

Laser Alignment System 645nm

Part Numbers	Power / Wavelength	Description
300-0107-00	5mW / 645nm	Dot
300-0108-00	5mW / 645nm	88° Line
300-0109-00	5mW / 645nm	58° Line
300-0110-00	5mW / 645nm	58° Cross
300-0112-00	-	88° Line Optic Head
300-0113-00	-	58° Line Optic Head
300-0114-00	-	58° Cross Optic Head
300-0116-00	-	Mounting Bracket
300-0117-00	-	4 Outlet Junction Box
300-0118-00	-	2 Metre Power Lead
300-0119-00	-	5 Metre Power Lead
300-0120-00	-	110V AC/5VDC US Wall Plug Adaptor
300-0337-00	-	230V AC/5VDC EURO Wall Plug Adaptor
300-0338-00	-	240V AC/5VDC UK Wall Plug Adaptor

Specifications

Output Power	0.1mW to 4.5mW (user adjustable)
Wavelength	645nm visible red
Operating Voltage	3-6VDC
Operating Current	100mA Maximum
Operating Temp.	-10 to +50 degrees C
Storage Temp.	-10 to +85 degrees C
Lifetime	>100,000 hours MTTF at 25 degrees C
Laser Class	3R / 3A (complies with IEC60825, CFR 21 1040.10)
Dimensions	14mm (0.551 inches) dia. x 78mm (3.070 inches)
Housing	Black anodised aluminium

Specifications are subject to change without prior notification. E&OE



Laser safety: Class 3R / 3A lasers produce laser outputs between 1mW and 5mW. They are considered eye safe as protection is afforded by the blink response and other natural reflexes.

However, caution should be observed, as focusing the light through optical aids could represent a danger to the eye.

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645nm Laser Alignment System

300-0100-00 series

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Laser Alignment System 645nm

Product Information

The 300-0100-00 series Laser Alignment Modules offer unrivaled performance and ease of use. They incorporate anti-surge, anti-static and reverse polarity protected electronics, interchangeable pre-aligned optics providing optimum laser beam performance, a scratch resistant glass window to protect the internal optics, a 2.1mm jack socket to ease installation and replacement, (no need to replace existing wiring), and user adjustment of the laser intensity. All this is contained in a 14mm diameter by 78mm long housing.

The Laser Diode Module

The Laser Alignment Modules incorporate a 645nm 5mW visible wavelength laser diode. The laser diode was designed for, and is used in, DVD players, and hence offers extremely high reliability. The intensity of the laser output is user adjustable, (via the access slot in the module housing). The Intensity can be varied from 0.1mW to 4.5mW to suit the material that is being worked on. Power is supplied via a 2.1mm jack socket on the end of the module. The jack socket allows easy installation or replacement of laser diode modules without the need to replace wiring.

The Optics

The Laser Alignment Modules employ high quality glass optics that produce crisp, clean laser outputs. The Optic Heads are interchangeable and only fit into the laser body in one position, providing optimum laser beam performance and eliminating the need for the user to spend time aligning the optic heads. Currently there are 4 output beam patterns available:

1. Dot
2. 88° Line
3. 58° Line
4. 58° Cross

Other beam patterns are available on request.

The interchangeable Optic Heads of the Laser Alignment Modules incorporate a scratch resistant protective glass window to prevent dust and other contaminants entering the module and degrading laser beam performance.

Mounting Bracket

The Laser Alignment Module is supplied with a mounting bracket that enables the position of the output laser beam to be aligned to the work piece and then firmly clamped in place.

Wall Plug Adaptor

The Laser Alignment Module can be operated from any regulated DC supply from 3V to 6V and requires a maximum operating current of 100mA. The appropriate 110V - US, 230V - EU, 240V - UK AC to 5V DC Wall Plug Adaptor, designed specifically to power the Laser Alignment Module, is supplied with each Module.

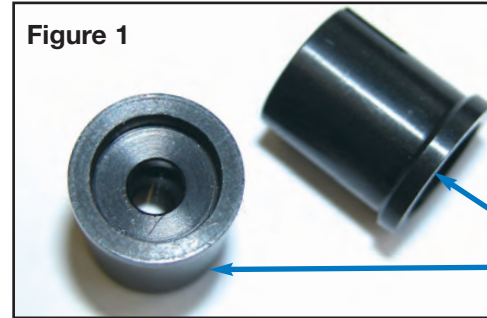
4 Outlet Junction Box

A 4-Outlet Junction Box is available and allows up to 4 Laser Alignment Modules to be powered from 1 Wall Plug Adaptor. The unit has an ON/OFF switch and red LED power on indicator.

Other Lasers available

Higher, (635nm), or lower, (670nm), brightness versions are also available on request.

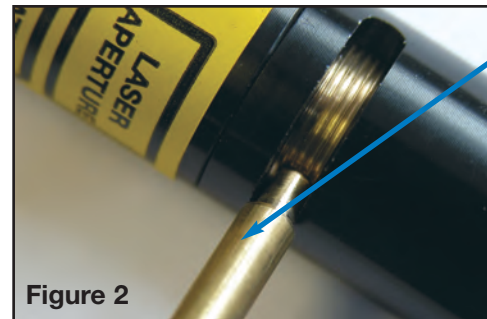
Figure 1



Interchangeable Optic Heads

Ensure 1mm wide slot on the head engages with 1mm pin in laser module housing for optimum laser beam performance. (If you have not engaged 1mm slot, the Optic Head will protrude from laser module body.)

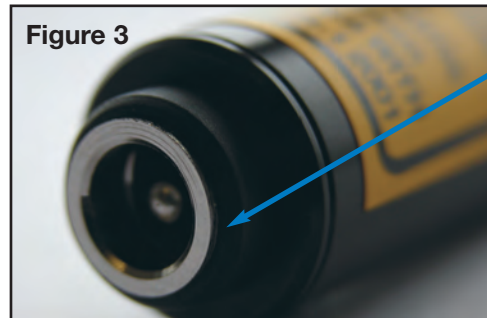
Figure 2



Intensity Adjustment

Adjust laser intensity via this access slot in the laser module body. Use supplied adjustment tool inserted into hole inside access slot. Turning clockwise will decrease the laser intensity to minimum power of 0.1mW.

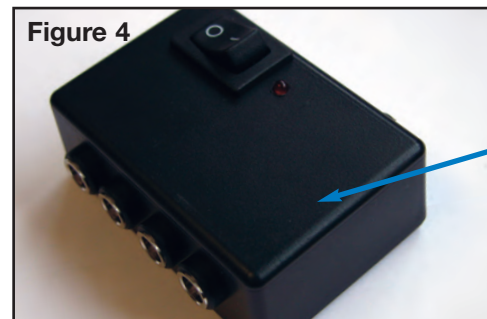
Figure 3



2.1mm Jack Socket

The Laser Alignment Module is powered via the 2.1mm jack socket. Plug a 2.1mm jack plug either directly from the Wall Plug Adaptor or from the 2m or 5m power leads from the 4 outlet junction box.

Figure 4



4 Outlet Junction Box

2.1mm jack plug from the Wall Plug Adaptor should be inserted into single jack socket, (not visible in figure 4). Power will be available to the four 2.1mm jack sockets when the red LED is illuminated.