



# RATIO IP

LED STRIP STR-RATIO IP





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

Nestled in a compact 20 x 22.5 mm extrusion, the Ratio IP is available with 6 different optics and IP66 and IK06 as standard.

#### POWER

##### 11W

11W / metre



SC



AL

##### 23W

23W / metre



SC



AL

#### COLOUR TEMPERATURE

2700K

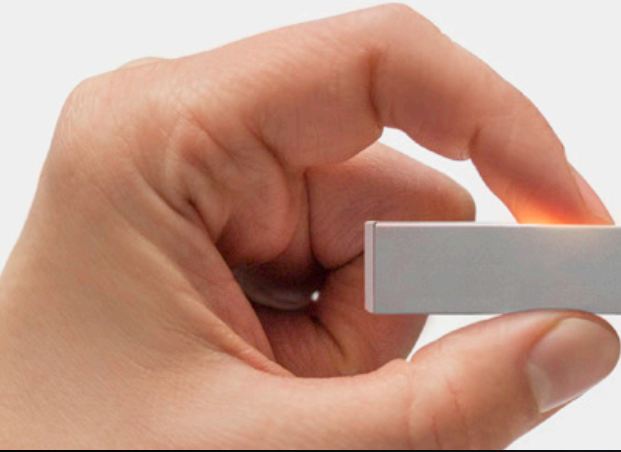
3000K

3500K

4000K

## COMPACT SIZE

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



## ELEGANT ENCAPSULATION

Ratio IP utilises Coolon's encapsulation technology to deliver a truly extraordinary outdoor luminaire. IP66, IK08, shock and abrasion resistance, thermal protection, and dashing good looks, all in one.



### 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 IP	
Description	Ratio IP Medium Power 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° – 110°)	
External Heatsink Required	No	
Ambient Operating Temp	Ta -40°C to 50°C	
Thermal Operating	Yes (Active)	
Reverse Polarity Protection	Yes	
Reported Lumen Maintenance TM21-11 (@ Ts = 85°C, If = 700mA)	L70 (17K) > 103,000 hours L90 (17K) > 103,000 hours	
	Ratio IP max. operating values (@ Ts = 40°C, If = 230mA)	
IP Rating	IP66	
IK Rating	IK06 – IK08 (Standard)	
	<ul style="list-style-type: none"> <li>▪ IK Rating of IK06 passed without marks to the extrusion and polyurethane material</li> <li>▪ IK Rating of IK07 and IK08 passed with minor marks to the extrusion and polyurethane material</li> <li>▪ Cable exit / entry not part of the IK Rating test</li> </ul>	
Max Continuous Connection Length	Please refer to installation limitations	

## LUMEN / METRE MATRIX

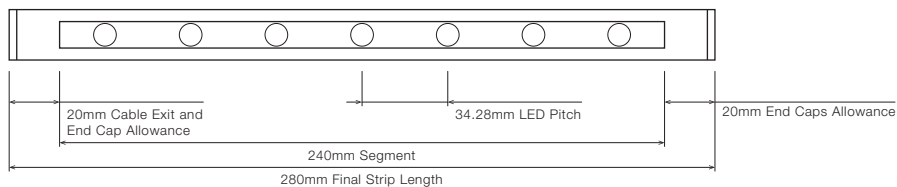
POWER	LUMINOUS FLUX			
	2700K CRI	3000K CRI	3500K CRI	4000K CRI
<b>11W</b> 11W / metre				
<b>SC Profile (50D Optics)</b>				
	NM	830 lm / metre	NM	NM
<b>SC Profile (O4018D Optics)</b>				
	NM	NM	NM	840 lm / metre
<b>23W</b> 23W / metre				
<b>SC Profile (50D Optics)</b>				
	NM	1,668 lm / metre	NM	NM
<b>SC Profile (O4018D Optics)</b>				
	NM	NM	NM	1,700 lm / metre

NM : Lumen output NOT MEASURED

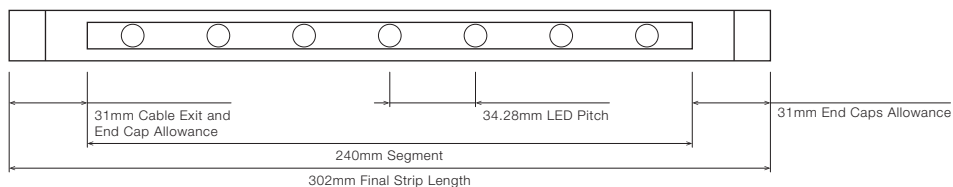
■ DIMENSIONS

For final strip lengths please refer to the "Product Length" table.

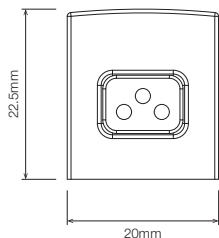
WS - Wire from Side



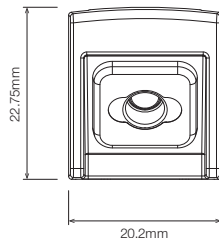
WA - Wire Angled



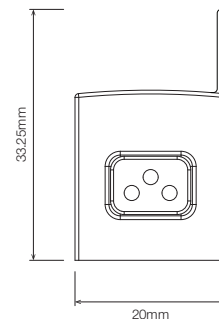
STANDARD PROFILE (WS)



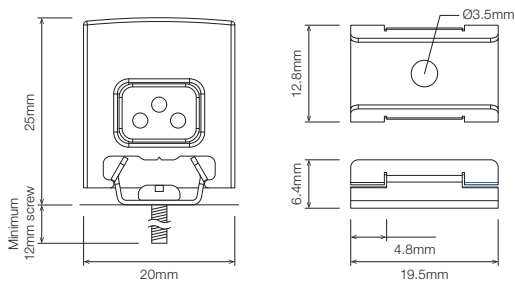
STANDARD PROFILE (WA)



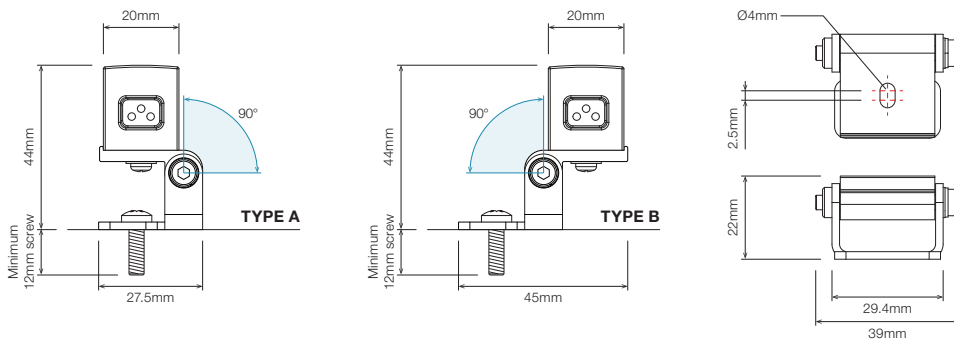
WITH BAFFLE



WITH STAINLESS STEEL C-CLIP <sup>1</sup>



ROTATING MOUNTING BRACKET, TYPE A/B ROTATING CLIP <sup>1</sup>



<sup>1</sup> Recommended spacing between Mounting Brackets is maximum 500mm and Mounting Clips is maximum 300mm.

■ PRODUCT LENGTH (WS)

FULL SEGMENTS	EXACT STRIP LENGTH	END CAP ALLOWANCE	FINAL LENGTH
S1	240mm	add 40mm	280mm
S2	480mm	add 40mm	520mm
S3	720mm	add 40mm	760mm
S4	960mm	add 40mm	1,000mm
S5	1,200mm	add 40mm	1,240mm
S6	1,440mm	add 40mm	1,480mm
S7	1,680mm	add 40mm	1,720mm
S8	1,920mm	add 40mm	1,960mm
S9	2,160mm	add 40mm	2,200mm
S10	2,400mm	add 40mm	2,440mm
S11	2,640mm	add 40mm	2,680mm
S12	2,880mm	add 40mm	2,920mm

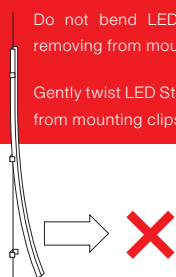
■ PRODUCT LENGTH (WA)

FULL SEGMENTS (S)	EXACT STRIP LENGTH	END CAP ALLOWANCE	FINAL LENGTH
S1_WA	240mm	add 62mm	302mm
S2_WA	480mm	add 62mm	542mm
S3_WA	720mm	add 62mm	782mm
S4_WA	960mm	add 62mm	1,022mm
S5_WA	1,200mm	add 62mm	1,262mm
S6_WA	1,440mm	add 62mm	1,502mm
S7_WA	1,680mm	add 62mm	1,742mm
S8_WA	1,920mm	add 62mm	1,982mm
S9_WA	2,160mm	add 62mm	2,222mm
S10_WA	2,400mm	add 62mm	2,462mm
S11_WA	2,640mm	add 62mm	2,702mm
S12_WA	2,880mm	add 62mm	2,942mm

**⚠ WARNING**

Do not bend LED strip when removing from mounting clips.

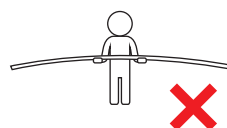
Gently twist LED Strip to remove from mounting clips.



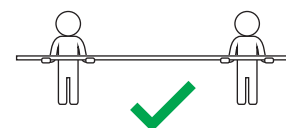
**⚠ WARNING**

**PLEASE HANDLE LONG LED STRIPS WITH CARE.**

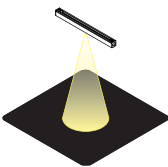
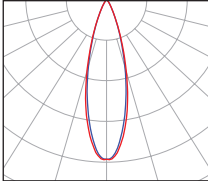
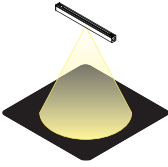
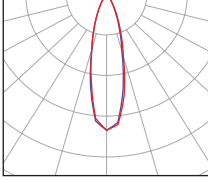
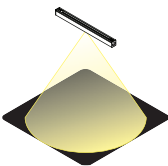
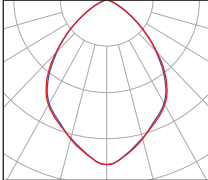
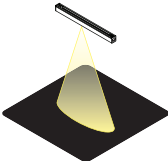
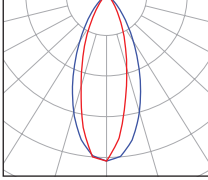
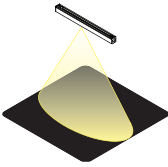
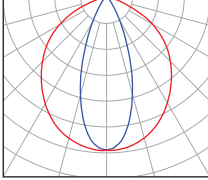
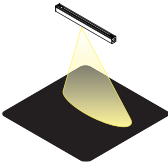
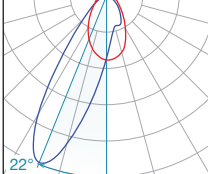
LED Strips must not be bent.



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



■ 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		
O10040D Oval Beam Oval 100° x 40° Beam Angle		
A7030D Asymmetric Beam Asymmetric 70° x 30° Beam Angle		

■ DIFFUSER / LOUVRE

**SC** - No Louvre



**AL** - Asymmetric Louvre



■ PROFILE COLOUR

**BLK** - Black (Standard)



**B-BLK** - Black with Baffle



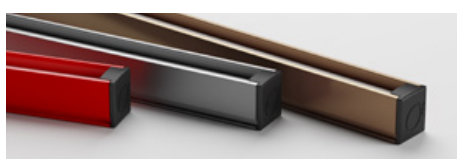
**WHT** - White



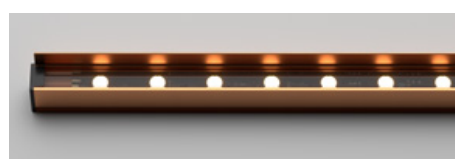
**B-WHT** - White with Baffle



**CST** - Custom Colour <sup>1</sup>



**B-CST** - Custom Colour with Baffle <sup>1</sup>



<sup>1</sup> Custom colours available on request.



WIRING CONFIGURATION

CONNECTOR TYPE	DRAWING	MALE	FEMALE
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			
FC4MO Flat Connector 2+1 pin Male Only			
FC4MF Flat Connector 2+1 pin Male + Female			
SMPLC.1 Sample Type Connector 2.5mm			

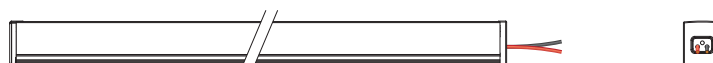
Please consult Coolon for details on extension cable between LED fittings, drivers and power supplies.

WIRING COLOUR CODE

	OC2.1MO / OC2.1MF	LC2.1MO / LC2.1MF	FC4MO / FC4MF
+ 24V	Red	Green	Brown and Red
- GND	Black	Black	Orange
PWM Dimming	White	White	Yellow

WIRING POSITION

WS - Wire from Side



Ideal for fittings installed individually or vertically.

WA - Wire Angled

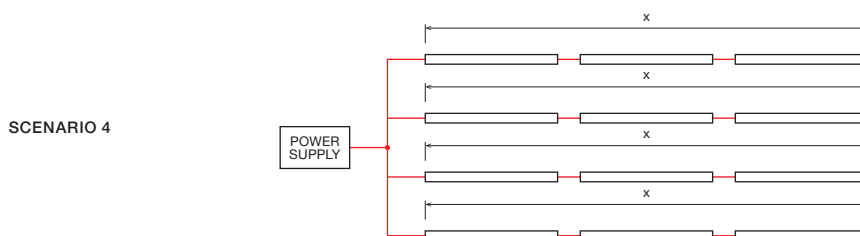
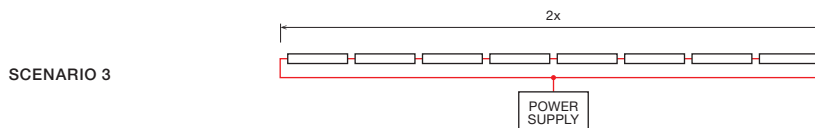
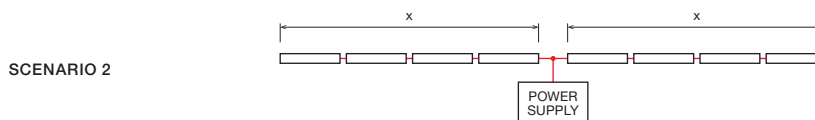
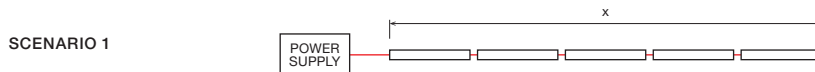


IP RATING

**IP66**

Fully protected against dust.  
Protected against wave-like water jets from all directions.

■ INSTALLATION LIMITS



11W VERSION

MAX. CONTINUOUS CONNECTION LENGTH (X)	CONNECTOR TYPE
5,500 mm	With 2+1 pin Connectors (OC2.1MO / OC2.1MF / SMPLC.1)
9,000 mm	With 2+1 pin Locking Connectors (LC2.1MO / LC2.1MF)
11,000 mm	With 4 pin Flat Connectors (FC4MO / FC4MF)

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

23W VERSION

MAX. CONTINUOUS CONNECTION LENGTH (X)	CONNECTOR TYPE
2,500 mm	With 2+1 pin connectors (OC2.1MO / OC2.1MF / SMPLC.1)
4,500 mm	With 2+1 pin Locking Connectors (LC2.1MO / LC2.1MF)
5,500 mm	With 4 pin Flat Connectors (FC4MO / FC4MF)

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

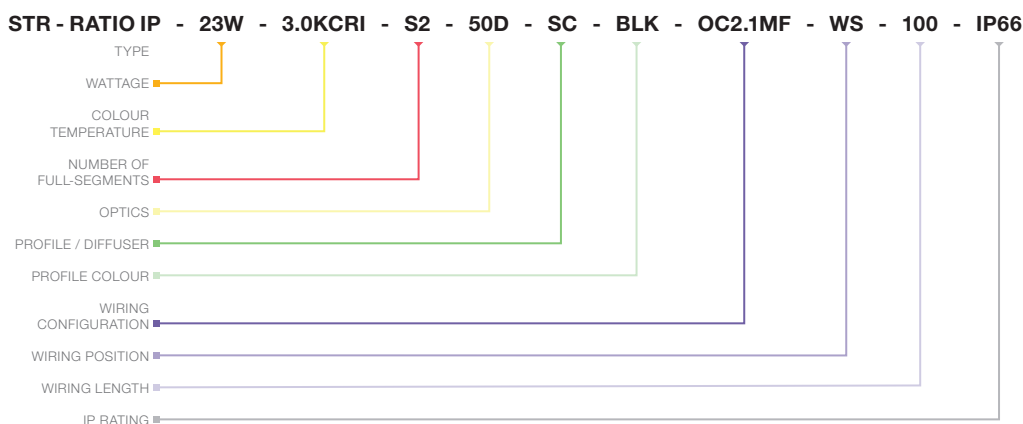
**⚠ WARNING**

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

✗

✗

ORDERING EXAMPLE



■ **WATTAGE**

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

■ **COLOUR TEMPERATURE** <sup>1</sup> 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 05

S1	280mm	S1_WA	302mm
S2	520mm	S2_WA	542mm
S3	760mm	S3_WA	782mm
S4	1,000mm	S4_WA	1,022mm
S5	1,240mm	S5_WA	1,262mm
S6	1,480mm	S6_WA	1,502mm
S7	1,720mm	S7_WA	1,742mm
S8	1,960mm	S8_WA	1,982mm
S9	2,200mm	S9_WA	2,222mm
S10	2,440mm	S10_WA	2,462mm
S11	2,680mm	S11_WA	2,702mm
S12	2,920mm	S12_WA	2,942mm

■ **OPTICS** PAGE 06

30D	30° Beam
50D	50° Beam
80D	80° Beam
O4018D	Oval 40° x 18° Beam
O10040D	Oval 100° x 40° Beam
A7030D	Asymmetric 70° x 30° Beam

■ **PROFILE / LOUVRE** PAGE 06

SC	No Louvre
AL	Asymmetric Louvre

■ **PROFILE COLOUR** <sup>2</sup> PAGE 06

BLK	Black (Standard)
B-BLK	Black with Baffle
WHT	White
B-WHT	White with Baffle
CST	Custom Colour <sup>3</sup>
B-CST	Custom Colour with Baffle <sup>3</sup>

■ **WIRING CONFIGURATION** PAGE 07

OC2.1MO	Outdoor Connector 2+1 pin Male Only
OC2.1MF	Outdoor Connector 2+1 pin Male + Female
LC2.1MO	Locking Connector 2+1 pin Male Only
LC2.1MF	Locking Connector 2+1 pin Male + Female
FC4MO	Flat Connector 4 pin Male Only
FC4MF	Flat Connector 4 pin Male + Female
SMPLC.1	Sample Type Connector 2.5mm

■ **WIRING POSITION** PAGE 07

WS	Wire from Side
WA	Wire Angled

■ **WIRING LENGTH** PAGE 07

100	100mm
250	250mm

■ **IP RATING** PAGE 07


IP66	Outdoor Use
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<sup>1</sup> Other CCT subject to availability.


<sup>2</sup> Custom colours available on request.


<sup>3</sup> End caps available in black or white only.

## ■ ACCESSORIES

	PRODUCT CODE	DESCRIPTION
<b>MOUNTING</b>		
	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

\* Recommended spacing between Mounting Brackets is maximum 500mm and Mounting Clips is maximum 300mm.

	PRODUCT CODE	DESCRIPTION
<b>CONTROLLER</b>		
	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-NEO	NEO Outdoor DALI Point 1 channel Driver with PWM Logic Output

	PRODUCT CODE	DESCRIPTION
<b>POWER SUPPLY FOR OUTDOOR USE (IP67)</b>		
	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

## ■ PHOTOGRAPHY

	LOCATION	LIGHTING PARTNER	PHOTOGRAPHER
Cover Photo	Sydney Gateway Mesh Wall	Jadecross	Jackie Chan <a href="https://www.jackiechan.com.au/">https://www.jackiechan.com.au/</a>