Stand 02.07.2018

Cameo Laser Series

Features

1250 Series (Standard)

- Simple thread mounted industrial laser module
- Compact length for restricted areas
- User focusable
- Reliable connector construction
- Isolated metal case
- Designed for continuous cool running
- Simple to mount
- Wide range of focus distances

1260 (Gating)

- Offers the following additional features
- Third wire input facilites rapid switching/ gating
- Switching speeds up to 100kHz
- Operates directly from binary logic signals
- Effective in wide variety of light conditions
- Controlled chopping minimises power consumption and extends life
- Low speed enable input

The 1250 Cameo is a unique, versatile, high quality industrial laser module widely used in alignment applications. The 1260 Gated Cameo provides a switchable control input to turn the laser beam ON/ OFF at high speed. A lower speed enable input is also provided.

Many applications require a chopped light source or need digital information to be encoded on the beam.

Using an appropriate detector, the laser light can be distinguished from other light sources, which might affect the alignment system.

The gated beam can also be detected at very low levels, making long range operation possible.

The isolated threaded mount houses an industrial grade laser diode, adjustable collimating lens and protected connectorised drive electronics.

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Lens Options

The Cameo series has four lens options:

C2 Lens	2 mm aperture lens
HG Lens	High quality aspheric lens
S Lens	Standard collimating lens
L8 Lens	8° short line lens

	C2 Lens	**S Lens**
Beam Size at Aperture	2 mm	3 by 1 mm
Beam Size at Nearest Focus	50 mm	20 by 60 mm
Beam Divergence	0.2 mrad	0.5 by 0.2

Technical Information

Mechanical Specifications

Dimensions (L x W x H)		24 x 14 x 14
Housing		Brass M12 thread front and black plastic back
Isolated Body		Yes
Input Leads	**1250 Version**	2, Red (+ve), Black (0V)
	1260 Version	4, Red (+ve), Black (0V), Yellow (Control), Blue (Enable)
Lead length		300 mm

Optical Specifications

Diode Power	1 mW to 3 mW
Wavelength	635 nm to 780 nm
Power Stability	0.15 % / °C
Wavelength vs Temp	0.25 nm / °C
Bore Sighting	< 3mrad
Focus Range	30 mm to infinity
Astigmatism	30 µm
Beam Alignment	5 mrad
Pointing Stability	10 µrad

Environmental Specifications

Operating case temperature	-10°C to +40°C
Storage temperature	-25°C to +85°C
Operating Humidity (% RH)	90
MTTF at 25°C	25,000 hours

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Dynamic Output

Control input rise/ fall time	5 µs
Enable input delay time	2 ms

Electrical Specifications

Input voltage (+ve) Red		3.0 Vdc to 6 Vdc
Input voltage (-ve) Black		0 V
Control Lead Yellow (1260 only)		off < 50 mV on > 2.0 V
Enable Lead Blue (1260 only)		off <0.4 V on > 2.0 V
Connector type	**1250 Version**	JST 2 pin
	1260 Version	JST 4 pin
Reverse – Polarity protection		Yes
Operating Current		35 to 45 mA

Specifications are typical at 25°C unless otherwise stated

Standard Wavelengths and Power Options

635 nm	1,3 mW
650 nm	1,3 mW
670 nm	1,3 mW
780 nm	1,3 mW
Custom	Please call for further details

Please note wavelength tolerance can vary typicaly by + 10nm.

Mounting

The M12 x 1 threaded body provides a stable and convenient mounting method which also provides effective cooling of the laser diode to maximise the operating life. The metal body should be in good thermal contact with the mount, which should not be allowed to exceed the maximum case temperature.

Gated Cameo Application Guide

Introduction

A common requirement for applications which use photodetectors, cameras and other non-visual sensing is the ability to rapidly switch the laser output ON and OFF. Simply applying and removing the supply voltage is rarely satisfactory and in certain cases can result in the destruction of the module. This is because laser diodes are very sensitive to spikes and surges, which are often the result of uncontrolled supply switching. To overcome this limitation, the 1260 gated Cameo has two additional inputs that are provided to control the output of the laser module in a reliable and predictable way.

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Input Description

Some applications require a simple, slow speed ON/OFF switching. The 1260 series eliminates the requirement to provide an external switching device by providing a logic compatible enable input, capable of operating from low power logic and micro-processors. In this OFF condition, the module draws virtually no current and no light is emitted.

In applications which require higher speed switching, a second input is provided which directly controls the laser output. This input may be used in either of two ways, digital and analog control.

Digital Control

A logic LOW level turns the output completely OFF. However, applying a HIGH turns the laser ON after a control input delay. The output rise time after this delay is then much faster. This sets the maximum rate at which the module can switch fully ON and OFF.

Analog Control

This is the fastest way to control the laser output. With analog control, the output power can be changed from the maximum rated power to a low level, typically 1-2% of the maximum. By preventing the laser output turning OFF completely, there are no delays and the frequency response is maximised.

Modulation & Synchronization

Using the yellow control lead the gate cameo laser may be modulated or synchronised by using an external signal. Required voltage range is 0 to +1 Vdc (to set the maximum intensity), frequency range is DC to 100 KHz.

Quality & Warranty

The Cameo is supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

Global Laser
Are a ISO9001:2000 registered company

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Laser Safety

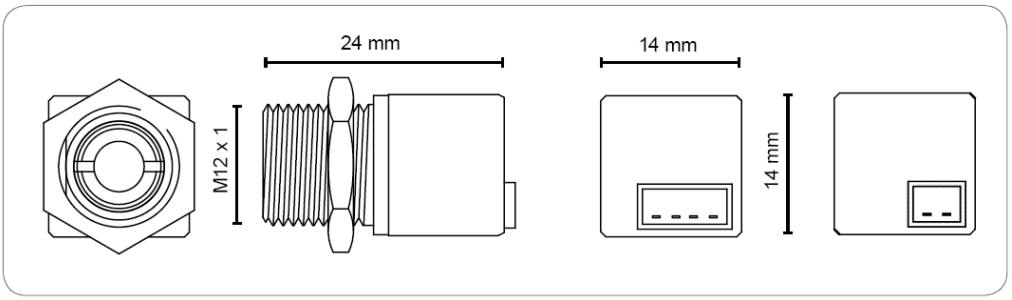
Our lasers are compliant to IEC 60825-1 standards. The lasers fall within one of the following classifications depending on power, wavelength and fan angle. The labels supplied with the units are shown below.

OEM Laser Label

Class 2M Laser Label

Class 3R Laser Label

Dimensions



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