



903 Series

LumiStrip™

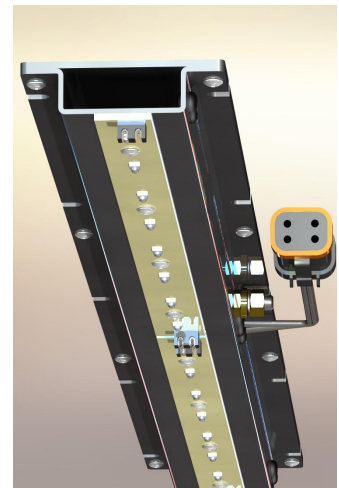


Long Life Reliability
does not cost the earth

LPA-EXCIL ELECTRONICS

Feature Summary

- High reliability LED technology.
- LED life expectancy greater than 70,000hrs to 70% of initial light output.
- Ultra-high reliability design - 480,000 hours MTBF*.
- Zero maintenance costs.
- Significantly reduced weight compared to fluorescent luminaires.
- Illumination levels exceed industry requirements.
- Offers energy savings compared to conventional light sources.
- Integrated power supply for direct connection to vehicle 110V DC systems.
- LED failure bypass protection to prevent the failure of one LED extinguishing any other LED.



Product Codes

- Individual products in the LumiStrip™ range are referred to by product

903 Product Range Standard Features	
Input Voltage Range	67-140Vdc
Input Connector	4-Way Deutsch DT
Earth Connector	M5 Earth Stud

Product Code # Non-Dimmable	903108	903106
Equivalent Fluorescent Luminaire Length	18WT8 593mm	36WT8 1186mm

Product Code # Dimmable	903111	903109
Equivalent Fluorescent Luminaire Length	18WT8 593mm	36WT8 1186mm

* MTBF calculated using US MIL-217F GM standard @ 40°C for 593mm LumiStrip™



Input Specification

	All Variants	
Acceptable Input Supply Voltage Range	67-140	V DC
Input Voltage Limit Without Damage	154	V DC

DC Input Voltage	67	80	100	110	140	V
DC Input Current (593mm)	255	218	182	170	140	mA
Input Power (593mm)	17	18	18	19	20	W
DC Input Current (1186mm)	522	450	366	341	386	W
Input Power (1186mm)	35	36	37	38	40	W

	All Variants	
Peak Inrush Current	22 (@ 110V DC)	A
Time to Half Value	5 (@ T=25°C)	µs

Output Specification

Illuminance (Cool White)	450*	Lux
Percentage Illuminance change due to Supply variation from nominal.	±5	%

	Colour Temperature	
Cool White	5000 - 5750	k

	LED Data	
Efficacy	80	Lum/W
Total Lumens	2560 (1186mm) 1280 (593mm)	Lumens

Nominal LED Current@110VDC	325	mA
Nominal LED Power@110VDC	1.07	W
Total LED Power (593mm)	17.1	W
Power Converter Efficiency	90	%

* Input supply 110VDC. Ceiling height 2.2m. Measurement point 0.8m from floor, perpendicular to 593mm LumiStrip™ centre.



Environmental Specification

All Variants			
Dry Heat (steady state)	RIA 13 1990 1995	70	°C
		6	Hrs
Shock and Vibration		EN50155 & EN61373	
Sealing		None	
Operating Temperature Range		-30 to 55	°C
Weight		0.860 (1186mm) 0.470(593mm)	kg
Lumen Maintenance (LED Life to 70% of the initial light output)		>70,000	Hrs
MTBF Ground Mobile 40°C		(593mm) 480,000	Hrs
		(1186mm) 245,000	Hrs

Compliance

The 903 Series variants comply with the following standards:

- EN50121-3-2
- EN61373
- EN50155

Safety Specification

All 903 Series variants come equipped with the following protection circuitry as standard:

- DC input voltage reversal (Non destructive).
- Input transient protection.
- Under voltage protection.
- Input fuse to protect against consequential failures or damage.
- The failure on any LED(s) will not effect the operation of the remaining LEDs.
- Complies with the requirements of BS6853 for a cat 1B.

* All immunity tests comply with performance criteria 'A'

Installation Guide

General Installation Notes: 903 Series Products

Maximum Supply Cable Impedance (Per Input)	
Input Voltage V DC	Impedance Ω*
110V	2

* Source impedance value MUST be divided by the number of LumiStrips™ on each supply cable

Input Connector - Deutsch DT	
Pin 1	110VDC
Pin 2	0VDC
Pin 3	(Optional) Dimming Signal
Pin 4	(Optional) Dimming Signal Return

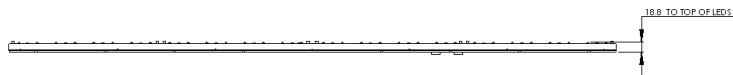
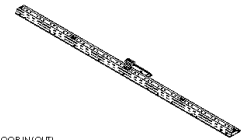
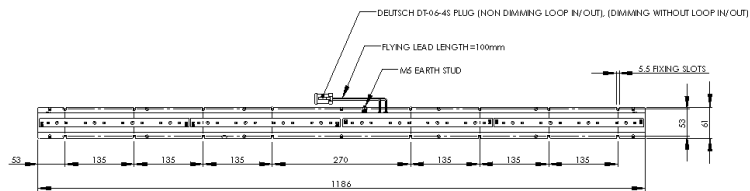
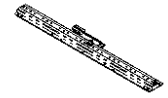
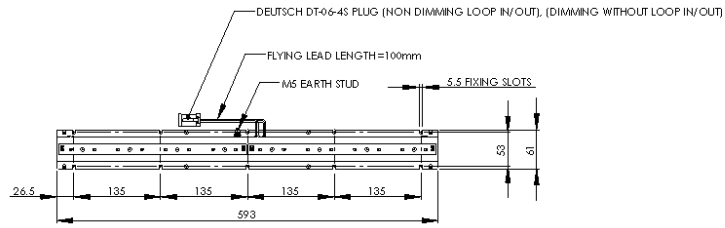
Dimming (Optional)

Dimming Parameters	
Dimming I/P Interface	15V PWM Signal
Minimum Dim Level	15% of Maximum
Default State (loss of input signal)	100% Illumination

The function of dimming can be interfaced to the vehicle via a LPA-Excil Electronics Dimming control unit. The key functions of the control unit are listed below:

- Operating supply range: 60V - 140VDC
- Emergency mode (dimmed illumination) activated via 110VDC (67-140VDC) logic signal
- Differential dimming signal isolated from vehicle 0V.
- Two modes of operation, Normal mode for maximum illumination (presetable internally) and Emergency mode (presetable internally) for dimmed illumination.
- Complies with all statutory regulations including EMC, Shock and Vibration, Environmental etc.
- Dimensions, 150mm W x 100mm H x 100mm D
- Sealing to IP54

Mechanical Specification



LPA-Excil makes every effort to ensure the accuracy of the information contained within this datasheet. However we reserve the right to withdraw and re-issue this datasheet at a later date.

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