

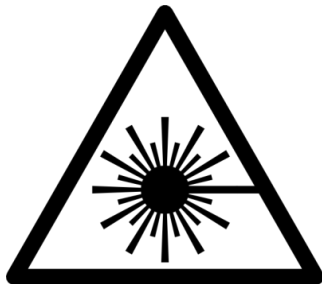


[www.lascells.com](http://www.lascells.com)

# DUAL COLOUR LASER

## LA20-880

### INSTRUCTIONS FOR USE



LASER RADIATION  
DO NOT STARE INTO BEAM  
CLASS 2 LASER PRODUCT

# DUAL COLOUR LASER

## LA20-880

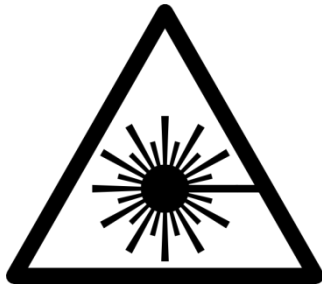


### INTRODUCTION

The Lascells dual colour laser contains two independently controlled laser diodes, one at the 650nm red and a second at 532nm green. Both lasers are switched and can be used independently or simultaneously.

### SAFETY

The apparatus is designated a Class 2 Laser product.



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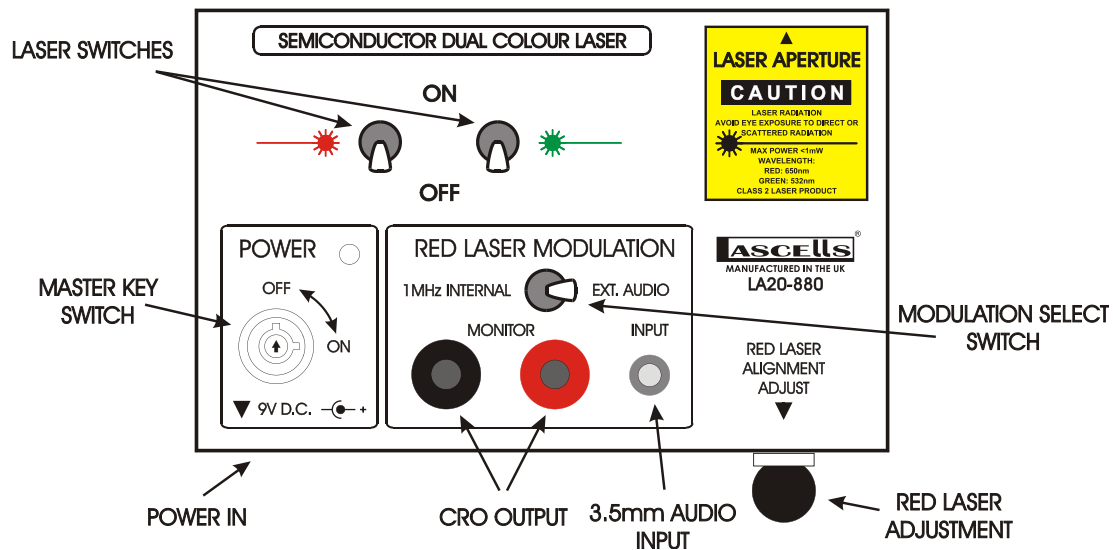
**The unit contains no user serviceable parts; no attempt should be made to open the unit as this may increase the output power and require reclassification. If the unit is damaged in any way please return to the manufacturer for service.**

### SPECIFICATIONS

Parameter	Red Laser	Green Laser
Wavelength (nm)	$650 \pm 5$	$532 \pm 5$
Beam Divergence (mRad)	1.5	1.5
Operation Mode	Continuous	Continuous
Output power (mW)	<1 mW Combined	

# SETUP

ENSURE THE KEY SWITCH AND BOTH LASER SWITCHES ARE IN THE OFF POSITION BEFORE POWER IS APPLIED



## MASTER KEY SWITCH

The master key switch controls power to the unit, with the switch in the off position and the key removed no power is available and the apparatus is safe.

When the master switch is in the on position the 'POWER' LED indicator is illuminated regardless of laser output to indicate that the unit is live. Both lasers may now be switched independently.

## ALIGNMENT ADJUSTMENT

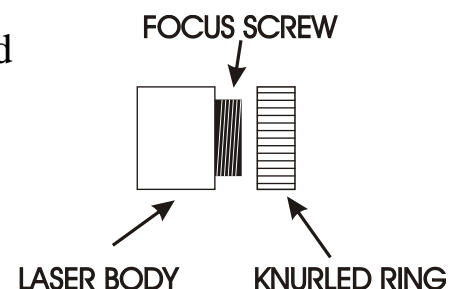
The red laser alignment may be altered by loosening the black ball screw, adjusting the red laser lever and retightening in the desired position. (Take care to not completely remove or over tighten the ball screw.)

## FOCUS ADJUSTMENT

The red laser focus is factory set but may need adjustment depending on use.

Carefully unscrew and remove the knurled ring and rotate the black focus screw until required focus is achieved. Replace the knurled ring.

**CAUTION:** The focus ring is tensioned using a spring, total removal of the focus ring will allow this spring to come free of the housing.

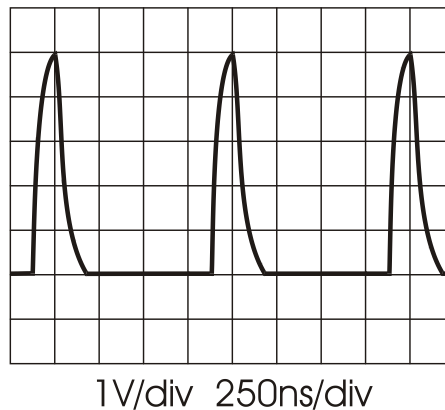


# MODULATION

The laser may be modulated at 1MHz via an internal oscillator or at audio frequencies via a 3.5mm jack connector. Selection of modulation source is via the modulation select switch on the front panel. (With no external source connected and the modulation switch in the EXT. AUDIO position the laser output will be unmodulated.)

## 1MHz MODULATION

With the modulation select switch set to 1MHz INTERNAL the red laser output will be modulated with 1MHz pulses, these may be observed via an oscilloscope connected to the MONITOR sockets on the front panel



When combined with the Lascells Laser Receiver and a dual beam oscilloscope these pulses can be used to determine the speed of light in the lab.

## AUDIO MODULATION

With the modulation select switch set to EXT. AUDIO an audio input may be applied from an external source via a 3.5mm jack. The red laser will then be modulated by this source to be received by the Lascells Laser Receiver.

(THIS INPUT IS 2V PK-PK MAX - DO NOT APPLY AMPLIFIED SIGNALS TO THIS INPUT)

**Lascells Ltd.,**

Walkmill Business Park, Sutton Road, Market Drayton, Shropshire. TF9 2HT

Tel 01630 657 801 Fax 01630 656726

**[www.lascells.com](http://www.lascells.com)**