

Product Features

Supports C-Block, COC,
or customer proprietary
QCL packages

Compatible with the LDX-3232
CW QCL Driver

Active temperature control from
-30°C to 30°C

Ports for vacuum evacuation or
nitrogen purge

Optional XYZ stage with multiple
ZnSe lens options

The LDM-4872 Series Quantum Cascade Laser Mounts provide convenient mounting for quantum cascade lasers in a vacuum or nitrogen purged environment. The 4872 Series mounts are offered with a standard mounting plate for C-Mount (C-Block) quantum cascade lasers, a standard mounting block for Alpes COC quantum cascade lasers or custom mounting blocks for customer proprietary QCL packages.

A wide temperature control range is accomplished by an integrated thermoelectric module and a high performance water-cooled cold plate which provides for an active control range of -30°C to 30°C with heat loads up to 10W.

Fixture design and precision machining result in low, repeatable thermal resistance between the QCL and LDM-4872 mounts minimizing the temperature difference between the laser and the fixture.

The LDM-4872 mounts are compatible with ILX Lightwave current sources and temperature controllers through interconnect cabling for quick setup. Optical table mounting is made possible through ANSI and metric spaced mounting holes on the base of the mount.



Convenient Mounting for Quantum Cascade Lasers

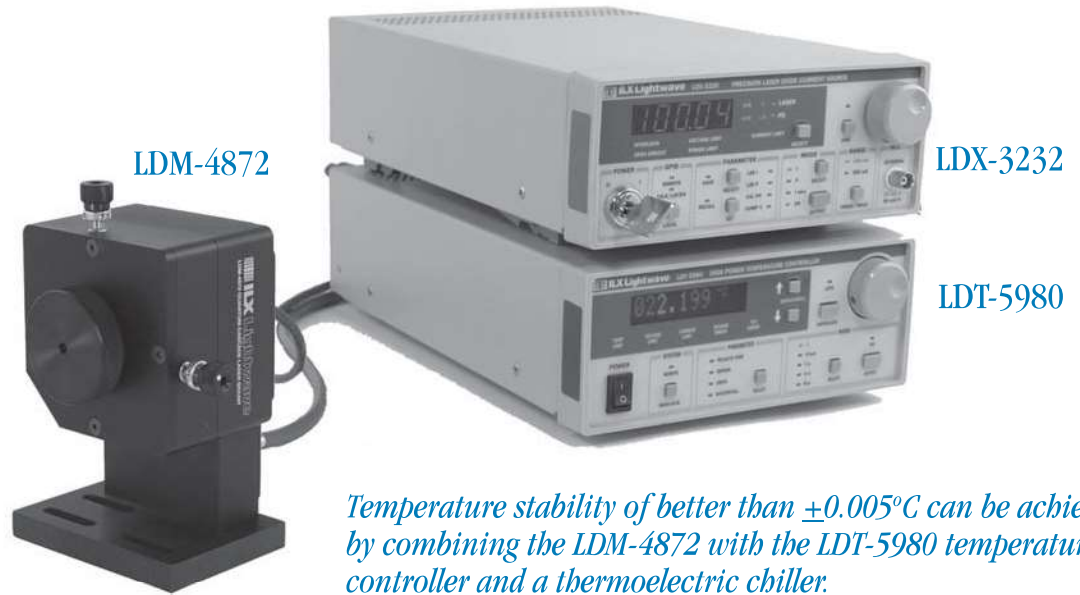
 **ILX Lightwave**[®]
A Newport Corporation Brand

LDM 4872 Series

Quantum Cascade Laser Mounts

LDM 4872 Series

Quantum
Cascade Laser
Mounts



Temperature stability of better than $\pm 0.005^{\circ}\text{C}$ can be achieved by combining the LDM-4872 with the LDT-5980 temperature controller and a thermoelectric chiller.

CONVENIENT MOUNTING OF QCL

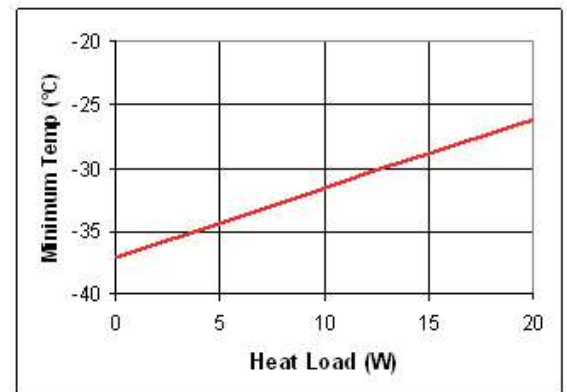
The LDM-4872 mounts are designed to support various QCL manufacturers' devices. The LDM-487201 supports C-Mount (C-Block) and the LDM-487202 supports Alpes COC. ILX can fabricate custom mounting blocks for customer proprietary QCL packages. Careful attention to the design of the optional XYZ stage with MID-IR lens and optional MID-IR window allow the 4872 mounts to be operated in either a vacuum or nitrogen environment. Contact an ILX Lightwave sales engineer if you have any questions concerning mounting of your QCL package to a 4872 mount.



C-Block Mounting Block

ACTIVE TEMPERATURE CONTROL

The LDM-4872 mounts come with an integrated 120W TEC and water-cooled cold plate. The high power TEC has the thermal performance to dissipate the waste heat from inefficient quantum cascade lasers over a wide temperature range of -30°C to 30°C with thermal loads up to 10W.



REPEATABLE, LOW THERMAL RESISTANCE

Careful attention to the LDM-4872 mounts mechanical design results in a low thermal resistance between the quantum cascade laser and the mounting plate. Torquing the device to the recommended value provides constant and repeatable clamping pressure on the package. Low thermal resistance eliminates temperature measurement inconsistency which ensures the QCL is being operated at a safe temperature.

LDM 4872 Series

Quantum
Cascade Laser
Mounts

PRECISION XYZ STAGE AND MID-IR LENS OPTION

The optional XYZ stage with lens provides precise adjustment even when the LDM-4872 mounts are under vacuum. Precision differential adjustment screws for the X and Y axis provide 25 μ m/rev of fine adjustment. The knurled lens cartridge has 64 threads per inch for precise Z adjustment. For your specific wavelength we have four standard aspheric 6.5mm lens options to cover a wide MID-IR wavelength range. Please contact an ILX Lightwave sales engineer to discuss our lens options.



XYZ Stage

ZINC SELINDE WINDOW OPTION

For quantum cascade lasers not requiring collimation a MID-IR window is available. The QCL output is located 1.5 mm from the 12.7mm diameter ZnSe window.

EASY CONNECTIONS FOR QUICK SET UP

The LDM-4872 mounts are compatible with most ILX current sources including the LDX-3232 High Compliance Laser Diode Driver. Additionally, the LDX-4872 mounts are compatible with ILX temperature controllers. All connections including electrical, water, and vacuum/nitrogen purge are conveniently located on the back of LDM-4872 mounts.

Standard interconnect cables interface with connectors for laser current and case control on the mount.



Zinc Selenide Window

OPTICAL TABLE MOUNTING

Optical table mounting is made possible through standard 1" spaced mounting holes on the base of the mount. Additionally, the LDM-4872 mounts are designed for integration into optical test systems with unobstructed access to the front of the quantum cascade laser mount.

PUT OUR EXPERTISE TO WORK

ILX Lightwave is a recognized world leader in Laser Diode Instrumentation and Test Systems. Our products are not only renowned for their reliability, quality, and value; they're backed by industry-leading after sales support. For more information about the LDM-4872 Quantum Cascade Laser Mounts, and our complete family of Laser Diode Instrumentation and Test Systems, visit www.newport.com/ilxlightwave.

