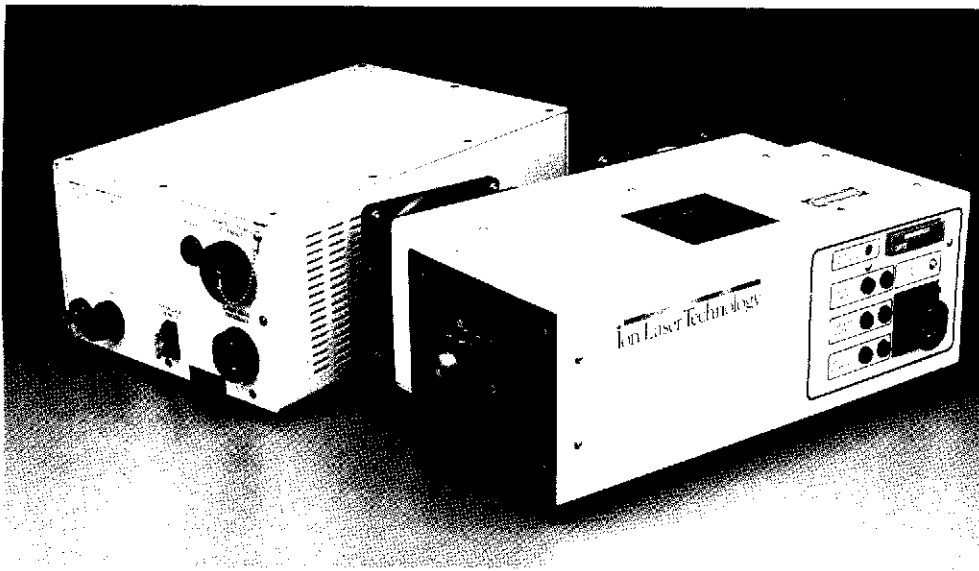


# ILT Model 5470K

## Air-Cooled Krypton Ion Laser



### STANDARD FEATURES

- 15mW Multiline Output (White)
- Air Cooled – Thermostat Controlled
- TEM<sub>00</sub> All Lines – Polarized Output
- Extra Gas Ballast for Added Stability and Tube Life
- Rugged Ceramic/Metal Plasma Tube
- Hands Off Operation
- 4 Invar Rod Resonator
- Superior Power and Pointing Stability
- Switching Regulator Isolated Power Supply
- Remote Interface—Control Via Host System

### OPTIONAL FEATURES

- Remote Cooling
- Multi Transverse Mode Optics with Increased Power
- Remote Control—RPC-50
- Red Line Only Optics
- Yellow Line Only Optics

### SYSTEM

Ion Laser Technology is the first to offer an off the shelf portable air cooled krypton laser. The ILT model 5470K is the first of its kind, state of the art broad band coherent, light source. In designing the 5470K, ILT's engineers took special care to incorporate everything needed to insure system reliability. Krypton lasers are typically sensitive to tube pressure, engineers added an extra gas ballast doubling gas volume over argon plasma tubes.

### PLASMA TUBE

The 5470K contains an off the shelf ILT plasma tube designed to operate in TEM<sub>00</sub> mode and to provide a polarized output beam. This model comes standard with 15mW multiline output with light control regulation. Standard optics provide a balanced four color output of red, yellow, green, and blue. Optional optics are also available for multimored all lines, red only, and yellow only wavelengths.

### 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.

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.

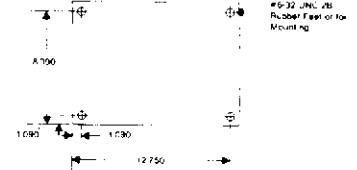
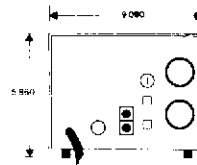
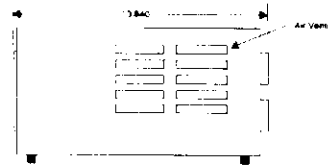
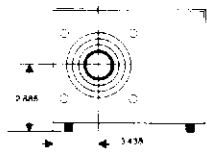
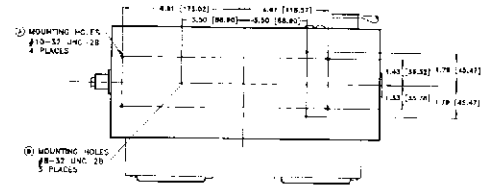
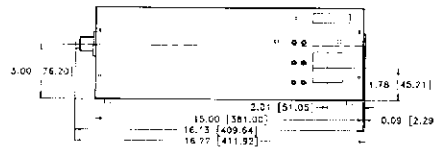
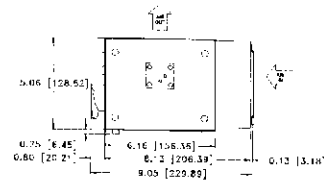
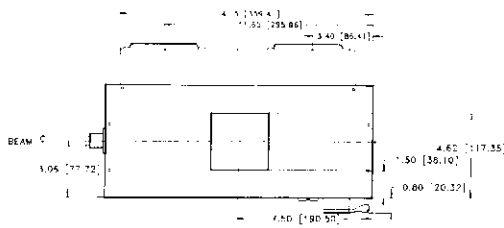
A fan thermostat controls cooling fans and monitors tube

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 hos system or the Model RPC-50 remote control.

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 24 hour turn-around by ILT service technicians, demonstrates Ion Laser Technology's standard of performance plus support.



### OUTPUT SPECIFICATIONS

Multiline 15mw (all lines)

Optional Singleline:

Multiline	476/482	520	568	647
Breakdown	3mw	4mw	4mw	4mw

568nm	14mW
647nm	30mW

### PERFORMANCE SPECIFICATIONS

Beam Diameter 1/e <sup>2</sup>	.65mm
Beam Divergence Full angle	.95mrad
Polarization	>100:1
E-Vector Vertical	
A.R. Spot	<.25%
Transverse Mode	TEM <sub>00</sub>
(Higher order modes available on multiline models with increase output power)	
Warm-up time (cold start)	
Multiline models	<5 mins.
Littrow Prism models	<15 mins.
From standby	Immediate
Beam Pointing Stability	
After warm-up	<30 microradians
Periodic	10 microradians
Beam Amplitude Noise DC to 2MHZ	<1% RMS
Long Term Power Stability 2 hours at constant ambient conditions	1%

### ELECTRICAL SPECIFICATIONS

Voltage	115VAC ± 10%
Optional	220VAC ± 10%
Current	10 Amp
Frequency	60 Hz
Optional	47 to 63 Hz
Phase	Single
Power Supply	30 KHz
Switching Frequency	

### SHIPPING SPECIFICATIONS

Power Supply Weight	20 lbs.
Shipping Weight	23 lbs.
Laser Head Weight	20 lbs.
Shipping Weight	31 lbs.

\*Specifications subject to change without notice.  
 † Specifications at 520nm

