FloppyFlex® F21s

RGB / RGBW
MULTI-PIXEL LED NEON

24V EXTRA LOW VOLTAGE	INDOOR OUTDOOR	UV STABILISED	OUTDOOR IP RATED	COMMERCIAL GRADE	VANDAL RESISTANT	GREEN FRIENDLY	PVC 3 YEAR WARRANTY	SILICONE 5 YEAR WARRANTY

29 mm

11.5 mm

Light Surface

Horizontal Bend
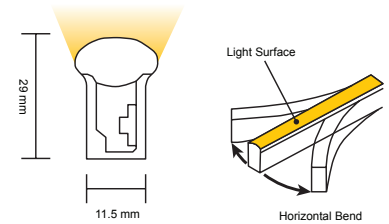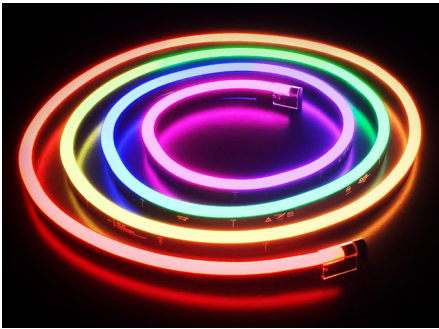
FloppyFlex F21 Digital is flexible 24V LED neon with multi-pixel control for advanced chasing, programmable scenes, and animated visual effects via FloppyDrive Digital, or an SPI decoder. It features a rich, vibrant color palette with RGB or RGBW LEDs. Available with PVC housing with a pixel size of 125mm and an average beam angle of 170.5° (50%) or longer lasting silicone housing with a pixel size of 125 mm and an average beam angle of 145.9° (50%). The minimum horizontal bend diameter is 120 mm. Black base is standard with a homogenous LED package without "skittles" effect.

CONTENTS

FEATURES

Digital RGB or RGBW with multi-pixel control in 125 mm sections

Super bright, pixel package with homogenous lighting surface

170.5° beam angle (PVC), 145.9° beam angle (Silicone)

Tight 120 mm horizontal bend

Seamless color mixing, beautiful dimming via FloppyDrive Digital or SPI decoder

Auto-addressing allows for quick setup and patching

Largest viewable beam spread in the FloppyFlex family

Wide range of accessories for joining, terminating, mounting, powering

Easy to use and install

Unlimited and unprecedented possibilities

APPLICATIONS

Installation, architectural, digital signage, gameshows, arcades, signs, film and television sets, theme parks, bars and clubs, cruise ships, creating words, indirect applications, and scenic elements

AVAILABLE CONNECTORS

Injection Molded Power Feed and End cap connectors, fully customizable for no-hassle installations. PVC IP67, Silicone IP68.

Double Molded IP68 Power Feed and End cap connectors, suitable for submersible applications. PVC only - not available for silicone versions.

Snap Connector Power Feed and End caps allow for easy onsite terminations with IP67 ratings, and allow for the End, Side, Middle, or Bottom power feed entry.

RESISTANCE AND PROTECTIONS

Flame Resistant
UV Resistant
Solvents Resistant
Saltwater Resistant
IP67 Protection
IK08 Protection

CERTIFICATIONS

With factory-installed connectors. cULus Listed, CE, TUV and RoHS compliant and passes rigorous environmental, optical, mechanical, and electrical testing.
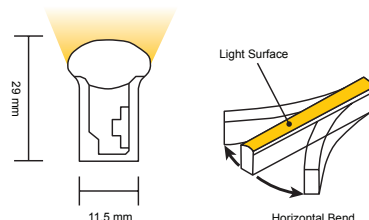
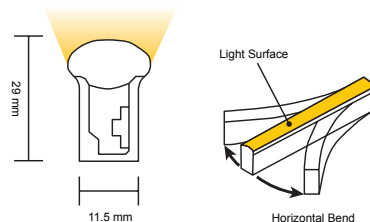c UL us LISTED   CE   TUV SUD   RoHS COMPLIANT

FloppyFlex® F21s

RGB
MULTI-PIXEL LED NEON

FIREFLY LIGHTING
Phone : +61 7 3254 4333
Email : sales@fireflylighting.com.au
Address : 9/29 Links Ave North, Eagle Farm.
Brisbane QLD 4009 Australia
www.fireflylighting.com.au

	PVC Specifications				**Silicone** Specifications			
Part Number	**LN-F21S-RGB**				SLN-F21S-RGB			
Type	Digital Multi-Pixel Control							
Colour	RGB							
Colour/CCT	**Red**	**Green**	**Blue**	**R+G+B**	**Red**	**Green**	**Blue**	**R+G+B**
Wavelength	618-624nm	522-528nm	468-474nm	-	618-624nm	522-528nm	468-474nm	-
Lumen/m	42	110	18	170	40	110	20	170
Beam Angle, Average (50%)	170.5°				145.9°			
Number of Pixels Per Meter	8							
LED Quantity Per Pixel	7							
LED Quantity Per Meter	56							
DMX Channels	3 per pixel / 24 per meter							
Base Color	Black base standard, other colors available on request				White base standard, other colors available on request			
Housing	PVC				Silicone			
Cut & Connect Joints	Located Every 125 mm							
Minimum Bend Diameter	120 mm							
Bending Direction	Horizontal Bend							
Connectors & Hardware	Factory molded connectors / Field attachable connectors / Aluminium mounting channels							
Operating Voltage	24V DC							
Wiring	3-Wire							
Power Consumption	12 W/m							
Max Fixture Runs	Single end feed	15 m Dynamic Operation			Single end feed	20 m Dynamic Operation		
		10 m Full Static Load				15 m Full Static Load		
	Double end feed	30 m Dynamic Operation			Double end feed	40 m Dynamic Operation		
		20 m Full Static Load				30 m Full Static Load		
Control	DMX-512/Ethernet via ProPlex BuckBoost System, DMX-512 via FloppyDrive Digital or SPI Decoder							
Installation Temperature	0 to 45 °C				-40 to 50 °C			
Operating Temperature	-20 to 45 °C				-40 to 55 °C			
Mounting Surface Temperature	60 °C Max.				85 °C Max.			
Storage Temperature	-20 to 60 °C				-40 to 60 °C			
Dimensions (WxHxD)	11.5 mm x 29 mm x variable							
Ingress Protection	IP67 with Molded connectors IP68 with Double Molded connectors IP67 with Quick Connect connectors				IP68 with Molded connectors IP67 with Quick Connect connectors Double Molded not available			
Listing	UL2108 Class 2, CE-EMC							
Warranty	3 Years				5 Years			
Wire Legend								

Black Negative
Yellow Signal
Red Positive (+)

Light Surface

29 mm

11.5 mm

Horizontal Bend

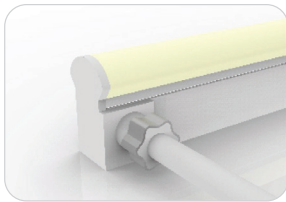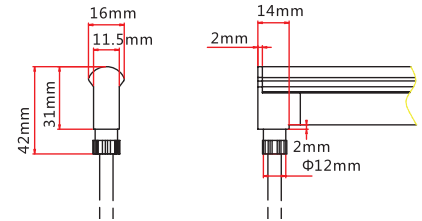# FloppyFlex® F21s

RGBW
MULTI-PIXEL LED NEON

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	PVC Specifications				**RGBW** Silicone Specifications			
Part Number	**LN-F21S-RGBW**				**SLN-F21S-RGBW**			
Type	Digital Multi-Pixel Control							
Colour	RGBW							
Colour/CCT	**Red**	**Green**	**Blue**	**White**	**Red**	**Green**	**Blue**	**White**
Wavelength	618-624nm	522-528nm	468-474nm	2725±145K	618-624nm	522-528nm	468-474nm	2725±85K
Lumen/m	42	110	18	110	40	110	20	110
Beam Angle, Average (50%)	170.5°				145.9°			
Number of Pixels Per Meter	8							
LED Quantity Per Pixel	7							
LED Quantity Per Meter	56							
DMX Channels	4 per pixel / 32 per meter							
Base Color	Black base standard, other colors available on request							
Housing	PVC				Silicone			
Cut & Connect Joints	Located Every 125 mm							
Minimum Bend Diameter	120 mm							
Bending Direction	Horizontal Bend							
Connectors & Hardware	Factory molded connectors / Field attachable connectors / Aluminium mounting channels							
Operating Voltage	24V DC							
Wiring	3-Wire							
Power Consumption	15 W/m							
Max Fixture Runs	Single end feed	10 m Dynamic Operation			Single end feed	15 m Dynamic Operation		
		5 m Full Static Load				10 m Full Static Load		
	Double end feed	20 m Dynamic Operation			Double end feed	30 m Dynamic Operation		
		10 m Full Static Load				20 m Full Static Load		
Control	DMX-512/Ethernet via ProPlex BuckBoost System, DMX-512 via FloppyDrive Digital or SPI Decoder							
Installation Temperature	0 to 45 °C				-40 to 50 °C			
Operating Temperature	-20 to 35 °C				-40 to 55 °C			
Mounting Surface Temperature	60 °C Max.				85 °C Max.			
Storage Temperature	-20 to 60 °C				-40 to 60 °C			
Dimensions (WxHxD)	11.5 mm x 29 mm x variable							
Ingress Protection	IP67 with Molded connectors IP68 with Double Molded connectors IP67 with Quick Connect connectors				IP68 with Molded connectors IP67 with Quick Connect connectors Double Molded not available			
Listing	UL2108 Class 2, CE-EMC							
Warranty	3 Years				5 Years			
Wire Legend								

Black Negative
Yellow Signal
Red Positive (+)

29 mm

11.5 mm

Light Surface

Horizontal Bend

c UL us LISTED   CE   TÜV SÜD   RoHS COMPLIANT

FloppyFlex® F21s

FACTORY MOLDED F21 CONNECTORS
IP67 PVC OR IP68 SILICONE

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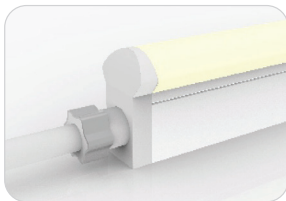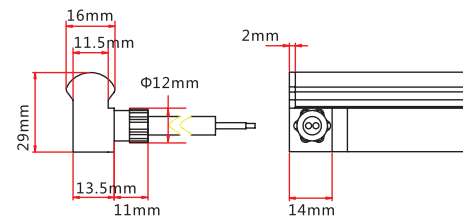**www.fireflylighting.com.au**

Molded Bottom Entry Connection

Connects FloppyFlex F21 to power supply with pre-installed bottom feed cable, IP67.
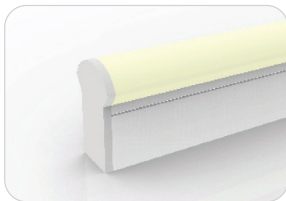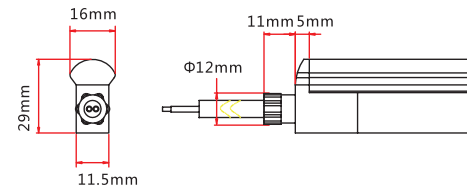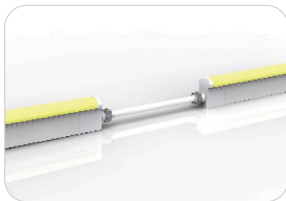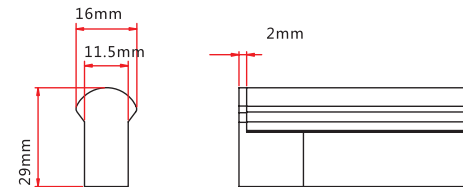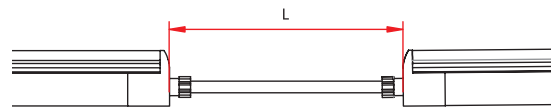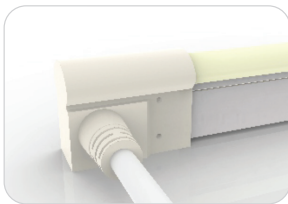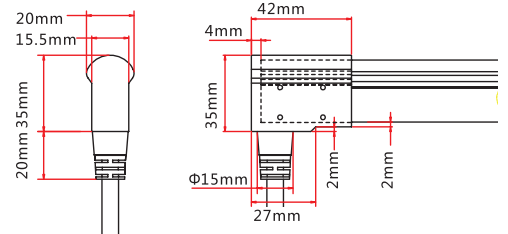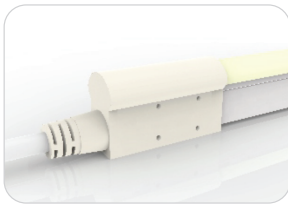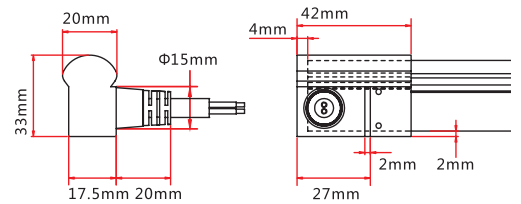Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Molded Side Entry Connection

Connects FloppyFlex F21 to power supply with pre-installed side feed cable, IP67.
Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Molded End Entry Connection

Connects FloppyFlex F21 to power supply with pre-installed end feed cable, IP67.
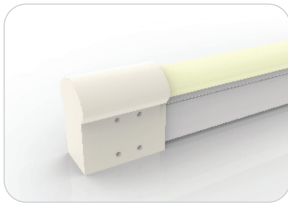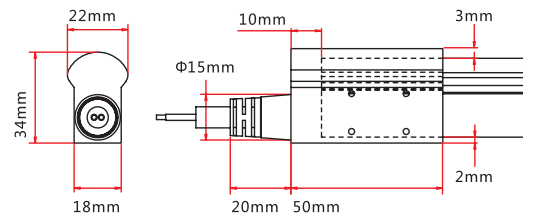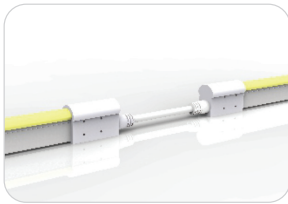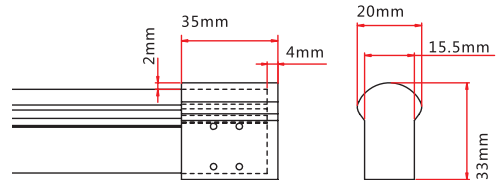Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Molded End Cap

Pre-installed termination protection of FloppyFlex F21, IP67.

Molded End Entry Connection

Connects two pieces of FloppyFlex F21 together with a flexible cable, IP67.
Cable length available in 0.3 - 1 m.
Maximum 8 jumpers per 20 m
Maximum 4 jumpers per 10 m

Molded T-Feed Connection

Connects two pieces of FloppyFlex F21 together with powered T-joint, IP67.
L1 and L2 length available in 0.15-0.5 m.
L3 length available in 0.3 - 1 m
Maximum 8 T-Feeds per 20 m
Maximum 4 T-Feeds per 10 m

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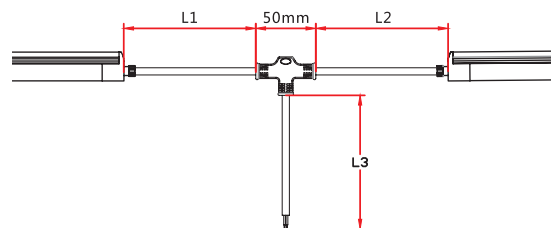
FloppyFlex® **F21**s

DOUBLE FACTORY MOLDED F21 CONNECTORS

IP68 PVC ONLY

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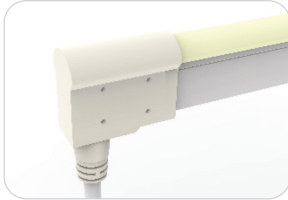
Double-Molded Bottom Entry Connection

Connects FloppyFlex F21 to power supply with pre-installed end feed cable, IP68.

Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Double-Molded Side Entry Connection

Connects FloppyFlex F21 to power supply with pre-installed side feed cable, IP68.

Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Double-Molded End Entry Connection

Connects FloppyFlex F21 to power supply with pre-installed end feed cable, IP68.

Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Double-Molded End Cap

Pre-installed termination protection of FloppyFlex F21, IP68.

Double-Molded End Entry Connection

Connects two pieces of FloppyFlex F21 together with a flexible cable, IP68.

Cable length available in 0.3 - 1 m.

Maximum 8 jumpers per 20 m
Maximum 4 jumpers per 10 m
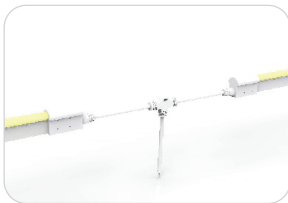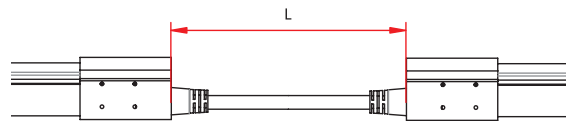
Double-Molded T-Feed Connection

Connects two pieces of FloppyFlex F21 together with powered T-joint, IP68.

L1 and L2 length available in 0.15-0.5 m.
L3 length available in 0.3 - 1 m

Maximum 8 T-Feeds per 20 m
Maximum 4 T-Feeds per 10 m
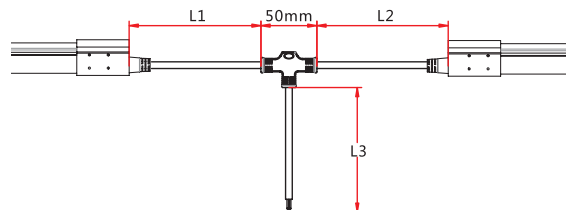
FloppyFlex® F21s
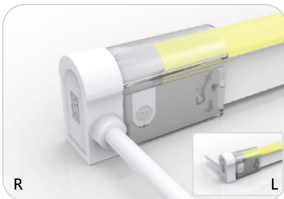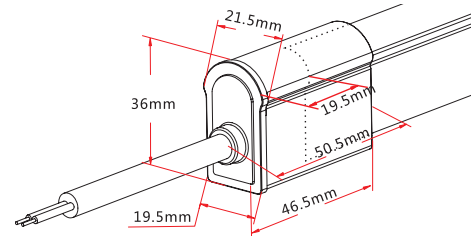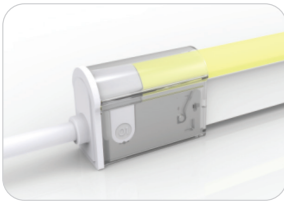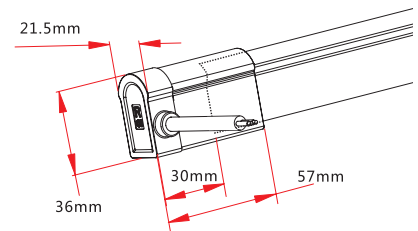
SNAP CONNECT F21 CONNECTORS
IP67

Snap Connect Bottom Entry

Connects FloppyFlex F21 to power supply with user-installable end feed cable, IP67.

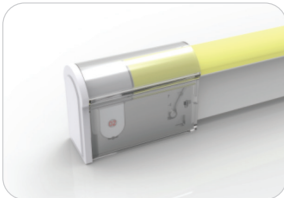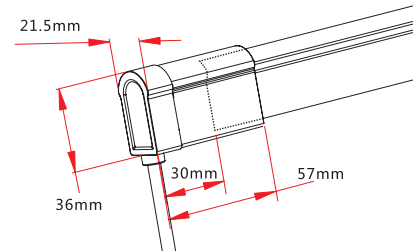Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Snap Connect Side Entry

Connects FloppyFlex F21 to power supply with user-installable side feed cable, IP67.

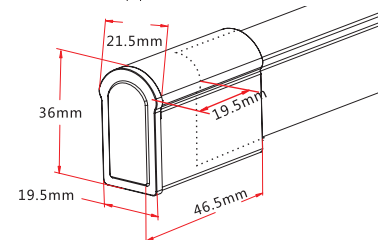Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Snap Connect End Entry

Connects FloppyFlex F21 to power supply with user-installable end feed cable, IP67.

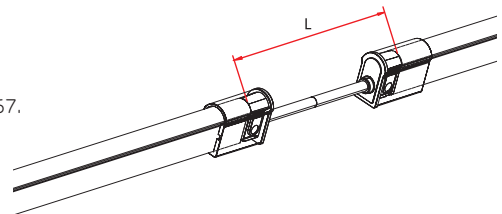Cable length available in 0.3 m, 1 m, 3 m, 5 m, 10 m.

Snap Connect End Cap

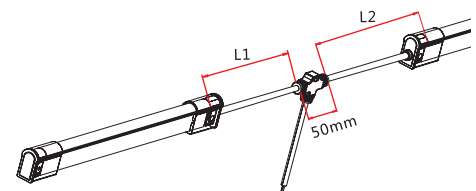User-installable termination protection of FloppyFlex F21, IP67.

Snap Connect End Entry

Connects two pieces of FloppyFlex F21 together with a flexible cable, user-installable, IP67.

Cable length available in 0.3 m, 1 m, and 3 m.

Snap Connect T-Feed

Connects two pieces of FloppyFlex F21 together with powered T-joint, user-installable, IP67.

L1 and L2 length available in 0.3 m.
L3 length available in 1 m

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FloppyFlex® F21s

MINI TOOL KIT
ASSEMBLY TOOLS

Mini Tool Kit

The FloppyFlex Mini Tool Kit includes the tools needed to properly cut and terminate FloppyFlex LED Neon with Snap Connect field-installable connectors. Correct installation ensures proper electrical contact, IP rating integrity, and warranty compliance.

Includes cutter, insertion spreader and grippers.

We recommend using these tools for optimum installation results and reduced risk of damage to the product.

Lockable Aluminium Case

Grippers

Cutter

Insertion Spreaders

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FloppyFlex® F21s

DRIVERS

FloppyDrive Digital DIN Rail Mount

- DMX multi-pixel dimming for FloppyFlex Digital RGB or RGBW
- Addressing, monitoring and reporting of all functions, via RDM
- 1200Hz flicker-free refresh rate
- Pluggable Terminal Block (PTB) screw terminals for bare-wire, installation flexibility
- Requires external 24 VDC Power Supply
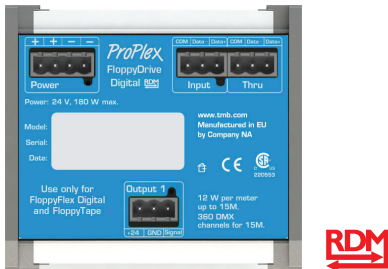
L-TECH DMX-SPI Signal Decoder

- DMX dimming for 24V LED Tapes, Neons, and other low voltage systems of all types. Perfect for FloppyFlex
- One 24V 2-wire output plus signal.
- Addressing via RDM or built in DIP switches
- Pluggable Terminal Block (PTB) screw terminals for bare-wire, installation flexibility
- Realises 0-100% dimming or different lighting effects.
- Works with IC compatible LEDs

Mean Well 24 VDC LED Drivers

- High efficiency 24VDC LED drivers in DIN Rail and stand-alone with multiple wattage configurations
- IP-rated units available
- Fixed or dimmable output. Dimming available via 1-10VDC, 10V PWM signal, resistance, or built-in potentiometer

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FloppyFlex® **F21**s
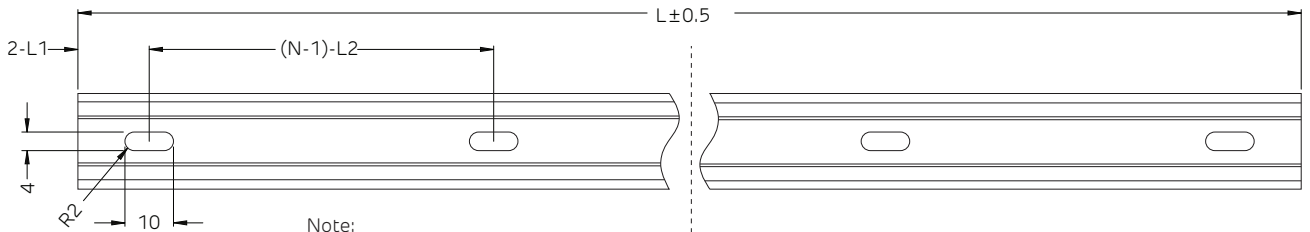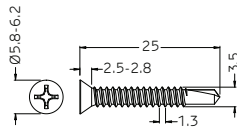
STRAIGHT ALUMINIUM CHANNEL

Versatile self-locking profile can be used to mount FloppyFlex F21 or F15 LED neon in any orientation including overhead at any angle. Extruded 6063 aluminium construction with elastic serrated grip tape hold the FloppyFlex neon firmly through varying temperatures of -20 to +70°C.
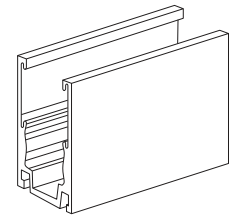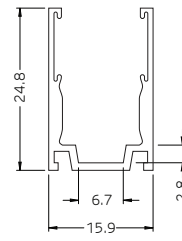
Tolerance: ±0.2 mm

Dimensions in millimeters

Note:
1. 2-L1 refers to two of symmetric L1 in each piece of profile.
2. (N-1)-L2 refers to (N minus one) of symmetric L2 in each piece of profile.
"N" hereby stands for its corresponding "Hole Number" in the table below.

Part Number	Length	L1	L2	Slotted Hole	Number of Holes
LNCH-F21-AC	20 mm	10 mm	N/A	4x10 mm	1
LNCH-F21-A1-05	500 mm	50 mm	200 mm	4x10 mm	3
LNCH-F21-A1-1	1000 mm	100 mm	200 mm	4x10 mm	5
LNCH-F21-A1-2	2000 mm	100 mm	200 mm	4x10 mm	10

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FloppyFlex® F21s
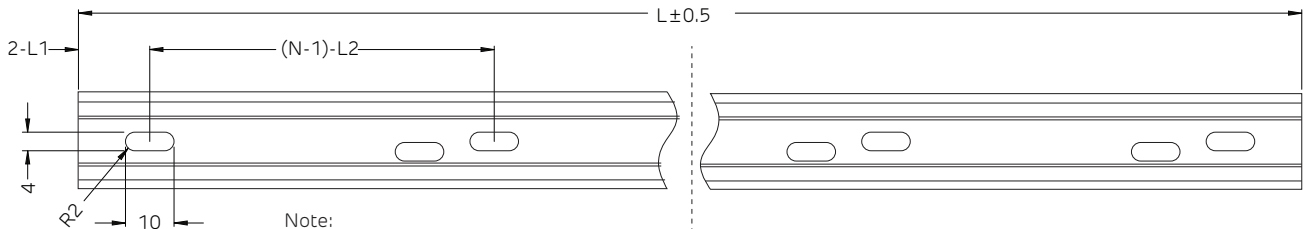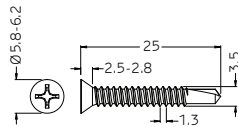
FLANGE ALUMINIUM PROFILE

Versatile self-locking profile can be used to mount recessed FloppyFlex F21 or F15 LED neon in any orientation including overhead at any angle. Extruded 6063 aluminum construction with elastic serrated grip tape hold the FloppyFlex neon firmly through varying temperatures of -20 to +70°C.
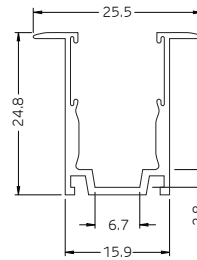
Tolerance: ±0.2 mm
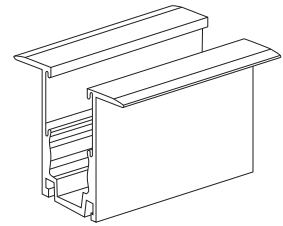
Dimensions in millimeters

Note:
1. 2-L1 refers to two of symmetric L1 in each piece of profile.
2. (N-1)-L2 refers to (N minus one) of symmetric L2 in each piece of profile.
"N" hereby stands for its corresponding "Hole Number" in the table below.

| Part Number	Length	L1	L2	Slotted Hole	Number of Holes
LNCH-F21-A3-20	20 mm	10 mm	N/A	4x10 mm	1
LNCH-F21-A3-05	500 mm	50 mm	200 mm	4x10 mm	3
LNCH-F21-A3-1	1000 mm	100 mm	200 mm	4x10 mm	5

FloppyFlex® F21s

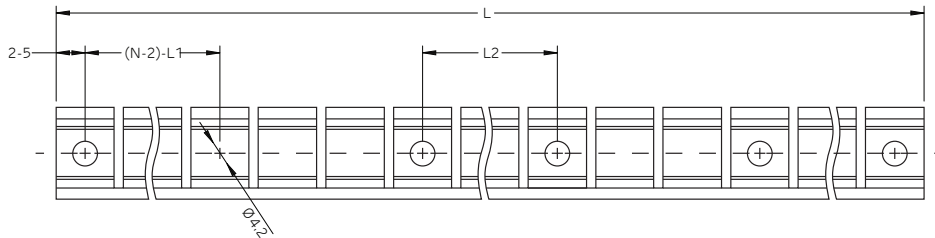## BENDABLE ALUMINIUM PROFILE
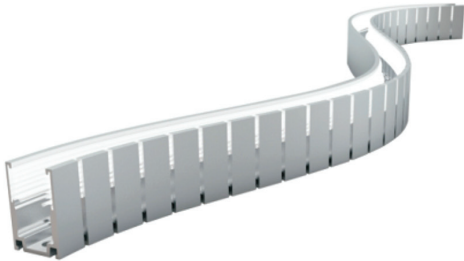
Flexible self-locking profile can be used to mount FloppyFlex F21 or F15 LED neon in custom freeform curves while maintaining clamping force. May be mounted in any orientation including overhead at any angle.
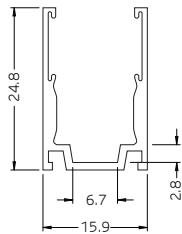
Tolerance: ±0.2 mm
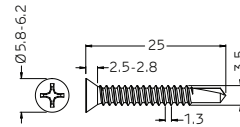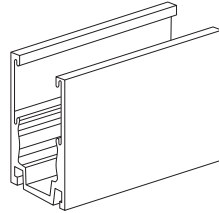
Dimensions in millimeters

Note:
1. 2-5 refers to two of symmetric 5mm in each piece of profile.
2. (N-2)-L1 refers to)N minus two) of symmetric L1 in each piece of profile.
"N" hereby stands for its corresponding "Hole Number" in the table below.

Part Number	Length	L1	L2	Screw Hole	Number of Holes
LNCH-F21-A2-05	500 mm	116.5 mm	23.3 mm	Ø4.2 mm	6
LNCH-F21-A2-1	1000 mm	116.5 mm	58.2 mm	Ø4.2 mm	10