

# LC200 - LED Lighting Controller

*Now lighting can be overdriven from a lower voltage supply*

Voltage step-up

Safe Sense™ technology

Continuous fault prediction and detection

Cut the cost of using LED lighting



Gardasoft Vision have designed a revolutionary new Lighting Controller to follow on from the very successful PP600. It contains several unique features which are covered by a patent application filed by Gardasoft Vision.

The LC200 is a single output constant current supply providing very stable continuous or pulsed output for LED lighting used in machine vision. It includes Gardasoft Vision's very popular "Display-and-Buttons" interface which allows the unit to be configured in seconds.

**Problem**



**Solution**



24V Lighting cannot be pulsed at higher voltages when using a 24V power supply.	The LC200 can step the input voltage up to 35V so that it can overdrive 24V lighting.
Most LED Lights are specified with a voltage rating, even though LED lighting is more stable if driven using a constant current.	The LC200 can automatically sense the current rating of lighting connected to it. The LC200 varies the output voltage to maintain a constant output current.
LED Lighting degrades over time, which can cause machine vision systems to become less reliable.	The LC200 monitors the output voltage or brightness of lighting and generates an alarm if degradation exceeds acceptable limits.
Applying the wrong current or voltage to lighting will damage or destroy it.	The LC200 prevents the voltage and current limits being exceeded, but still allows limited overdriving when pulsing.

## LC200 Range

Model	Lighting
LC200-12V	12V rated lights
LC200-24V	24V rated lights
LC200-350	350mA rated lights
LC200-700	700mA rated lights
	Other versions available



The LC200 lighting controller provides repeatable intensity control of LED lighting for machine vision applications. It includes the power regulation, timing and triggering functions required for machine vision systems. Two modes of operation are provided:

- Continuous:** Output is a continuous current
- Pulsed:** Output is pulsed once per trigger

The LC200 is set up using three push buttons and a two digit display. The setup is saved in non-volatile memory so that the LC200 will resume operation after a power cycle.

## Safe-Sense™ Technology for Voltage Rated Lights

The LC200-12V and LC200-24V provides automatic operation with voltage-rated lighting, providing plug and play operation. Using the technology set out in our patent application, the LC200 detects the connection and disconnection of a light. On connection, the LC200 will automatically sense the voltage and current rating of the light.

## Continuous Monitoring for Fault Detection

The LC200 monitors the output voltage and current continuously for sudden and long term changes. When an unexpected change occurs, a fault is alerted and the output is disabled. The LC200 can detect lighting that fails open or short circuit, lighting which is overheating or degrading over time and single LED failures, depending on conditions.

## Specification

	LC200
Output channels	One constant current output channel, continuous or pulsed
Output current	Up to 1.2A continuous, 2A pulsed
Trigger inputs	One opto-isolated digital input. Requires 5V to 24V.
Pulse width timing	From 100us to 10ms in steps of 100us. Timing accuracy 2us.
Delay from trigger to pulse	From 100us to 10ms in steps of 100us. Timing accuracy 2us.
Supply voltage	24V DC
Output voltage	0V to 35V
Dimensions	23mm long by 57mm wide by 73mm high (excluding DIN rail adapter)
Weight	40g
Mounting	DIN rail

Other controllers are also available with up to 8 channels, higher output currents and more complex output control. For further information see [www.gardasoft.com](http://www.gardasoft.com).

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