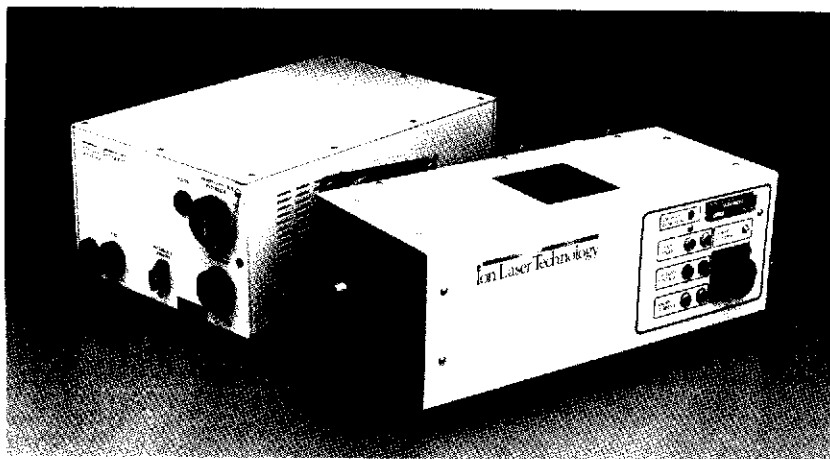


ILT Model 5490A

Air-Cooled Argon Ion Laser



STANDARD FEATURES

- 100mW Multiline Output
- TEM₀₀/Polarized Beam
- Metal/Ceramic Plasma Tube
- Double Size Gas Reservoir for Extended Life
- Hands Off Operation
- Thermostat Controlled Air Cooling
- Switching Regulator Power Supply
- Excellent Power and Pointing Stability
- Invar Rod Resonator
- Light Feedback Regulation
- CDRH Certified

OPTIONAL FEATURES

- Tuneable/Singleline-Littrow Prism
457nm to 514nm
- Multimode Optics up to 300mW Output
- 19" Rackmount Power Supply Model 5401
- Remote Control (RPC-50) W/Standby Interlock
- Remote Cooling for Systems Requiring Cooling Fans to be Located Away from Laser Head
- WC Option Compatible - Allows User to Quick Change From Singleline to Multiline Operation

SYSTEM

The ILT Model 5490A Argon Ion Laser is an advanced, state of the art coherent light source, designed with reliability in mind. The 5490A is our most versatile laser offered, and is compatible with all of ILT's available options. This in combination with a rugged ceramic/metal plasma tube, invar resonator, switching power supply and light feedback regulation, the 5490A offers a wealth of advantages for laboratory or OEM applications.

PLASMA TUBE

The ILT plasma tube is constructed of BeO ceramic with enlarged metal end shrouds. This provides high thermal conductivity and large gas volume for extended tube lifetime. This tube is designed with Brewster windows sealed on each end and external mirrors, providing high polarization and high spectral purity when used with our Littrow prism option. This design also gives the end user a simple and less expensive, typically half the cost, tube to refurbish when the time comes.

RESONATOR

The plasma tube is housed in a lightweight aluminum resonator structure which utilizes a four invar rod design. This design provides excellent mechanical and beam pointing stability. The mirror mounts are held in place with a one piece, solid spring steel adjustment gimble. This unique combination provides field proven, hands free operation. The resonator also incorporates a molecular sieve dryer system attached to teflon tube to mirror seals which provides guaranteed maintenance free operation, even in humid environments.

Laser head cooling is accomplished by using two high volume fans located at each end of the resonator. Air moves across the anode and cathode shrouds and exits through a fully brazed pure copper heat sink.

A fan thermostat controls cooling fans and monitors tube temperature. Fans turn on when tube is up to operating temperature and turn off only after tube is completely cooled down. As a result, the tube can warm up and cool down faster.

POWER SUPPLY

The laser head is powered by the Model 5400 or optional 5401, high efficiency, switching regulator power supply. These power supplies incorporate a MOSFET switching bridge and high frequency isolation transformer. This exclusive design permits a wide range of operating voltages (100VAC, 120VAC, or 240VAC) and adds total line isolation. Both supplies come standard with light feedback regulation which gives the user excellent amplitude and long term power stability. The 5400 is supplied with interlock remote connection, key switch, and remote control interface. The system can be controlled manually via power control on laser head or remotely by a host system or the Model RPC-50 remote control. The RPC-50 has a 4 inch high resolution LED bar graph display. This display reads out laser power and tube current. The RPC-50 also has run/standby switch, and display of system interlocks that provide diagnostic information in the event of system failure.

Ion Laser Technology has united high technological ingenuity with no nonsense design to provide our customers with the most reliable laser systems available today. This commitment combined with quick turnaround by ILT service technicians, demonstrates Ion Laser Technology's standard of performance plus support.

