

YLS-AMB Adjustable Mode Beam Lasers

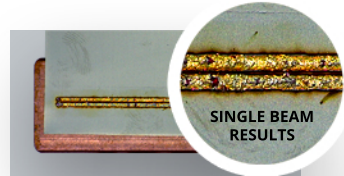
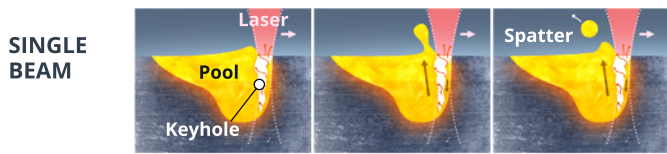
The Broadest Range of Beam Profile Tunability

Independent and Dynamic Control of the Beam Profile



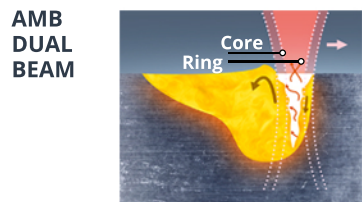
Any combination of a small-spot high intensity bright core and a larger ring-shaped beam

AMB Improves Welding Quality and Speed



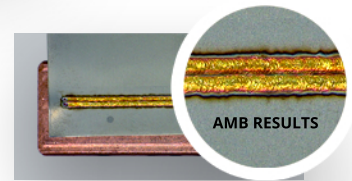
Material: two 0.2 mm Ni coated copper + 2.0 mm copper
Welding speed = 120 mm/s

Normal laser welding can be accompanied by periodic keyhole instability revealed by spatter of molten metal. Keyhole instability results in porosity, variations in keyhole depth and poor visual finish.



Virtually Eliminates Spatter

A larger and more stable keyhole is created, the ring beam softens and deflects escaping material back towards the bottom of the weld pool, producing consistent high-quality weld seams.



Spatter free welding minimizes contamination by molten metal

AMB reduces spatter by 90% or more while increasing welding speed

Reduced spatter is an indication of high quality welding

AMB enables high-speed high-quality welding in automotive applications such as body in white, drivetrains and e-mobility such as Al battery enclosures and battery tabs



Save time and reduce operating costs by not reworking parts and maximizing uptime

- Drastically reduced part, process head and sensor contamination by molten metal
- Eliminates external optics such as optical switches, zoom process heads and other peripherals