

Gardasoft VCubed Ultra Bright Linelights

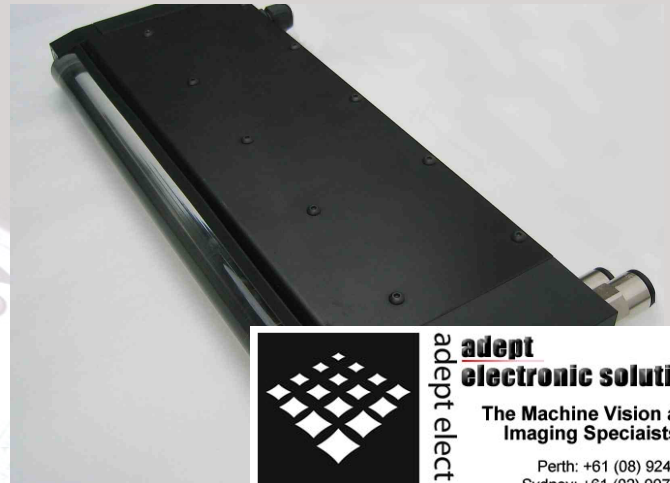
Very High Intensity Linelights for Linescan Applications

Faster Linescan Line Rate

Water Cooled High Performance

Replacement for Fibre Optic Lighting

Up to 3 metres long



Faster Linescan Systems

Gardasoft VCubed VLX2 water cooled linelights give extremely bright, uniform lighting focussed to a narrow beam. The limiting factor in many linescan systems is the intensity of the line light being used. By using VLX2 lighting the line scan acquisition can run many times faster than with conventional air-cooled LED lights allowing higher production speeds and/or higher resolution images.

Typical applications include:

Web inspection
Surface inspection
Pharmaceutical quality control
PCB and assembly inspection

Film/foil inspection
Rail/road inspection
Food industry

Replaces Fibre Optic Linelights

The VLX2 series of LED Line Lights have been designed to provide a better alternative to fibre optic based systems. Compared to fibre optic light sources, there are no expensive bulbs to change saving money and reducing process down-time. The colour of the LEDs will remain much more constant than with filament or discharge bulbs.

Intensity profile adjustment allows the profile to be varied along the length to compensate for other geometry variations in the system, resulting in even illumination at the camera sensor.

Complete Water Cooled Solution

Water cooling is commonly used in industrial applications and is simple to implement. All that is required is a cooler, flexible plastic pipework and self-sealing pipe connectors. Gardasoft can supply all of this as a ready to connect kit. Existing on-site cooled water can also be used.

Water cooling allows the VLX2 lights to run much brighter whilst still maintaining the lifetime of the LEDs in excess of 50000 hours for all environmental conditions. Great emphasis has been placed upon intensity and thermal management to ensure efficient, reliable and consistent operation and fast "warm up" time. The units will automatically switch off in the event of cooling failure to prevent damage.

Control Interface

The light output from the units can be varied over a very wide range and is either preset or controlled via a communication interface. The system temperature and individual LED device failure detection can be monitored.



Specification

Parameter	VLX2
Line uniformity	> 95%
Standard line light lengths	250mm, 375mm, 500mm, 1000mm, 1500mm, 2000mm others available on request
Profile adjustment resolution	62.5mm segments
Working distance	37mm fixed or 90mm to 150mm variable Other options available.
Line Thickness at Working Distance	3mm
Supply Voltage	24V to 26VDC
Supply current at 100% brightness	16A per metre
Control/Communication	RS232
Modulation Input	5V to 24V opto-isolated
Healthy output	Open collector switching 24V, 100mA
Lifetime (degrade to 70% brightness)	>50000 hours at 100% ~20000 hours at 140%
Width	30mm
Height	109mm
Length	Lighting length plus 52mm
Mounting	M5 tapped holes
Weight	Approx 5.6Kg per metre
Operating Temperature	-20°C to +50 °C.
Storage Temperature	-20°C to +70 °C
Environmental Protection	IP50 standard, IP65 optional



Colour	Peak Wavelength	Luminous or Radiometric Output/m ¹	Intensity at 3mm Line Thickness ³
White	Colour temperature 6500K	23000lm	2300kLux
Green	530nm	16000lm	1600kLux
Red-Orange	617nm	9600lm	960kLux
Red	627nm	9600lm	960kLux
Blue	470nm	4800lm	480kLux
IR	740nm	11W	1150W/m ²
	850nm	19W	1900W/m ²
	940nm	7W	675W/m ²
UV	365nm	33W	3300W/m ²
	405nm	38W	3800W/m ²

1 - Total power output from the LEDs (calculated)

3 - Intensity at illuminated surface Based on 20mm optics, working distance 37mm. 110mm WD will be slightly less

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Local Distributor:



Castle Acres, Elsworth
Cambridge, CB23 4JQ, UK
Tel: +44 1954 200343
Fax: +44 1954 204343
Web: www.gardasoft.com