



ISOLATED LASER DIODE POWER MODULE

- COMPACT 6.0" x 5.9" x 2.85" PACKAGE
- 2000W NON-POWER FACTOR CORRECTED
- 1750W POWER FACTOR CORRECTED
- OPTIONAL POSITIVE OR NEGATIVE OUTPUT
- DESIGNED TO MEET UL 60601-1 MEDICAL LASER REQUIREMENT
- LOW EMI, ULTRA LOW LEAKAGE CURRENT
- MODULAR, EXPANDABLE
- CAN BE OPERATED AS CONSTANT CURRENT OR CONSTANT VOLTAGE SOURCE



DESCRIPTION:

The **Model 5705** isolated laser diode power module uses a proprietary power conversion technique to charge energy storage capacitors for CW or pulsed diode-pumped solid-state laser applications. A differentially isolated output allows the **Model 5705** to be configured with either positive or negative output. With the addition of an internal Hall effect sensor, and with 280-360VDC input, the module can operate as a current source to deliver pulsed or CW current directly to diode loads. For applications requiring greater operational control, the **Model 5705** can be operated as a voltage source and used with AMI's **Model 779A** or **Model 7701A** laser diode driver. The **Model 5705** provides the highest power density of any similar module on the market and may easily be used with additional **5705 Series** modules for even higher average power applications. The **Model 5705** is designed to meet the isolation and leakage current requirements for the most stringent medical applications.

SPECIFICATIONS:

Input		Output	
Voltage	24VDC at 300mA and either rectified 230VDC \pm 10%, 1 \emptyset , 50/60 Hz (add -D to part number) or 280-360VDC (add -DC to part number)	Power	1750W with rectified 230VAC input (voltage source only) 2000W with 325VDC input
Power Factor	0.9 with rectified 230VAC input (voltage source only)	Voltage or Current	Voltage source (add -V to part number) Current source (add -I to part number) 3 versions available (See table on reverse side for operating maximums.)
Control	0 to 10VDC proportional control with 20k Ω input impedance	Regulation	
Inhibit	3.5 to 24VDC to inhibit with 10k Ω input impedance	Load	<0.1A 10% to 100% output
Cooling Requirements	\geq 110CFM recommended. Pull air from connector end of supply.	Line	<0.1A 198VAC to 253VAC
Operating Temperature	0 $^{\circ}$ to +40 $^{\circ}$ C	Efficiency	85% to 90% typical
Size	6.0" x 5.9" x 2.85" (without fan)	Ripple Current	0.3Arms at 50A continuous
Weight	3 lbs	Pulse Risetime	<100 μ s
		Leakage Current	25 μ A (typical)
		Protection	Open Circuit, Short Circuit, Thermal Overload, Over-Voltage



Specifications subject to change without notice.

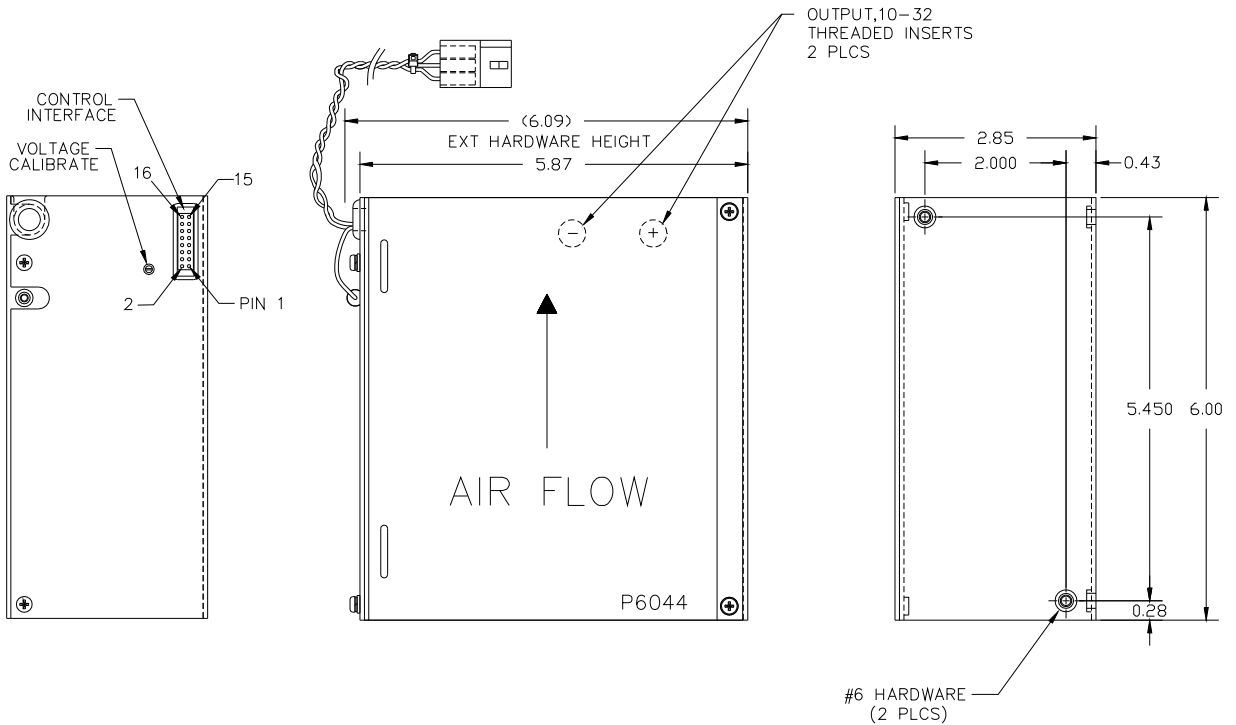
APPLICATIONS:

Constant Voltage or Constant Current for Diode Pumped Lasers

OPERATING MAXIMUMS				
MODEL NUMBER 5705-X-X-X	INPUT VOLTAGE	AVG. POWER	OUTPUT VOLTAGE	PEAK CW CURRENT
5705V-40-D	Rectified 230VAC	1750W	0 to 40V	N/A
5705-I-40-DC	325VDC	2000W		50A @ 40V
5705-V-100-D	Rectified 230VAC	1750W	0 to 100V	N/A
5705-I-100-DC	325VDC	2000W		20A @ 100V
5705-V-200-D	Rectified 230VAC	1750W	0 to 200V	N/A
5705-I-200-DC	325VDC	2000W		10A @ 200V

NOTE: Contact Factory for other input voltage options.

Typical Part Number: **5705-I-40-DC** = Output Type: Current Source
Maximum Output Voltage: 40VDC
Maximum CW Current: 50A @ 40V
Output Power: 2000W



5705 IO INTERFACE DESCRIPTION

PIN	FUNCTION
1	TEMPERATURE TEST POINT
2	DEMAND OUTPUT RETURN
3	DEMAND OUTPUT CONTROL
4	SIGNAL RETURN
5	24V RTN
6	24V RTN
7	PRIMARY INHIBIT
8	PIN 8 IS REMOVED N/C
9	24V INPUT
10	24V INPUT
11	+5V REFERENCE
12	CURRENT SENSE *
13	OVERTEMP_OUT
14	VOLTAGE SENSE
15	SEE NOTE
16	SEE NOTE

* AVAILABLE WITH CURRENT SOURCE OPTION ONLY.
NOTE: VOLTAGE SOURCE (-V OPTION) MUST HAVE PINS 15 AND 16 CONNECTED FOR PROPER OPERATION.