



HealthyPhoton

Model: QC-Qube™

Mini Quantum Cascade Laser Head



| Date | Version |
|-------------|------------------------|
| 2019/01/27 | V1.0 |
| 2020/2/13 | V1.1 Test Report Added |



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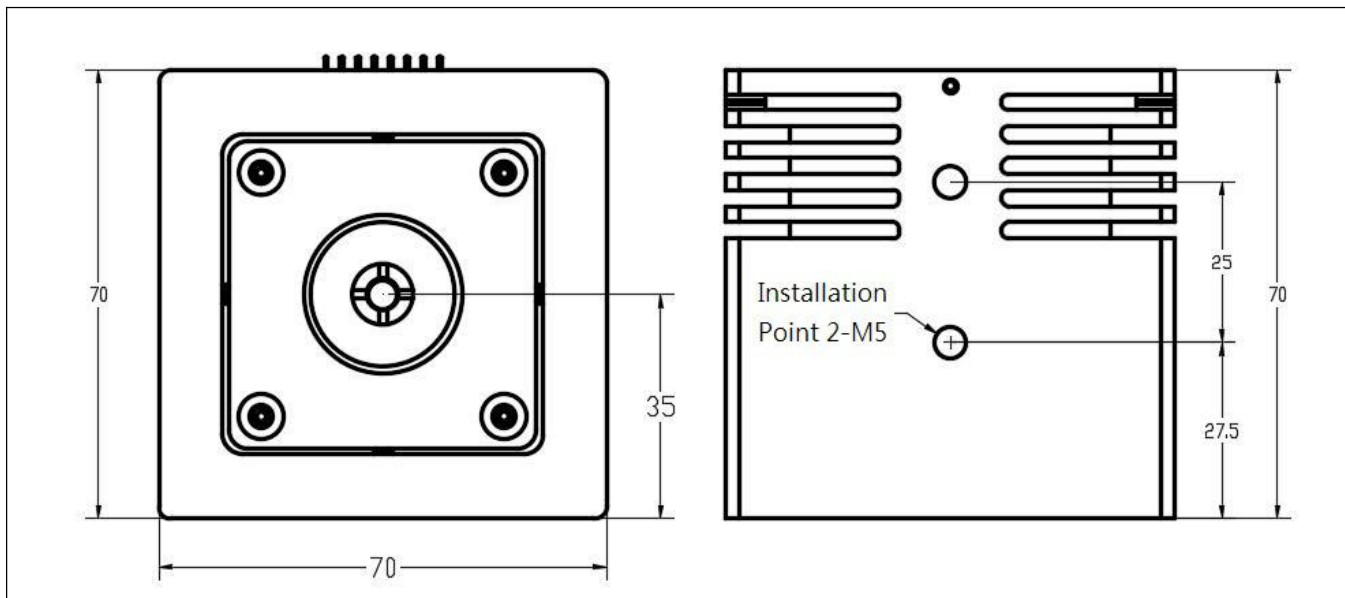
1. Introduction

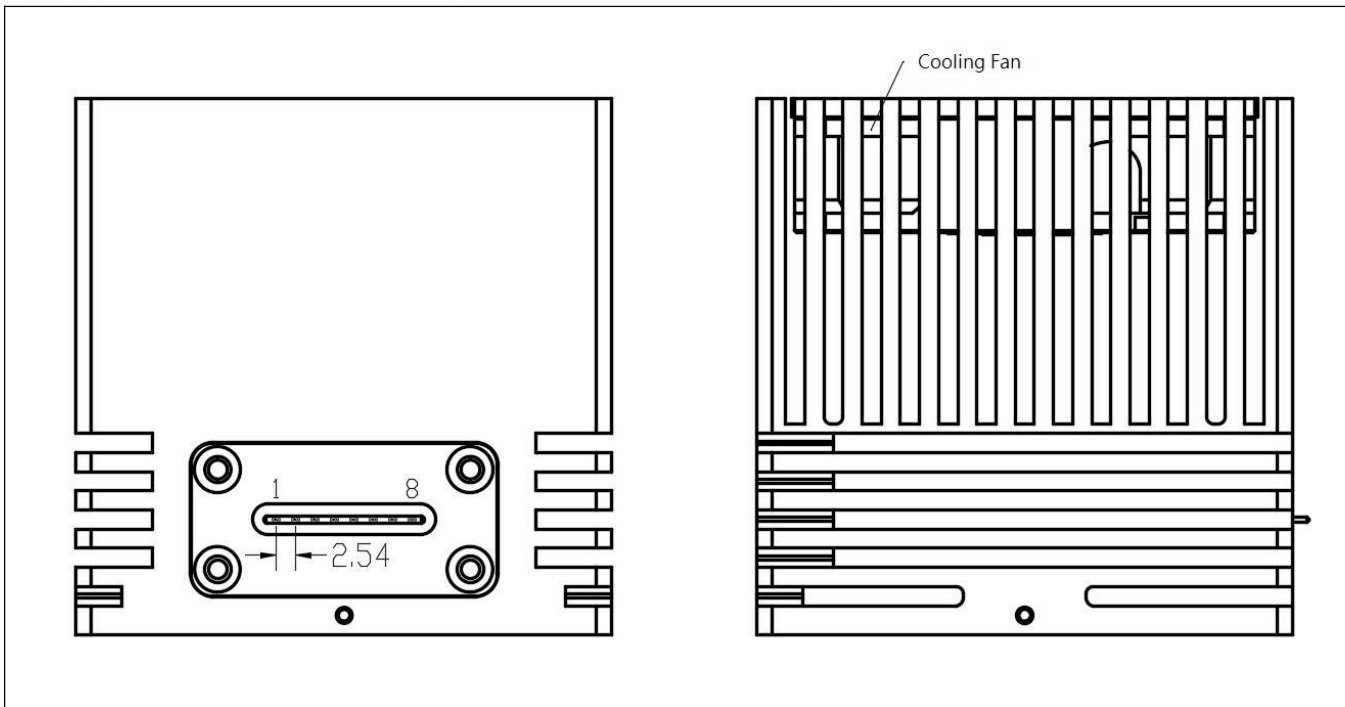
HealthyPhoton launched the newly designed QC-Qube™ laser mount, which integrates a high-quality QC laser chip, Peltier cooler, low-noise cooling fan, and output beam collimating lens. A compact QCL-based spectroscopic system can be built based on this compact 70×70×70mm³ laser mount with our QC750-Touch™ QCL driver. On the other hand, we can customize our product for a user-selected QCL chip based on the chip parameters.

2. Product Description

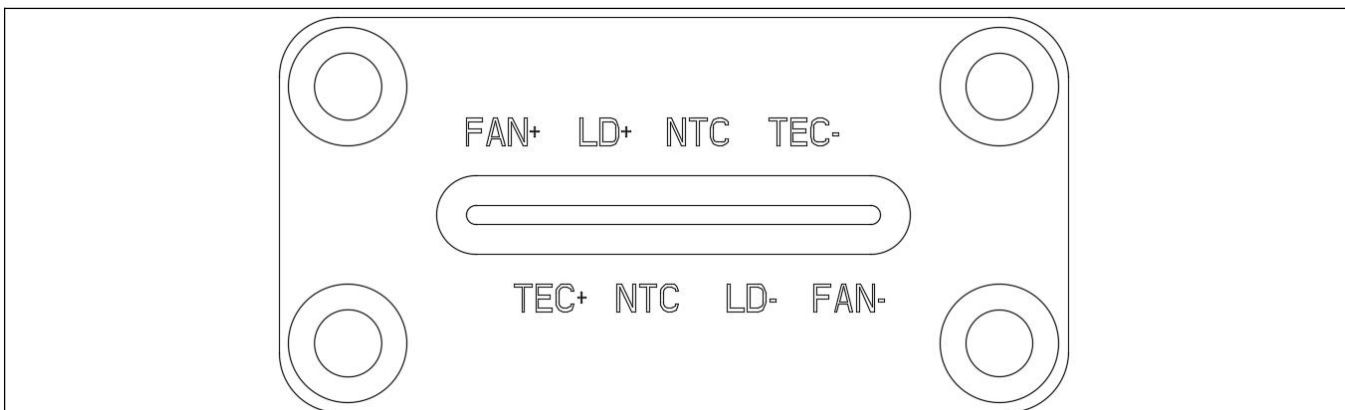
- Compact package specially designed for QCLs
- Output beam collimated and extremely low optical interference fringes
- Integrated semiconductor TEC temperature control and low-noise air fan with 20W heat dissipation capability, ensuring constant chip temperature
- Output optical power can reach up to 100 mW
- Compatible with QC750-Touch™ QCL driver
- Cables and connectors included

3. Mechanical Dimensions (Unit: mm)





4. PIN Assignments



| PIN | DESCRIPTION |
|-----|--------------------------------|
| 1 | FAN (+) |
| 2 | TEC (-) |
| 3 | LASER ANODE (+) |
| 4 | NTC THERMISTOR (10k Ω) |
| 5 | NTC THERMISTOR (10k Ω) |
| 6 | LASER CATHODE (-) |
| 7 | TEC (+) |
| 8 | FAN GND |



5. Test Report*

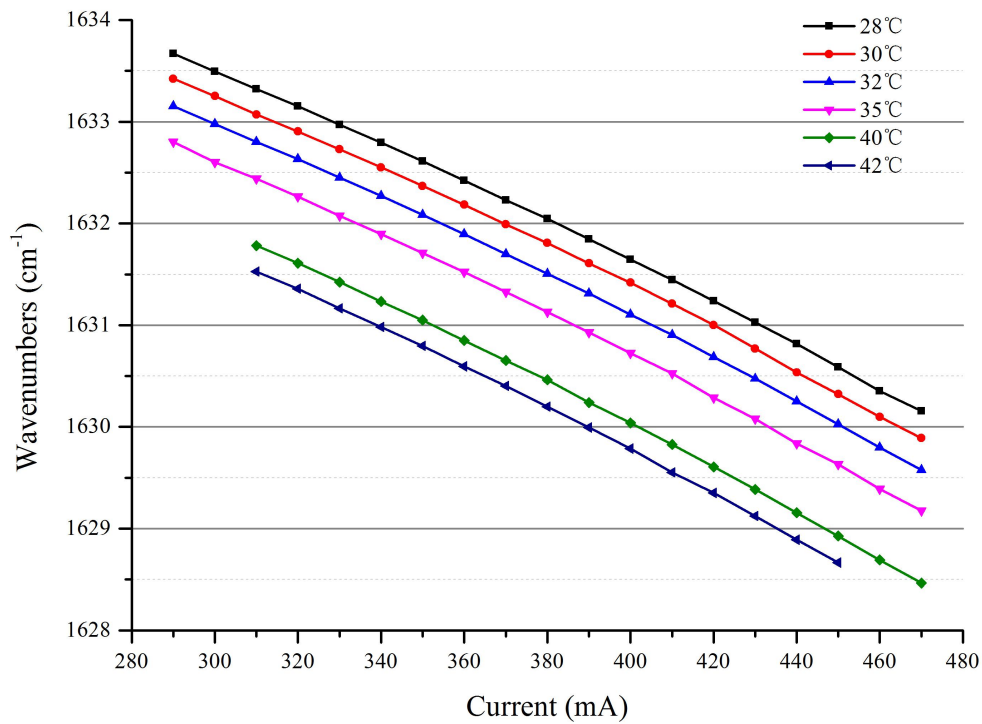


Figure 1. Wavenumber VS Current & Temperature

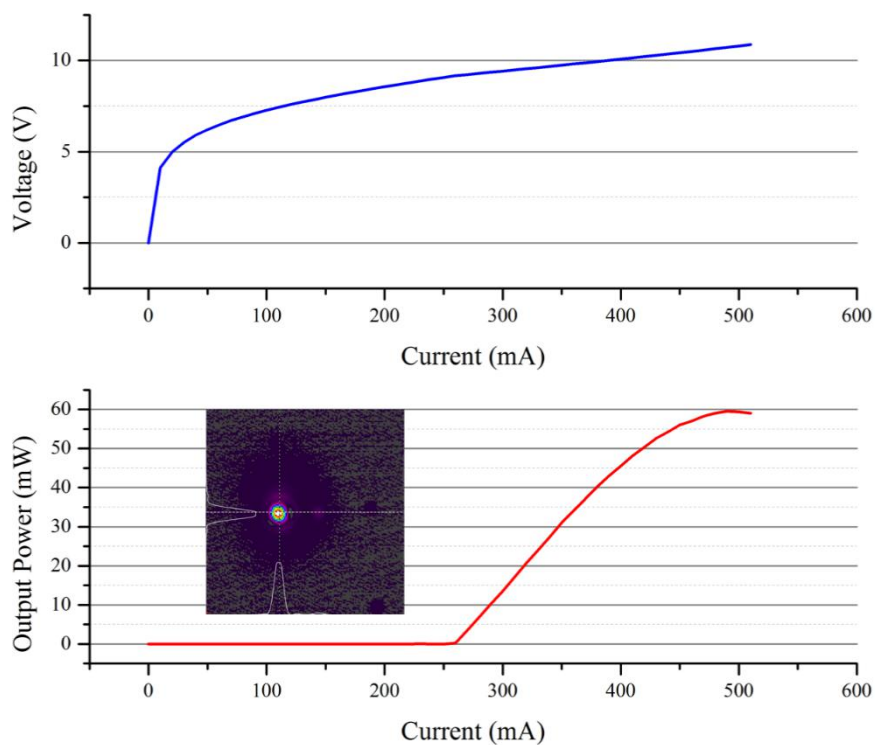


Figure 2. LIV and Beam Quality

*Note: This is an example test report. The QCL chip used is manufactured by Thorlabs Inc. Chips from other manufactures are available upon customer request.