA)	1160lm	270°	550g
❷	P100 Orb Pendant	6W (700mA)	588lm	270°	400g

Key Information

Mounting	48V Track
Finish	■ Textured Black □ Textured White
LED CCT	■ 2700K ■ 3000K ■ 4000K
Warranty	5 Year

Design

Product Family	FX 48V
Material	Powder Coated Aluminium
IP Rating	IP20
Class Rating	Class III

Performance

Lumen efficacy	Up to 89lm/W
CRI (Ra/R9)	90+ (R9: >50)
Lifetime (Ta 25°C)	>56,000h L70B10
Ambient Temperature Range	10°- 30°C
SDCM	≤3
COI Compliance model requirements	4000K

Driver

1-10V	In-Track
DALI (DC-String)	In-Track
Bluetooth	In-Track

270°
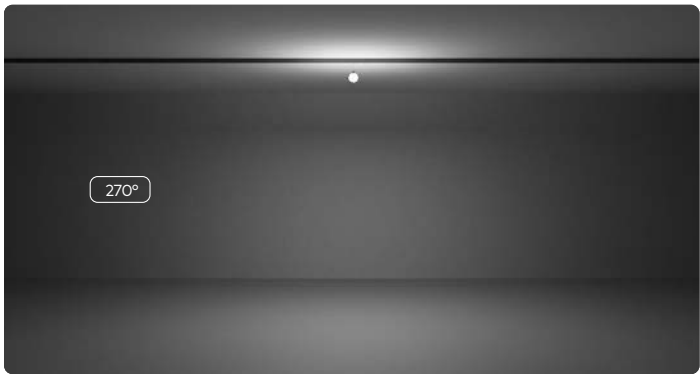
		Indirect LED Power	Lumens (at 3000K)	Length	Beam	Maximum Load Bearing
①	FX 48V Indirect Suspended Track	5W/m (24V DC)	245lm/m	1000mm, 2000mm, 3000mm	100°	20kg/m
		10W/m (24V DC)	480lm/m			
		15W/m (24V DC)	701lm/m			
		20W/m (24V DC)	930lm/m			

Key Information

Mounting	Ceiling Suspended
Track Mount	48V Low Voltage
Finish	■ Textured Black ☐ Textured White
Diffuser	☐ Opal Diffuser
Strip Compatibility	Eclipse EC10 (10mm)
LED CCT	■ 2700K ■ 3000K ■ 4000K
Warranty	3 Years

Design

Product Family	FX 48V
Material	Powdercoated Aluminum, PMMA Diffuser
IP Rating	IP20
Class Rating	Class III
Cable Length	3 metres
No. of LED's	120/m

Performance

Lumen efficacy	Up to 69lm/W
CRI (Ra/R9)	90+ (R9: >50)
Lifetime (Ta 25°C)	>54,000h L80B10
Ambient Temperature Range	10°- 30°C
SDCM	≤3

Driver

Non-Dim	Remote
DALI	Remote
Bluetooth	Remote

Driver notes

Two drivers required to operate. 24V DC Driver for the indirect lighting and 48V DC for the track.

Power Feeds

FX 48V Live Power Feed

FX 48V 3m Suspended Canopy Kit

Available Accessories

FX Track Cover Plate

Notes

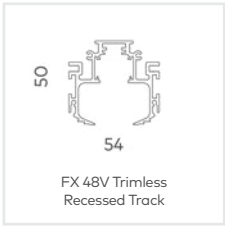*Remote 48V power supply required for all application. Mains voltage strictly cannot be connected to track.*

Track

FX 48V Surface Track

54
26

Mechanical Joiners

FX Surface Mechanical L Joiner

52 / 26 / 100 / 100

FX Surface Mechanical Ceiling to Wall L Joiner

100 / 26 / 100 / 52

FX Surface Mechanical Track Joiner

20 / 80

		Length	Maximum Load Bearing
❶	FX 48V Surface Track	1000mm, 2000mm, 3000mm	30kg/m
❷	FX 48V Suspended Track	1000mm, 2000mm, 3000mm	20kg/m

Key Information		Power Feeds	Power Connectors	Available Accessories
Mounting	Ceiling Surface, Ceiling Suspended, Wall Surface	FX 48V Live Power Feed	FX 48V Straight Power Connector	3m FX Stainless Steel Suspension Wire
		FX 48V 3m Suspended Canopy Kit	FX 48V L Power Connector	2x Surface End Cap
Finish	■ Textured Black ☐ Textured White			FX Track Cover Plate
Warranty	5 Years			
Track Mount	48V Low Voltage			

Notes

Remote 48V power supply required for all application. Mains voltage strictly cannot be connected to track.

Power connectors are required for multiple lengths of track to continue power across track configuration.

Surface Mechanical Track Joiners are required for joining surface and suspended track together.
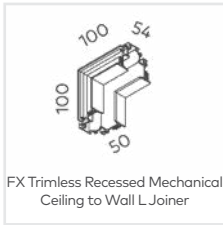

Track
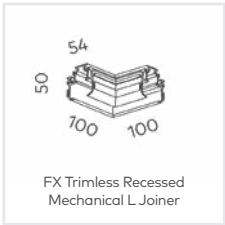
FX 48V Trimless Recessed Track
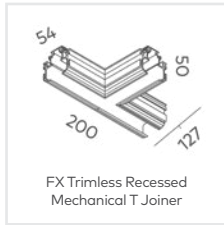
50
54

Mechanical Joiners

FX Trimless Recessed Mechanical L Joiner

50 / 54 / 100 / 100

FX Trimless Recessed Mechanical Ceiling to Wall L Joiner

100 / 54 / 100 / 50

FX Trimless Recessed Mechanical T Joiner

54 / 50 / 200 / 127

FX Trimless Recessed Mechanical Cross Joiner

54 / 50 / 200

2x FX Trimless Recessed Mechanical Track Joiner

20 / 80
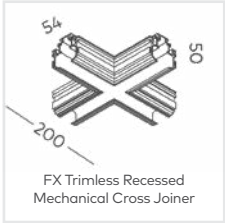
		Length	Maximum Load Bearing
❶	FX 48V Trimless Recessed Track	1000mm, 2000mm, 3000mm	20kg/m

| Key Information		Power Feeds	Power Connectors	Available Accessories
Mounting	Ceiling Recessed, Wall Recessed	FX 48V Live Power Feed	FX 48V Straight Power Connector	2x FX Trimless Recesed Mounting Brackets
Finish	■ Textured Black ☐ Textured White		FX 48V L Power Connector	2x Recessed End Cap
Warranty	5 Years			FX Track Cover Plate
Track Mount	48V Low Voltage			

Notes

Remote 48V power supply required for all application. Mains voltage strictly cannot be connected to track.

Power connectors are required for multiple lengths of track to continue power across track configuration.

Mechanical Track Joiners are required for joining tracks together.
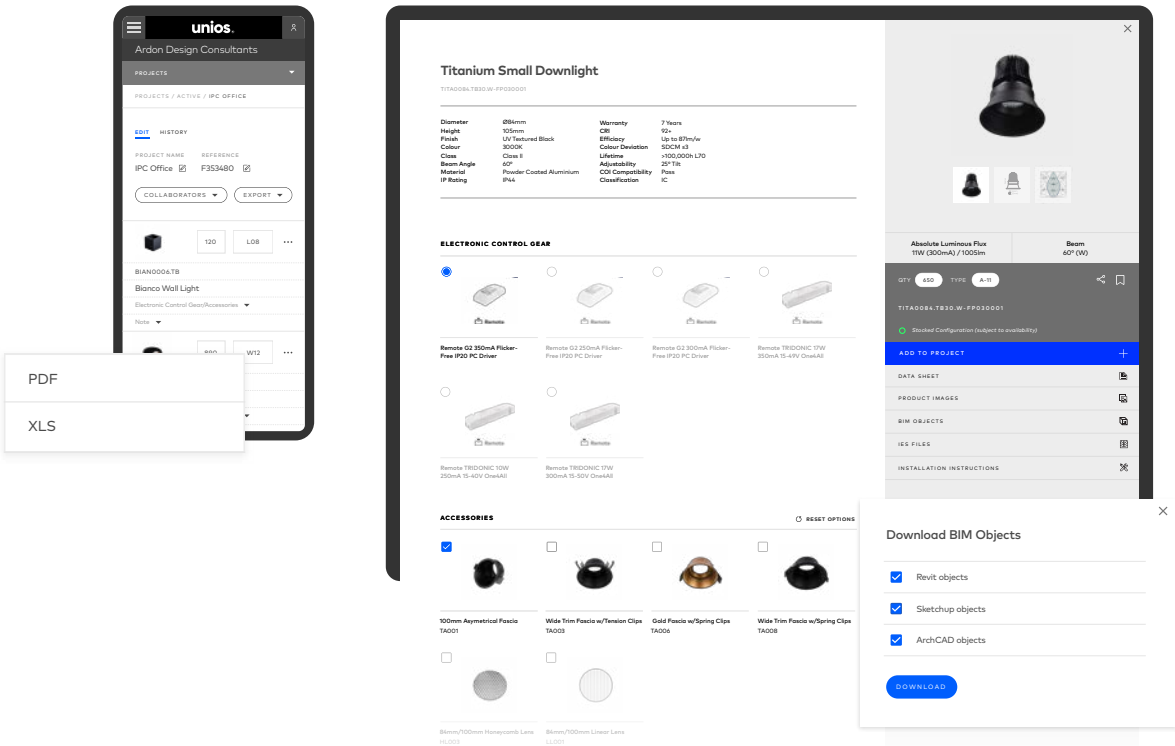
From design to documentation in seconds

Best-in-class product configuration tools

With different design and performance criteria for every project, discovering and configuring the right luminaire needs to be a seamless process. With the Unios Toolbox, you can filter through thousands of variations in seconds.

Export customised PDF and Excel lighting schedules

Project lighting can quickly get complex and time-consuming. We've developed a suite of tools to allow you to build a luminaire schedule, export it in PDF or Excel formats and integrate it back into your own project workflow.

More data accessibility than ever before

BIM objects, IES files, customised data sheets and product images are all easily accessible for your project requirements. All product variations are presented with a holistic view of each data point and piece of documentation you may require.

Special Thanks

This publication wouldn't be possible without the ongoing support of our project partners, distributors and photographers who have assisted in providing content.

More Information

For additional technical information and to access our full library, visit **unios.com**. Our library contains a comprehensive database of BIM objects, IES files and product imagery.

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