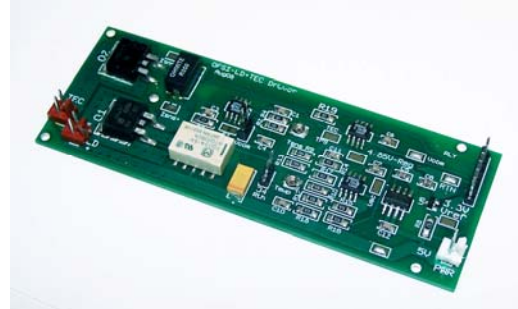


LCB-H05 LD Controller Board

Our LCB-H05 is a simple yet precise laser diode controller circuit board. It includes on the same board a current regulation circuit along with a temperature regulation circuit.

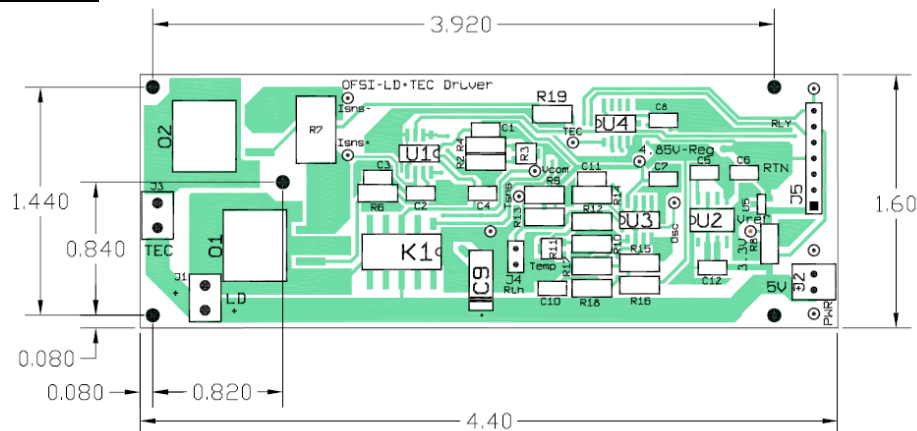


It has a 2-pin header connector for the LD, a 2-pin header connector for power supply, a 2-pin header for a thermo-electric cooler (TEC or Pelletier module), and a 5-pin header for optional external controls such as a potentiometer to adjust the current and an ON/OFF switch. It also has an on-board safety relay that shunts the laser diode until it is actively opened.

Specifications:

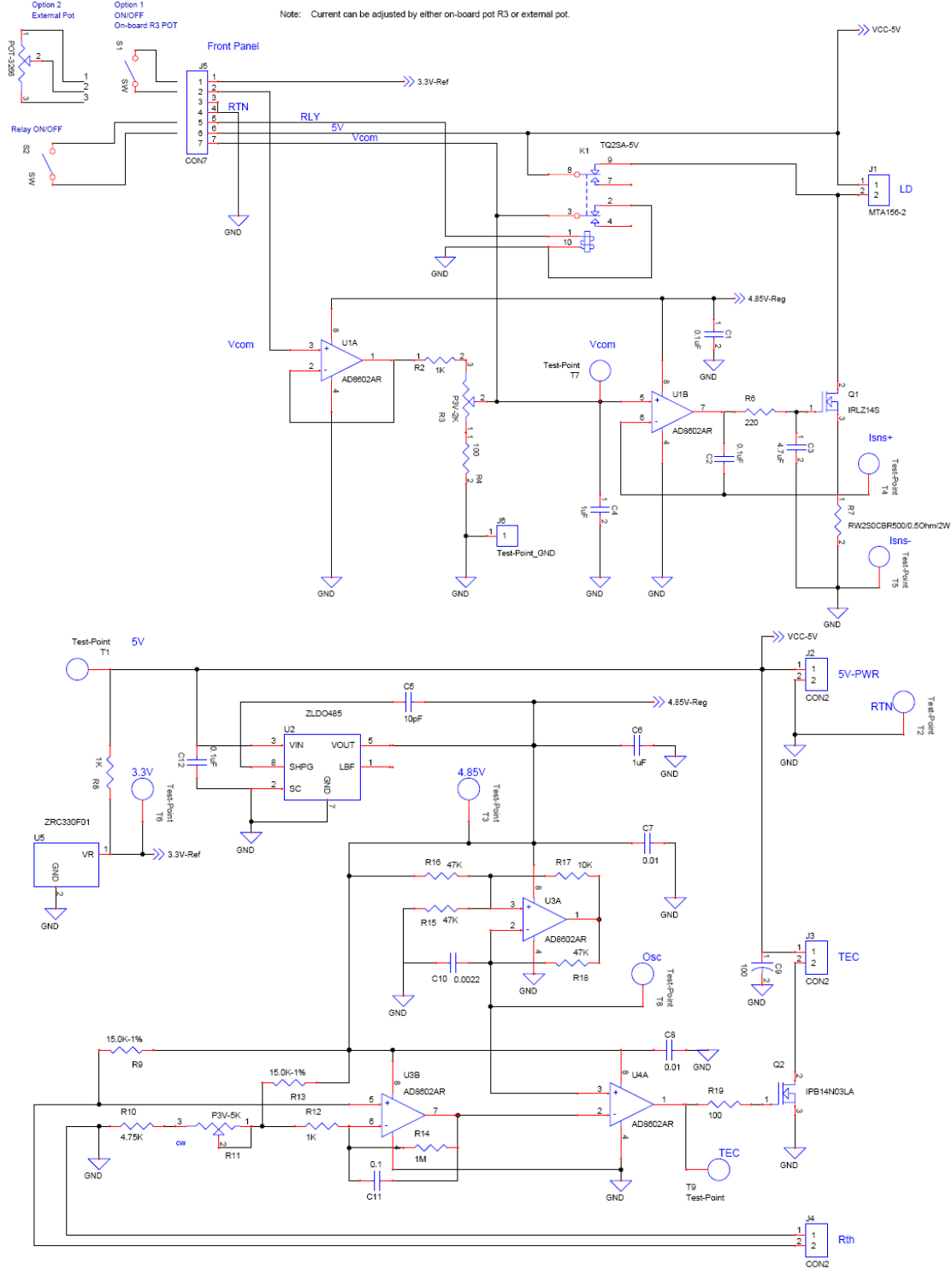
LD connection:	2 pin header MTA156
TE connection:	2 pin header MTA156
Power Supply connection:	2-pin screw-terminal
Dimensions (inches):	4.4" x 1.6"
Operating Temperature:	-10C to 40C
Ambient humidity:	non-condensing
Power Supply:	4.9-to-6 V (5V nominal), 10A min
Maximum LD Current:	3A
Maximum TEC current:	5A
Current regulation:	< 1%
Current stability (2 hrs)	< 2%

PC Board Drawing:



LCB-H05 LD Controller Board

Schematic:



Optical Fiber Systems, Inc., 829B Turnpike Road, New Ipswich, NH 0371-0186
 Tel: (603) 291-0345 Fax: (603) 291-0547 Email: info@opticalfibersystems.com

LCB-H05 LD Controller Board

Pin Connections:

J1	
Laser Diode	
1	LD-A
2	LD-C

J2	
Power	
1	Pos
2	Neg

J3	
TEC	
1	TEC +
2	TEC -

J4	
Thermistor	
1	Th-1
2	Th-2

J5	
Controls	
1	ON-switch
2	ON-switch
3	GND
4	RLY-switch
5	RLY-switch

- Notes: Connectors J4 and J5 are standard headers with 0.1" spacing.
Connector J1 and J3 are MTA-156 connector headers (0.156" pin spacing)
LDA - Laser Diode Anode (+) LDC - Laser Diode Cathode (-)
Thermistor should be NTC, 10kOhm at 25C.
LD Current can be adjusted using the on-board trim-pot R3.
For external LD power adjustment, connect Potentiometer.(recommended 100 kOhm) between J5 pins 1-2-3 (wiper on pin 2). In this case, you can use the RLY switch to turn the laser ON and OFF.
Regulating temperature can be adjusted with the on-board trim-pot R11