



LED LINEAR & SYSTEMS LUMINAIRES

advanced systems

**STRATEGIC
LIGHTING
GROUP**
LIGHTING WITH PURPOSE

ARCHILED DMX
TECHNICAL SPECIFICATION DATA

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ARCHILED LINK DMX CHASERS

mono & RGB colour change - individual DMX addressable

Image Project : Acergy Project - Stairwell Atrium .



Lighting Design : KJ Tait - Edinburgh.

Product Purpose & Meaning

- The Archiled *Links series* concept is founded on its ability to offer PowerLED boards with pitch flexibility, interchangeable optics and the ability to resolve curved and straight line architecture alike.
- The name "Archiled" is derived from the products ability to follow and delineate interior architectural structure.

Product Summary

- Chasing RGB or Monochromatic 'daisy chain' link boards for fast, easy quick connections of 'strings' of professional power with full individual DMX addressability command control and chasing affects.
- Full On-Board Individual Mono or Full Colour DMX 512.
- For use with or without optics..
- Especially ideal for curved architecture.
- For 24Vdc remote bulk PSU's.
- Suitable for connections in series of 20 mono or 10 RGB boards at a time before a new parallel feed is required.

Applications

- Dynamic Chasing affects and pixellation of colours.
- Dynamic Architecture
- Exhibitions & Museums.
- Especially Curved Architectural Details.
- Coving, Recesses, Ceiling Pelmet's & Soffits.
- Window Reveals & Frames / Ground Troughs & Channels.

Performance

Lamp Type	3W [mono] 5.3W [RGB] PowerLED.
LED Qty	1 per board unit.
Lamp Source	P4 [mono] P5 II [RGB TriChip] Seoul Semi Conductors.
Lumen Output	see codes.
Lamp CRI	see nm range for colours.
LED Life	50.000hrs [CIE electronic parts default].
Optic Beams	Narrow 10°, Medium 25°, Med Wide 40°, Elliptical Wall Wash [15°x60°] Wide c.130° [No Optic].
LED Colours	Primary Mono's & RGB - Full Colour Change -DMX 512.

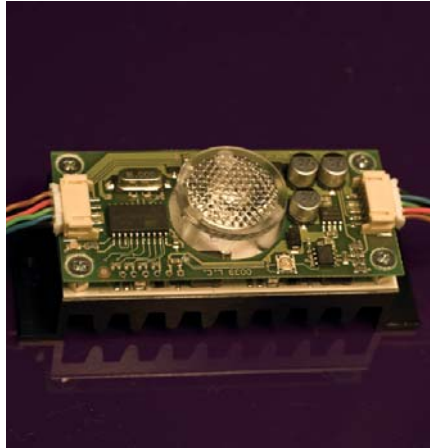
Electrical Data

Voltage	24Vdc input.
Load Watt	3W [mono] 5.3W [RGB].
Load Current	700mA.
Remote Gear	24Vdc Power Supply Unit [PSU].
Configuration	CV [Constant Voltage].
Control	PCB on board CC [current controller]. Via 3 signal cables to R.G.B current controllers [Interface required].
Data Protocol(s)	DMX 512.



Colour Consistency :
1 MacAdam Ellipse <100K

IP20



Description

A lighting designers professional tool with the latest RGB full colour 5.3W or Mono 3W powerLED's with on board circuitry and individual addressable chips for singular DMX control. Enabling chasing affects and / or dynamic light movement in single, single mixed or full RGB colours. With same or mixed optics [interchangeable flexibility]. A true theatrical lighting tool. Made for quick & easy plug & socket link-chain mounting in linear arrays with direct easy 24Vdc SELV [Safe Extra Low Voltage] powering. Ideal for internal applications of ceiling pelmets, alcoves, architectural soffits, floor troughs and internal architectural fabric. Wide-flood of 130° or with additional push-fit optics of Elliptical wall-wash 15°x60°, Narrow 10°, Medium 25° & Wide 40°. Variable cable connectors and spacing centres allows true infinite flexibility. Bulk PSU (Power Supply Units) for easy remote gear installation. Full photometrics available.

Construction & Finishes

- Double-tiered Printed Circuit Board - finished green.
- Extruded aluminium heat sink - anodised black finish.
- Clear optical lenses - Acrylic PMMA.

Main Features

- Benefits multiples of 20 [mono] 10 [RGB] unit chains linked in series. [for connection chains from typical 1 to 2m] [thereafter new parallel power joint connection] [signal DATA control cables may pass through all boards]
 - Bulk 30 metre+ remote 24Vdc PSU powering.
 - Easy quick Install - with Plug & Play connectivity.
 - CONTROL via DMX language
 - High output / high bin quality Power LED.
 - Curved & irregular shaped installations possible.

Mounting

- M3 holes for screw fixing or flat resin bonding or for attachment to flexible PVC mounting channel accessory
- Core Connectors Live [Red] & Neutral [Black] power feeds. 1 [mono] or 3 integrated RGB signal cables

Connection Diagram 7.1

- Connection is for CV - Constant Voltage for use with remote 24Vdc PSU [Power Supply Unit] from 15 to 30 metres distance. See Connection Diagram over page .

Standard Colours

- Warm White - 3000K - CRI = 93%
- Neutral White - 4000K - CRI = 93%
- Cool White - 5500K - CRI = 80%
- Royal Blue - 457nm
- Red - 625nm
- Green - 525nm
- RGB Colour Change .



Flexible track channel for quick and easy assembly










Links can be ordered pre-assembled as extra accessory.


Product Order Codes








Due to LED technology advances increased lumen packages can be readily anticipated.

Wide 130° Archiled Chaser - On-Board DMX address for monochromatic & RGB - No Optic - Wide Open to 130°








130°	 ARC.CH3.NO	CRI = 93	ChaseWhite3000K	3W	- 72/126lm	No Optic - 126°
	 ARC.CH4.NO	CRI = 93	ChaseWhite4000K	3W	- 76/133lm	No Optic - 126°
	 ARC.CH5.NO	CRI = 80	ChaseWhite5500K	3W	-100/170lm	No Optic - 127°
	 ARC.CHB.NO	457nm	Chaser Blue	3W	- 22/39lm	No Optic - 130°
	 ARC.CHR.NO	625nm	Chaser Red	3W	- 48/84lm	No Optic - 130°
	 ARC.CHG.NO	525nm	Chaser Green	3W	- 70/123lm	No Optic - 130°
	 ARC.CHRGB.NO	RGB	Chaser RGB	5.3W	- 105lm	No Optic - 130°

Elliptical° Archiled Chaser - On-Board DMX address for monochromatic & RGB - Elliptical Optic - 15° x 60°










	ARC.CH3.EL	CRI = 93	ChaseWhite3000K	3W	- 72/126lm	Elliptical 15° x 60°
	ARC.CH4.EL	CRI = 93	ChaseWhite4000K	3W	- 76/133lm	Elliptical 15° x 60°
	ARC.CH5.EL	CRI = 80	ChaseWhite5500K	3W	-100/170lm	Elliptical 15° x 60°
	ARC.CHB.EL	457nm	Chaser Blue	3W	- 22/39lm	Elliptical 15° x 60°
	ARC.CHR.EL	625nm	Chaser Red	3W	- 48/84lm	Elliptical 15° x 60°
	ARC.CHG.EL	525nm	Chaser Green	3W	- 70/123lm	Elliptical 15° x 60°
	ARC.CHRGB.EL	RGB	Chaser RGB	5.3W	- 105lm	Elliptical 15° x 60°








Narrow 10° Archiled Chaser - On-Board DMX address for monochromatic & RGB - With Optic - Narrow°

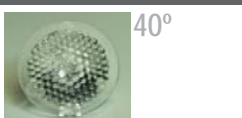
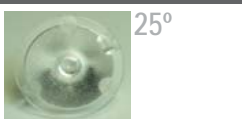
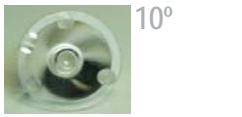
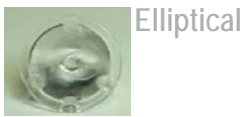
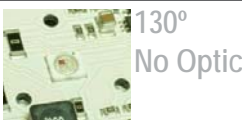
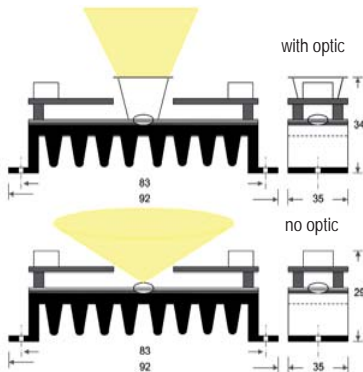
10°	 ARC.CH3.10	CRI = 93	ChaseWhite3000K	3W	- 72/126lm	Narrow - 10°
	 ARC.CH4.10	CRI = 93	ChaseWhite4000K	3W	- 76/133lm	Narrow - 10°
	 ARC.CH5.10	CRI = 80	ChaseWhite5500K	3W	-100/170lm	Narrow - 10°
	 ARC.CHBL.10	457nm	Chaser Blue	3W	- 22/39lm	Narrow - 10°
	 ARC.CHR.10	625nm	Chaser Red	3W	- 48/84lm	Narrow - 10°
	 ARC.CHG.10	525nm	Chaser Green	3W	- 70/123lm	Narrow - 10°
	 ARC.CHRGB.10	RGB	Chaser RGB	5.3W	- 105lm	Narrow - 10°

Medium 25° Archiled Chaser - On-Board DMX address for monochromatic & RGB - With Optic - Medium 25°

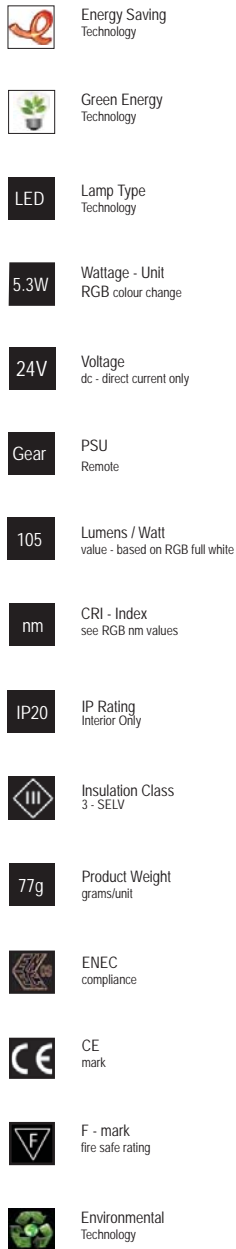
25°	 ARC.CH3.25	CRI = 93	ChaseWhite3000K	3W	- 72/126lm	Medium - 25°
	 ARC.CH4.25	CRI = 93	ChaseWhite4000K	3W	- 76/133lm	Medium - 25°
	 ARC.CH5.25	CRI = 80	ChaseWhite5500K	3W	-100/170lm	Medium - 25°
	 ARC.CHB.25	457nm	Chaser Blue	3W	- 22/39lm	Medium - 25°
	 ARC.CHR.25	625nm	Chaser Red	3W	- 48/84lm	Medium - 25°
	 ARC.CHG.25	525nm	Chaser Green	3W	- 70/123lm	Medium - 25°
	 ARC.CHRGB.25	RGB	Chaser RGB	5.3W	- 105lm	Medium - 25°

Med Wide 40° Archiled Chaser - On-Board DMX address for monochromatic & RGB - With Optic - Medium-Wide 40°

40°	 ARC.CH3.40	CRI = 93	ChaseWhite3000K	3W	- 72/126lm	Med Wide - 40°
	 ARC.CH4.40	CRI = 93	ChaseWhite4000K	3W	- 76/133lm	Med Wide - 40°
	 ARC.CH5.40	CRI = 80	ChaseWhite5500K	3W	-100/170lm	Med Wide - 40°
	 ARC.CHB.40	457nm	Chaser Blue	3W	- 22/39lm	Med Wide - 40°
	 ARC.CHR.40	625nm	Chaser Red	3W	- 48/84lm	Med Wide - 40°
	 ARC.CHG.40	525nm	Chaser Green	3W	- 70/123lm	Med Wide - 40°
	 ARC.CHRGB.40	RGB	Chaser RGB	5.3W	- 105lm	Med Wide - 40°



RGB full
colour change





Colour Consistency :
1 MacAdam Ellipse <100K

Accessories



Link Plug Cable Connectors

Connector plugs to join Archiled Chaser boards. Maximum 10 RGB / 20 mono in series.			
CON.CH100	for 100mm LED Pitch	Circuit Controlled	Connector L = 40mm
CON.CH150	for 150mm LED Pitch	Circuit Controlled	Connector L = 90mm
CON.CH200	for 200mm LED Pitch	Circuit Controlled	Connector L = 140mm
CON.CH250	for 250mm LED Pitch	Circuit Controlled	Connector L = 250mm



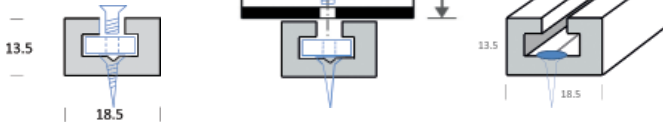
PSU - 24Vdc Power Supply Units

Standard Power Supply Units in 24Vdc enable bulk powering. Match to 110% of load or VA rating shown. Power supplies are the same as for all versions Archiled.
- specification order codes are as shown on page 330 - 332.



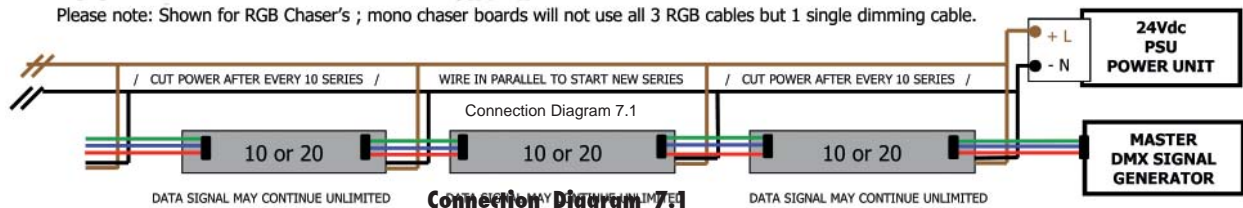
Flexible PVC Mounting Channel

A light-weight flexible PVC channel with bend radii to 1.0metre allows bulk loading of Archiled units. The mounting channel is the same for all versions of Archiled
- specification order codes are as shown on page 115.



Connection Diagram 7.1

The diagram below shows how many Chaser-DMX boards are typically wired / cabled from the PSU. Archiled's in RGB or Mono Chaser-boards, given their load, current rating and amperage are able to plug connect 10 or 20 pcs at time respectively in "series-type"connection. This is shown in the diagram as the symbol below o - 10 or 20 - o, after which a new parallel feed is required for the power. The DMX signal via the signal cables may continue indefinitely, almost unlimited in distance & number through the boards, although for wiring purposes the installer may find it easier to use multi-5-core cable for RGB / multi-3-core for Mono boards and use combined power and data, picking up new feeds together.
Note 7.2 Where multiple PSU's are used their respective -VE negative Neutral terminals must be "bridged" (ie. connected across each other).



After a maximum series connection of 10 RGB / 20 mono Archiled boards a new parallel feed from the 24Vdc PSU is required. Signal data from the interface can pass through all boards – but be sure to "cut" the power cables after the maximum.

Mounting, Design & Layout Guide

- 1) Uniformity**
Uniformity and pitch is lighting design led. Uniformity holds until spacing max 150 - 250mm without optics, much less for LED's with narrower beams.
Common Pitch spacing is shown in Table 8.1 below. The default pitch is 100mm and respective plug connectors supplied being 40mm in length.
- 2) Pitch & Board Spacing**
Common Pitch spacing is shown in Table 8.1 below. The default pitch is 100mm and respective plug connectors supplied being 40mm in length.
- 3) Planning Layout**
In setting and laying out the boards it is recommended that the installer uses for ease a spacing block. The gaps between the link boards is as shown in Table 8.1. This table also shows the max. nos of boards per metre and the load per metre.
- 4) Nos of boards in series.**
A maximum of 10 RGB / 20 Mono Archiled link boards can be used in 'series', after which the boards must not be linked and a new parallel power feed attached. See Connection Diagram 7.1.
- 5) Power Connection**
The boards are powered by Constant Voltage meaning the current controllers are already mounted on the circuits.

- The PSU & direct 24V power feed can be attached straight to the boards. See Diagram 7.1 above
- 6) RGB DMX Signal Control**
Colour change, brightness dim levels & dynamic control is via DMX protocol direct to the current controllers on the PCB boards. Since the boards and plug cable connectors have an integrated circuitry the signal cable can be left between all boards on a circuit. See Diagram 7.1. Control does not require an interface unit, since each individual Chaser Archiled has on-board DMX addressability. The signal from the master controller is therefore direct.
 - 7) Voltage Drop**
Volt drop issues are always of concern with LED installations. A guide is shown on page 323 of the catalogue.
 - 8) Mounting**
The boards should be screw fixed or securely bonded depending on the surface to be fixed. A flexible PVC tray which can curve can be pre-loaded at the correct pitch for ease of installation. Other pre-mounted custom profiles and trays can be made and assembled to architectural needs for larger projects. Enquire on application.

Table 8.1 Common Chaser Pitch Spacings

LED PITCH	Connector	Chaser Boards	Chaser Board	RGB Load	mono Load
SPACING	Length	per / metre	Spacing Gap	Watts/metre	Watts/metre
100mm	40mm	10	8.5mm	53W	30W
150mm	90mm	6.7	58.5mm	36W	20.1W
200mm	140mm	5	108.5mm	27W	15W
250mm	190mm	4	158.5mm	22W	12W

Table 6.3 Maximum Chaser In-Series Lengths
Table 2.3 shows based on the RGB pitch [and Watts per metre] what the maximum length of run is through the boards is possible before a new parallel power feed is required. Pitch is expressed as LED to LED or board centre to centre.

CHASER PITCH	Max. Run Length	RGB Load	mono Load
SPACING	(metres)	Watts/metre	Watts/metre
100mm	1	53W	30W
150mm	1.5	36W	20.1W
200mm	2	27W	15W
250mm	2.5	22W	12W

Table 2.2 & 6.2 Maximum Volt Drop
Table 2.2 [mono - Page 111] & 6.2 [RGB - Page 117] shows the designer a guide maximum. distance length for MONO & RGB boards for sole cable loads based on the maximum volt drop / amperage for typical cable core sizes. These tables also apply for mono & RGB chaser boards respectively. They are however an approximation for designers to appreciate. Actual volt drops can only be verified by exact cable specifications and site conditions. These are the domain and remit of qualified electrical design teams and not the lighting designer, this catalogue or these tables. All values should be verified by others and checked meticulously.

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NEON TYPE

MONO - 5W

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RGB - 5W-11W

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NEON LEDLINE - mono

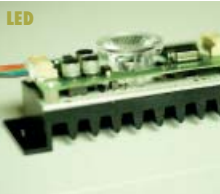


NEONLEDLINE - RGB

LINKS & CHAINS

POWERLED

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ARCHILED LINKS - Chaser

RGB - 5.3W

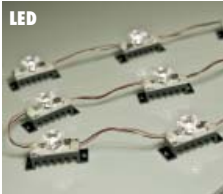
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ARCHILED LINKS - RGB

MONO - 3W

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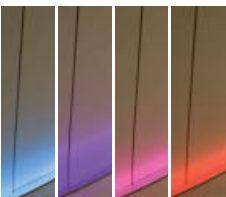
ARCHILED LINKS - mono

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ATRIA & STAIRWELLS

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FOOTBRIDGES

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FASCIAS

TUBULAR

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SCORRENTE

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AMBIENTALE

FLEXIBLE CONTINUOUS

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STRIPLED FLEXI - mono

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STRIPLED FLEXI - RGB

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SIDELED mono & RGB

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GLASS SHELVING

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BAR

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LANDSCAPE

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CEILING ALCOVES

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RGB COLOUR CHANGE

IN-GROUND MARKER

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XACOTO

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AIRPORT FLOORING