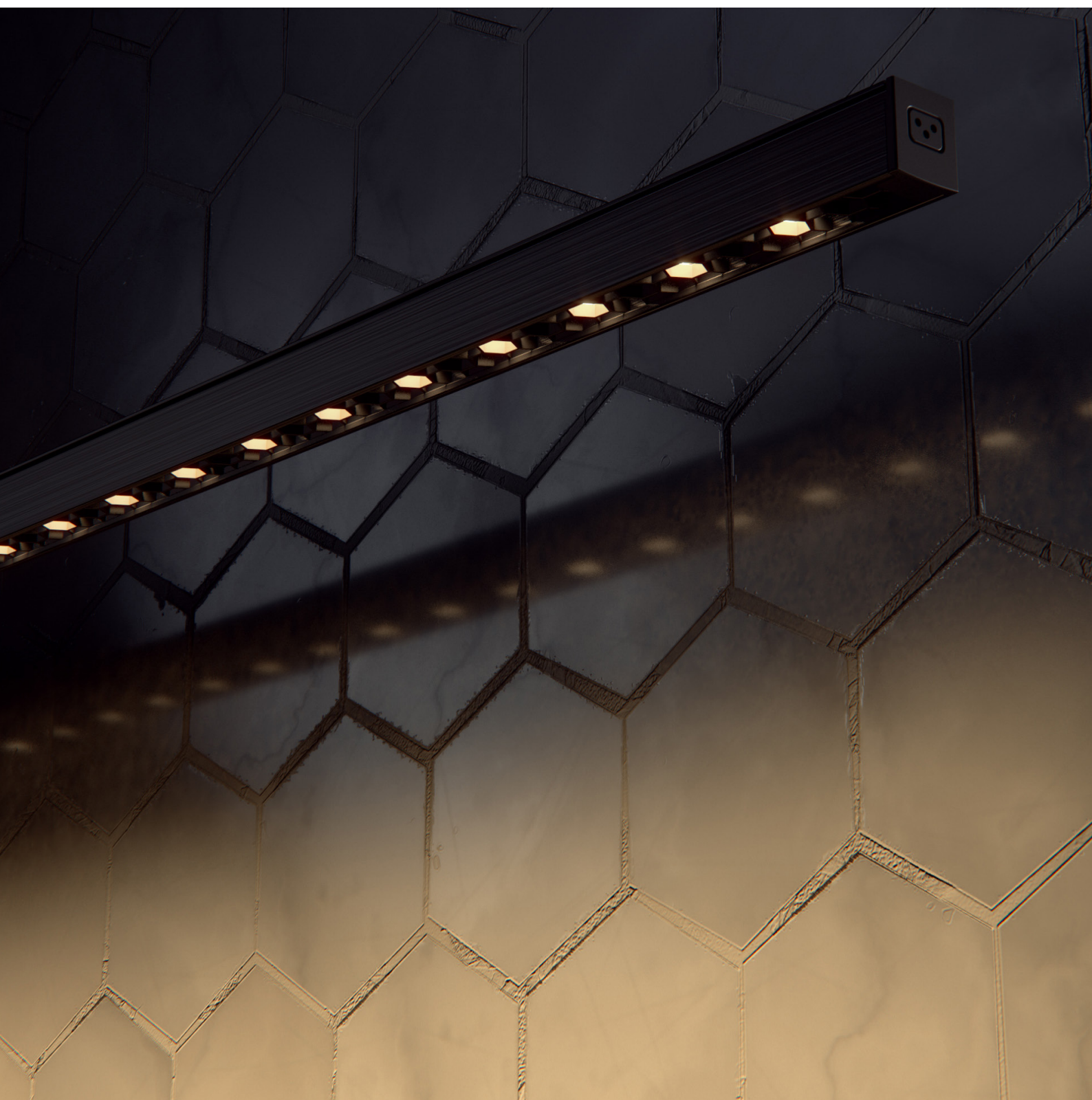# COOLON

RATIO

LED STRIP | STR-RATIO

Ratio is our most elegant product that provides inspiring directional light with glare control. Ratio's utility is further enhanced by the availability of 2 wattages (11W and 23W), multiple optics and various lengths.

With no compromise on aesthetics, it is easy to customise the perfect lighting effect for the most demanding of lighting projects.
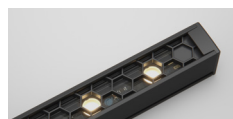
POWER

11W
11W / metre

LL

HL

23W
23W / metre

LL

HL

COLOUR TEMPERATURE
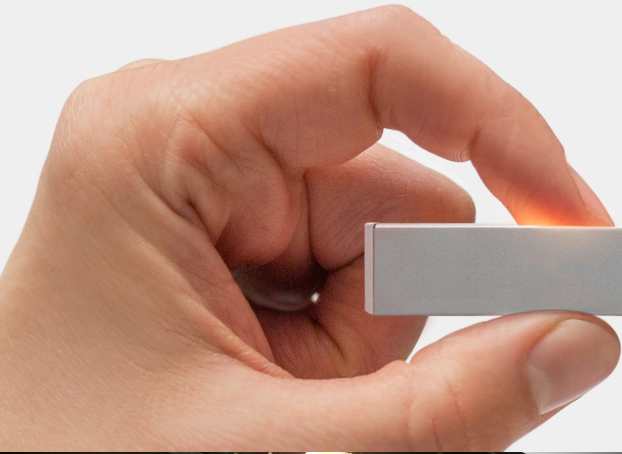
2700K	3000K	3500K	4000K

COMPACT SIZE

Reduced form factor can provide freedom and simplicity to a designer. At only 20x22.5mm, Ratio is the smallest LED strip/profile offered with optical and glare control.

GLARE CONTROL

Visual comfort is key with Ratio, with precisely detailed louvres that integrate perfectly with the optics. Available in Honeycomb Louvre, providing glare control in all directions, or Longitudinal Louvre, ideal where the main viewing angle is from the side.

LONG OPERATING LIFE

Coolon products use the world's most reputable LED manufacturers and the latest available standards to adequately report lumen maintenance. We strive to drive LEDs under their nominal current and use state-of-the-art heat dissipation methods, leading to durable electronics.

VARIOUS CCT & COLOUR BINNING CONSISTENCY

All products are offered in various colour temperatures, and manufactured using tighter bins, ensuring excellent consistency and uniformity.

5 YEARS WARRANTY

Coolon luminaires are covered by a solid comprehensive manufacturer's warranty that covers a range of possible defects and performance parameters throughout the duration of the warranty period.
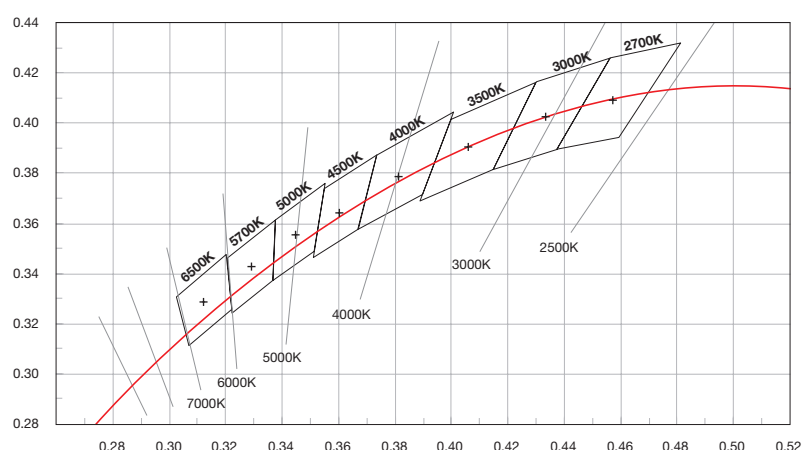
PROUDLY MADE IN AUSTRALIA

Our products are designed and manufactured in Australia. Engineered to perfection, using only the highest quality components and highly skilled labour, each luminaire is assembled and thoroughly tested to ensure that it exceeds the highest standards.

▪ TECHNICAL SPECIFICATIONS

	11W VERSION	23W VERSION
Product Code	STR-RATIO	
Description	Ratio Beam Control LED Strip	
Segment Length (S)	240mm	
Segment Width	10.50mm	
LED Pitch	34.28mm	
LEDs Per Segment	7	
Operating Voltage	24VDC	
Typical Power Consumption per Segment	2.5W per 240mm Segment	5.3W per 240mm Segment
Typical Power Consumption per Metre	11W per metre	23W per metre
Typical Current	115mA per 240mm Segment	230mA per 240mm Segment
Colour Rendering Index (CRI & CCT variations)	90+, Single LED BIN from a 3-step MacAdam ellipse	
Dimmable	1 – 100% range through CTR-DALILOGIC or CTR-DIMMERLOGIC (sold separately)	
Effective Beam Angle	Varies with optics (30° – 50°)	
External Heatsink Required	No	
Ambient Operating Temp	Ta -10°C to 50°C	
Thermal Operating	Yes (Active)	
Reverse Polarity Protection	Yes	
Reported Lumen Maintenance TM21-11 (@ Ts = 85°C, I$_f$ = 700mA)	L70 (17K) > 103,000 hours L90 (17K) > 103,000 hours	
	Ratio max. operating values (@ Ts = 40°C, I$_f$ = 230mA)	
IP Rating	IP40	
Max Continuous Connection Length	Please refer to installation limitations (Page 09)	

▪ COLOUR BINNING

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COOLON

▪ LUMEN / METRE MATRIX

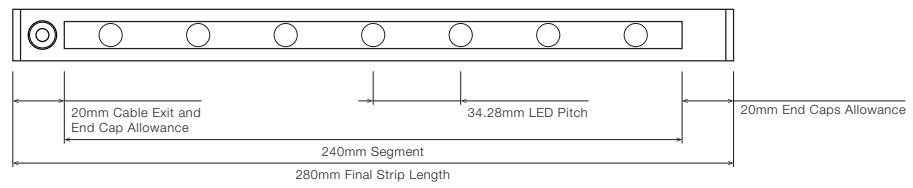| POWER	LUMINOUS FLUX			
11W 11W / metre	2700K CRI	3000K CRI	3500K CRI	4000K CRI
LL Profile (30D Optics)	506 lm / metre	517 lm / metre	NM	528 lm / metre
LL Profile (50D Optics)	539 lm / metre	550 lm / metre	NM	561 lm / metre
LL Profile (O4018D Optics)	418 lm / metre	429 lm / metre	NM	440 lm / metre
HL Profile (30D Optics)	561 lm / metre	572 lm / metre	NM	583 lm / metre
HL Profile (50D Optics)	616 lm / metre	627 lm / metre	NM	638 lm / metre
HL Profile (O4018D Optics)	440 lm / metre	451 lm / metre	NM	462 lm / metre
23W 23W / metre				
LL Profile (30D Optics)	1,035 lm / metre	1,058 lm / metre	NM	1,081 lm / metre
LL Profile (50D Optics)	1,104 lm / metre	1,127 lm / metre	NM	1,150 lm / metre
LL Profile (O4018D Optics)	828 lm / metre	881 lm / metre	NM	874 lm / metre
HL Profile (30D Optics)	1,150 lm / metre	1,173 lm / metre	NM	1,196 lm / metre
HL Profile (50D Optics)	1,265 lm / metre	1,288 lm / metre	NM	1,311 lm / metre
HL Profile (O4018D Optics)	1,035 lm / metre	1,065 lm / metre	NM	1,081 lm / metre

[1] Extrapolated lumen output per metre.

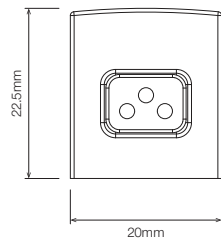[2] Lumen values apply to black and white profile colours.

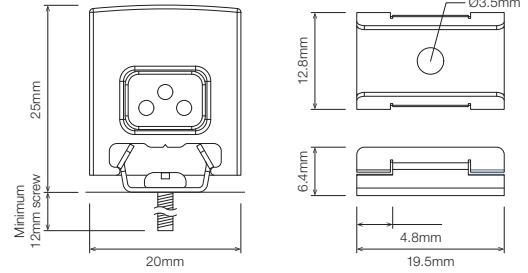✖ : CCT / Profile combination NOT AVAILABLE   NM : Lumen output NOT MEASURED

▪ DIMENSIONS

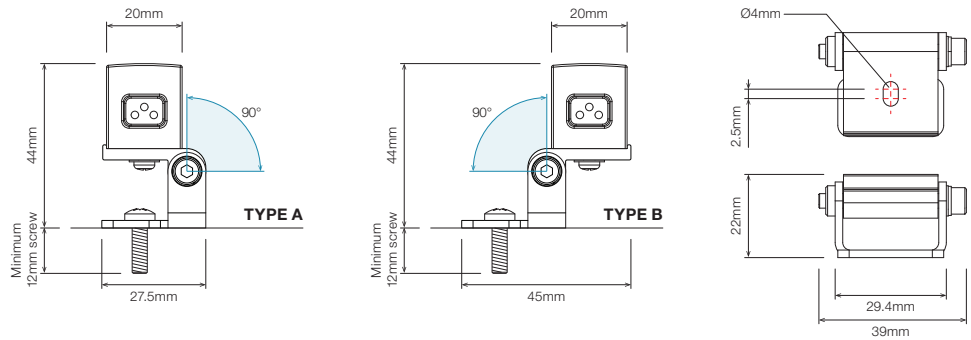For final strip lengths please refer to the "Product Length" table (Page 06).

20mm Cable Exit and End Cap Allowance

34.28mm LED Pitch

20mm End Caps Allowance

240mm Segment

280mm Final Strip Length

STANDARD PROFILE

22.5mm

20mm

WITH STAINLESS STEEL C-CLIP [1]

25mm

Minimum 12mm screw

20mm

Ø3.5mm

12.8mm

6.4mm

4.8mm

19.5mm

ROTATING MOUNTING BRACKET, TYPE A/B ROTATING CLIP [1]

20mm

44mm

Minimum 12mm screw

90°

TYPE A

27.5mm

20mm

44mm

Minimum 12mm screw

90°

TYPE B

45mm

Ø4mm

2.5mm

22mm

29.4mm

39mm

WITH SUSPENSION KIT

3,000mm (adjustable)

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[1] Recommended spacing between Mounting Brackets is maximum 500mm and Mounting Clips is maximum 300mm.

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- ## PRODUCT LENGTH

FULL SEGMENTS (S)	EXACT STRIP LENGTH	END CAP ALLOWANCE	FINAL LENGTH	
1	240mm	add 40mm	280mm	
2	480mm	add 40mm	520mm	
3	720mm	add 40mm	760mm	
4	960mm	add 40mm	1,000mm	
5	1,200mm	add 40mm	1,240mm	
6	1,440mm	add 40mm	1,480mm	
7	1,680mm	add 40mm	1,720mm	
8	1,920mm	add 40mm	1,960mm	[1]
9	2,160mm	add 40mm	2,200mm	[1]
10	2,400mm	add 40mm	2,440mm	[1]
11	2,640mm	add 40mm	2,680mm	[1]
12	2,880mm	add 40mm	2,920mm	[1]
13	3,120mm	add 40mm	3,160mm	[1]
14	3,360mm	add 40mm	3,400mm	[1]

[1] Custom lengths - contact Coolon LED for more information.

⚠ WARNING

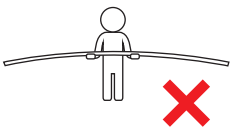Do not bend LED strip when removing from mounting clips.
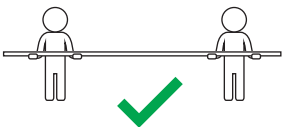
Gently twist LED Strip to remove from mounting clips.

⚠ WARNING
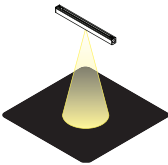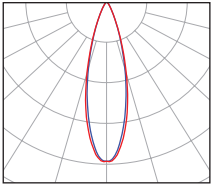
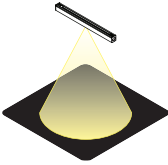PLEASE HANDLE LONG LED STRIPS WITH CARE.
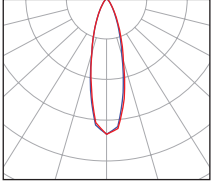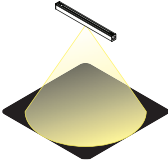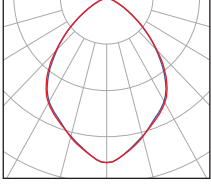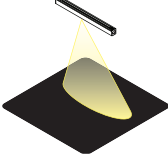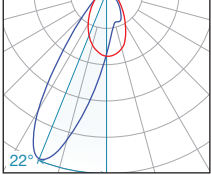
LED Strips must not be bent.

When handling LED Strips, please ensure that they are kept straight.

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- # POLAR
  DISTRIBUTION

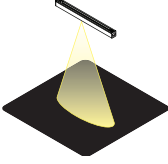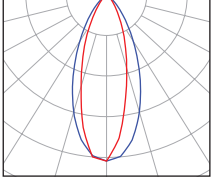| OPTIC		POLAR DISTRIBUTION
30D Medium Beam 30° Beam Angle		
50D Wide Beam 50° Beam Angle		
80D Wide Beam 80° Beam Angle		
O4018D Oval Beam Oval 40° x 18° Beam Angle		
A7030D Asymmetric Beam Asymmetric 70° x 30° Beam Angle		22°

- # DIFFUSER
  / LOUVRE

LL · Longitudinal Louvre

HL · Honeycomb Louvre

- # PROFILE
  COLOUR

BLK · Black (Standard)

WHT · White

CST · Custom Colour [1]

[1] Custom colours available on request.

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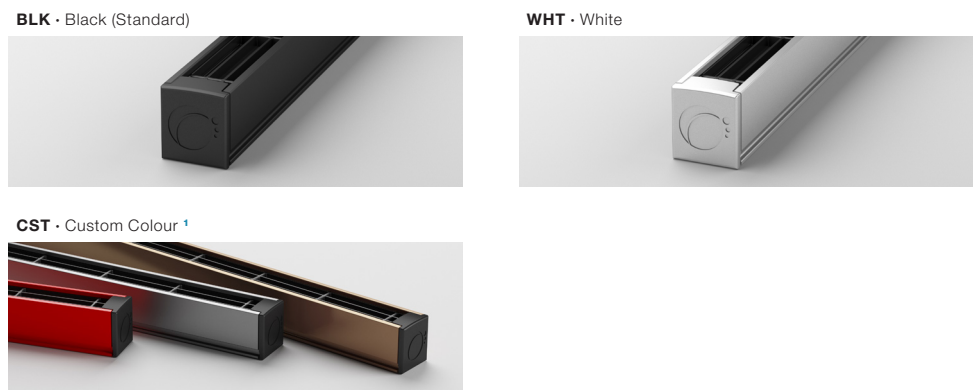
WIRING CONFIGURATION

CONNECTOR TYPE	DRAWING	MALE	FEMALE
WR2.1OS Wire 2+1 Core One Side		● ● ●	
WR2.1BS Wire 2+1 Core Both Sides		● ● ●	● ● ●
CBL2.1OS ¹ Cable 2+1 Core One Side		●	
OC2.1MO Connector 2+1 pin Male Only			
OC2.1MF Connector 2+1 pin Male + Female			
LC2.1MO Locking Connector 2+1 pin Male Only			
LC2.1MF Locking Connector 2+1 pin Male + Female			
SMPLC.1 Sample Type Connector 2.5mm			

▪ Typical loom length for surface mount (WS) 100mm / 250mm.

▪ Typical cable length for suspended applications (WB) 3000mm.

▪ Please consult Coolon for details on extension cable between LED fittings, drivers and power supplies.

¹ Cable from one side (CBL2.1OS) is available as Wire from Back (WB) with Suspension Kit.

WIRING COLOUR CODE	
Red	+ VDC
Black	GND
White	PWM Control

WIRING POSITION

WB - Wire from back

Ideal for fittings installed back-to-back or limited spaces.
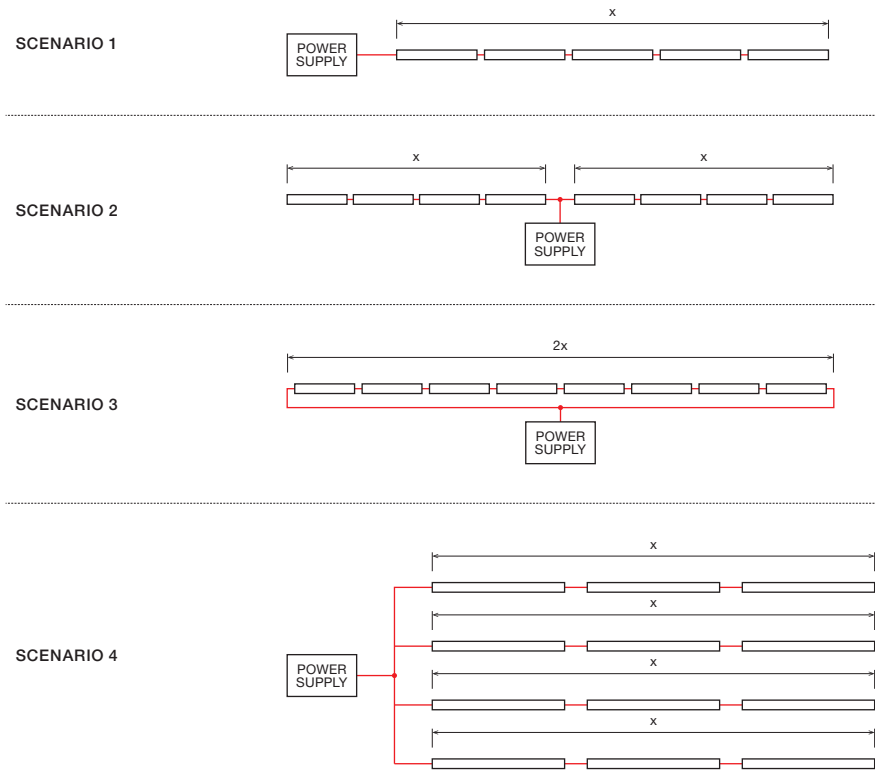
WS - Wire from Side

Ideal for fittings installed individually or vertically.

IP RATING

IP40

Protected against solid objects greater than 1mm. No protection against liquids.

▪ INSTALLATION LIMITS

SCENARIO 1

SCENARIO 2

SCENARIO 3

SCENARIO 4

11W VERSION

MAX. CONTINUOUS CONNECTION LENGTH (X)	CONNECTOR TYPE
12,200 mm	With 2+1 core (WR2.1OS / WR2.1BS)
5,500 mm	With 2+1 pin connectors (OC2.1MO / OC2.1MF / LC2.1MO / LC2.1MF / SMPLC.1)
3,400 mm / Single Fitting	With 2+1 cable (CBL2.1OS)

▪ Please consult Coolon for details on extension cable between LED fittings, drivers and power supplies.

23W VERSION

MAX. CONTINUOUS CONNECTION LENGTH (X)	CONNECTOR TYPE
5,800 mm	With 2+1 core (WR2.1OS / WR2.1BS)
2,500 mm	With 2+1 pin connectors (OC2.1MO / OC2.1MF / LC2.1MO / LC2.1MF / SMPLC.1)
3,400 mm / Single Fitting	With 2+1 cable (CBL2.1OS)

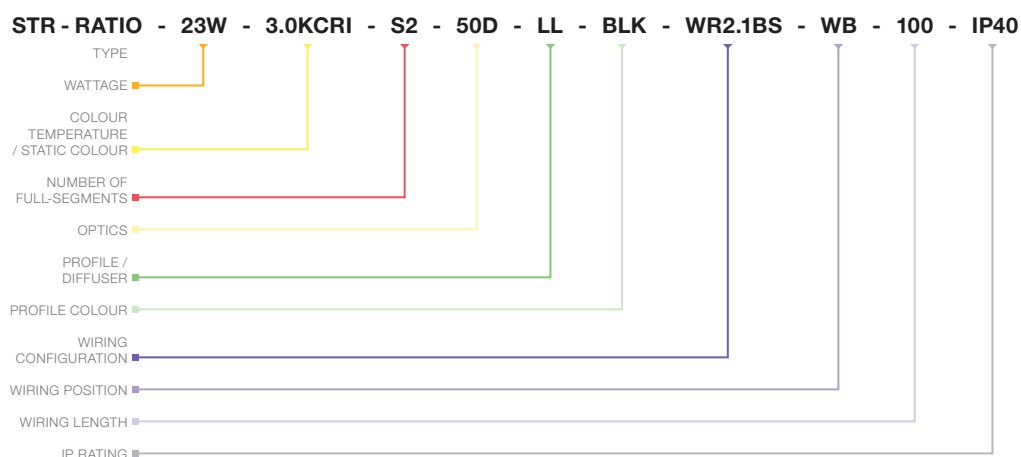▪ Please consult Coolon for details on extension cable between LED fittings, drivers and power supplies.

⚠ WARNING

Avoid connecting multiple power supplies into a single circuit, unless they are specifically designed to do so.

ORDERING EXAMPLE

STR - RATIO - 23W - 3.0KCRI - S2 - 50D - LL - BLK - WR2.1BS - WB - 100 - IP40

- TYPE
- WATTAGE
- COLOUR TEMPERATURE / STATIC COLOUR
- NUMBER OF FULL-SEGMENTS
- OPTICS
- PROFILE / DIFFUSER
- PROFILE COLOUR
- WIRING CONFIGURATION
- WIRING POSITION
- WIRING LENGTH
- IP RATING

WATTAGE	
11W	10.5W per metre
23W	23W per metre

COLOUR TEMPERATURE [1] PAGE 04	
2.7KCRI	2700K CRI 90
3.0KCRI	3000K CRI 90
3.5KCRI	3500K CRI 90
4.0KCRI	4000K CRI 90

PRODUCT LENGTH PAGE 06	
S1	280mm
S2	520mm
S3	760mm
S4	1,000mm
S5	1,240mm
S6	1,480mm
S7	1,720mm
S8	1,960mm
S9	2,200mm
S10	2,440mm
S11	2,680mm
S12	2,920mm
S13	3,160mm
S14	3,400mm

OPTICS PAGE 07	
30D	30° Beam
50D	50° Beam
80D	50° Beam
O4018D	Oval 40° x 18° Beam
A7030D	Asymmetric 70° x 30° Beam

PROFILE / LOUVRE PAGE 07	
LL	Longitudinal Louvre
HL	Honeycomb Louvre

PROFILE COLOUR [2] PAGE 07	
BLK	Black (Standard)
WHT	White
CST	Custom Colour [3]

WIRING CONFIGURATION PAGE 08	
WR2.1OS	Wire 2+1 Core One Side
WR2.1BS	Wire 2+1 Core Both Sides
CBL2.1OS	Cable 2+1 Core One Side
OC2.1MO	Connector 2+1 pin Male Only
OC2.1MF	Connector 2+1 pin Male + Female
LC2.1MO	Locking Connector 2+1 pin Male Only
LC2.1MF	Locking Connector 2+1 pin Male + Female
SMPLC.1	Sample Type Connector 2.5mm

WIRING POSITION PAGE 09	
WB	Wire from Back [4]
WS	Wire from Side

WIRING LENGTH PAGE 09	
100	100mm
250	250mm
3000	3,000mm [5]

IP RATING PAGE 09	
IP40	Indoor Use

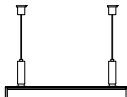[1] Other CCT subject to availability.

[2] Custom colours available on request.

[3] End caps available in black or white only.

[4] Wiring from the back only available for CBL2.1OS

[5] 3000mm wiring length only available for CBL2.1OS

▪ ACCESSORIES

	PRODUCT CODE	DESCRIPTION
MOUNTING		
	MC-CCLIP20	Stainless Steel C-Clip for P20 Profile
	MBR-RB-TA-P20-BLK	Rotating Bracket, TYPE A Rotating Clip - Black
	MBR-RB-TB-P20-BLK	Rotating Bracket, TYPE B Rotating Clip - Black

[1] Recommended spacing between Mounting Brackets is maximum 500mm and Mounting Clips is maximum 300mm.

	PRODUCT CODE	DESCRIPTION
SUSPENSION KIT		
	MSK-STR-3000-0CG-BLK	Suspension Kit, 3000mm Wire, No Cable Grip, Black
	MSK-STR-3000-1CG-BLK	Suspension Kit, 3000mm Wire, 1 Cable Grip, Black
	MSK-STR-3000-2CG-BLK	Suspension Kit, 3000mm Wire, 2 Cable Grips, Black

[2] Minimum of 2 suspensions required per fitting or maximum of 3 per long fitting

	PRODUCT CODE	DESCRIPTION
CONTROLLER		
	CTR-A2PWM 0-10V	Analogue to PWM converter for 0 – 10V dimming signal
	CTR-DIMMERLOGIC	Coolon Universal Wall Dimmer with 0 – 10V and PWM Logic Output
	CTR-DALI-LOGIC	Indoor DALI Point 1 channel Driver with PWM Logic Output
	CTR-DALILOGIC-IP	Outdoor DALI Point 1 channel Driver with PWM Logic Output

	PRODUCT CODE	DESCRIPTION
POWER SUPPLY FOR INDOOR USE (IP67)		
	PWR-HLG-60H-24AU	Mean Well Power Supply HLG 60W 24V IP67
	PWR-HLG-150H-24AU	Mean Well Power Supply HLG 150W 24V IP67
	PWR-HLG-240H-24AU	Mean Well Power Supply HLG 240W 24V IP67
	PWR-HLG-320H-24AU	Mean Well Power Supply HLG 320W 24V IP67