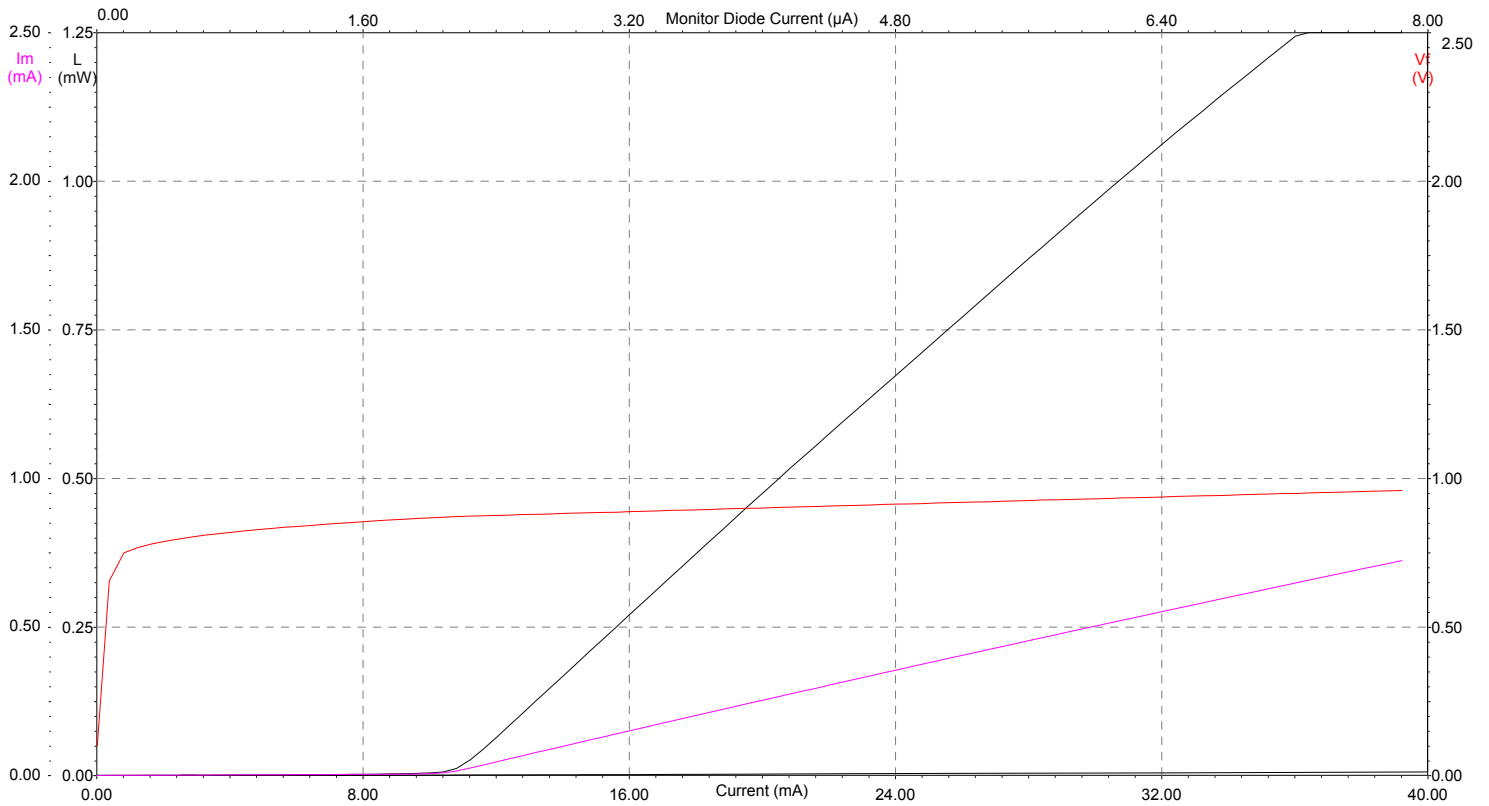


# Fermionics Lasertech LD-1550

Serial No:R1108

Tested By:Ryan Cyr

Test Date:3/20/2006 3:27:11 PM



## Summary Characteristics

|                         |           |
|-------------------------|-----------|
| Temperature (C):        | 25.142° C |
| Wavelength (nm):        | 1548.811  |
| SMSR:(dB)               | -----     |
| Threshold Current (mA): | 11.210    |
| Diff. Eff. (mW/mA):     | 0.048     |
| Pop (mW):               | 1.000     |
| Iop @ Pop (mA):         | 30.820    |
| Vf @ Pop (V):           | 0.934     |
| Im @ Pop (µA):          | 522.300   |

Connector Type: FC/APC

Cable Length: 0.9m

Comments:

- DIL MQW Laser diode. Excellent cond.

ILX Lightwave Corporation

Laser Diode Instrumentation and Test Systems

www.ilxlightwave.com

## InGaAs/InP Strained MQW Laser Diode

### DESCRIPTION

LD-1550s are thermoelectrically cooled, single-mode fiber pigtailed 1550nm lasers with advanced strained multiple quantum wells. A lensed fiber is laser welded to insure low tracking error and long-term stability. An InGaAs backfacet monitor is provided for power monitoring.

### ABSOLUTE MAXIMUM RATINGS (T = 25°C)

| PARAMETER             | RATING     | UNITS |
|-----------------------|------------|-------|
| Storage Temperature   | -30 to +70 | °C    |
| Operating Temperature | -10 to +60 | °C    |
| Forward Current       | 150        | mA    |
| Reverse Voltage       | 2          | V     |

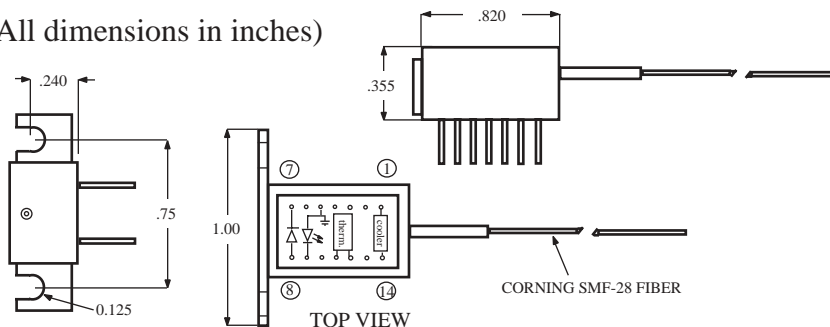


### OPTICAL AND ELECTRICAL CHARACTERISTICS (T = 25°C)

| PARAMETER             | SYMBOL       | TEST CONDITIONS                          | MIN  | TYP  | MAX  | UNIT |
|-----------------------|--------------|--|------|------|------|------|
| Threshold Current     | $I_{th}$     | CW                                       | -    | 10   | 30   | mA   |
| Forward Voltage       | $V_f$        | CW, $I_f = 60\text{mA}$                  | -    | 1.2  | 1.6  | V    |
| Optical Power         | $P_o$        | CW, $I_f = I_{th} + 30\text{mA}$         | 0.5  | 1    | -    | mW   |
| Peak Wavelength       | $\zeta_p$    | CW, $P_o = 1\text{mW}$                   | 1530 | 1550 | 1570 | nm   |
| Spectral Width (FWHM) | $\div \zeta$ | CW, $P_o = 1\text{mW}$                   | -    | 4    | 6    | nm   |
| Rise Time             | $t_r$        | $P_o = 1\text{mW}$ , $I_{bias} = I_{th}$ | -    | 0.2  | 0.5  | nsec |
| Fall Time             | $t_f$        | $P_o = 1\text{mW}$ , $I_{bias} = I_{th}$ | -    | 0.4  | 0.5  | nsec |
| Thermistor R          | R            | $T_{laser} = 25^\circ\text{C}$           | 9    | -    | 11   | KT   |
| TEC Current           | $I_{TEC}$    | -  | -    | -    | 0.8  | A    |

### DIMENSIONAL OUTLINE

(All dimensions in inches)



| Pin # | Function          |
|-------|-------------------|
| 1     | Cooler (+)        |
| 2-4   | N/C               |
| 5     | LD Anode (+), GND |
| 6     | N/C               |
| 7     | Monitor (+V)      |
| 8     | Monitor (-V)      |
| 9     | LD Cathode (-)    |
| 10    | LD Anode (+), GND |
| 11    | Thermistor        |
| 12    | Thermistor        |
| 13    | N/C               |
| 14    | Cooler (-)        |

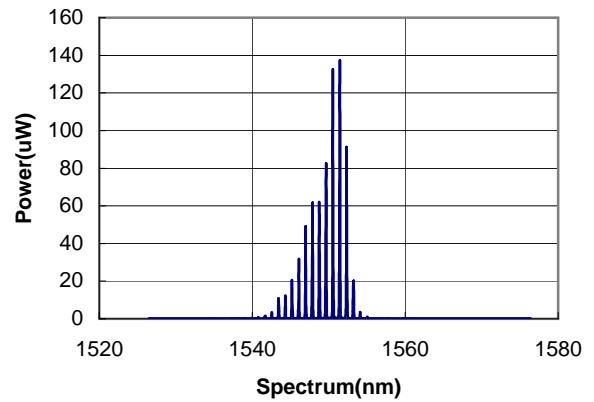


PART NUMBER  
**LD - 1550**

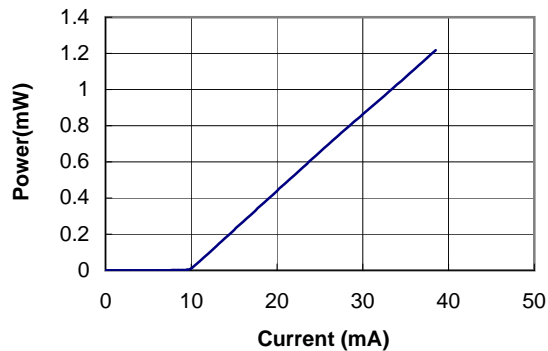
## InGaAs/InP Strained MQW Laser Diode

Serial Number  
Po(mW) 1.00  
Ith(mA) 9.55  
If(mA) 33.29  
Imo(uA) 795.66  
Es(uW/mA) 42.11  
Spectral Width(nm) 2.73  
Center Wavelength(nm) 1551

**Output Spectrum**



**Output Power vs Input Current**



**Monitor Current vs Output Power**

