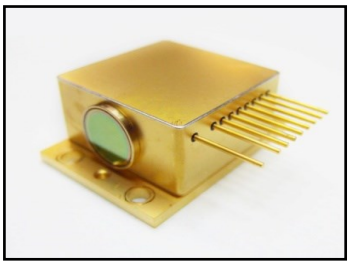
9.56 µm Distributed Feedback (DFB) QCL
ATP0956-H



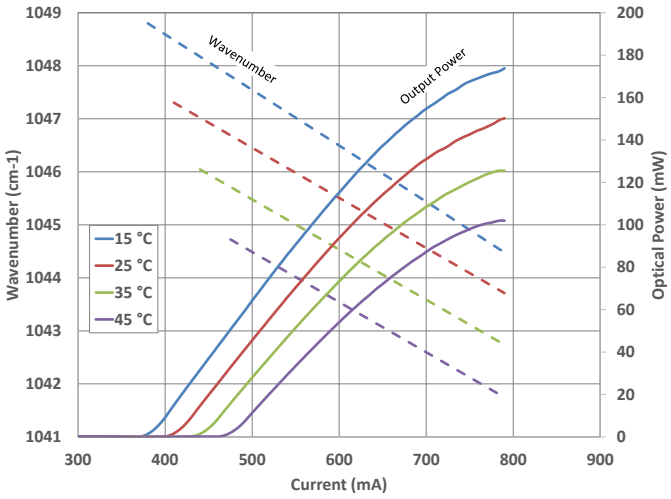
Description: AdTech's distributed feedback lasers are designed and fabricated in house to operate under Pulsed or CW conditions at room temperature while providing single longitudinal mode operation. Mode hop free tuning of wavelength emission can be achieved by increasing current or temperature.

Application: Trace Gas Detection of Ammonia (NH_3)

Electro-Optical Laser Characteristics at 15 °C:

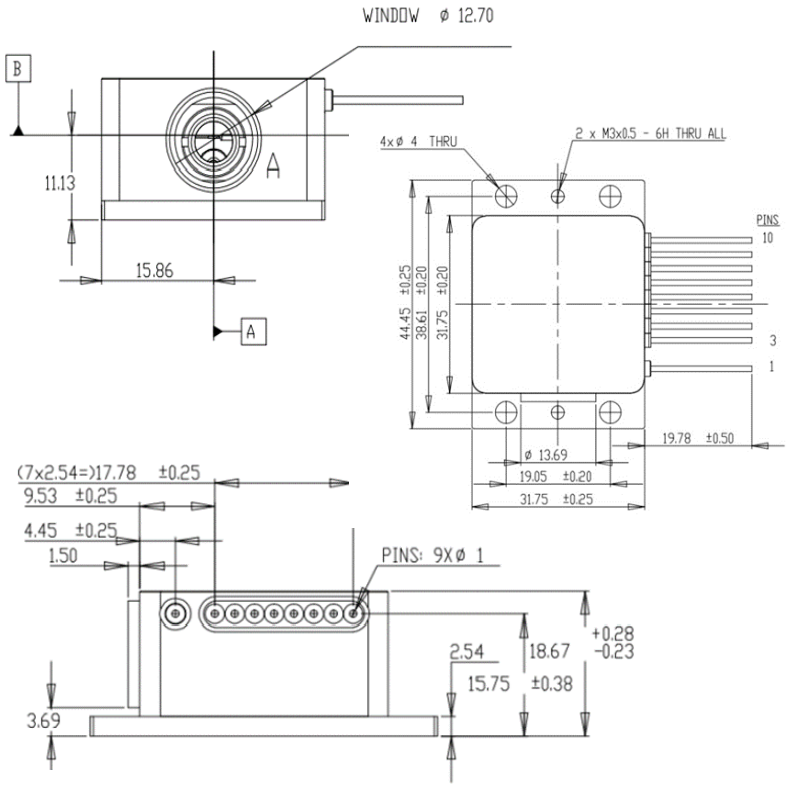
	Min.	Typ.	Max.	Units
Operating Current	0.25	0.60	0.85	A
Operating Voltage	8.0	10.0	12.0	V
Wall-plug Efficiency	-	2.0	-	%
Optical Output Power	-	100	-	mW
Center Wavelength	9.43	-	9.75	µm
Temperature Tuning	-	0.85	-	nm/K
Current Tuning	-	85.0	-	nm/A
SMSR	25	-	-	dB
Linewidth	-	-	30	MHz

Typical Spectra Plot:



Packaging Specifications:

	Specifications	Unit
Temperature Sensor	10.0K or RTD	----
Window Material	ZnSe	----
Window Tilt	5	°
Transmittance	>95	%
Polarization Ratio	> 100:1(S:P)	-
Collimation Lens Type	Aspheric	----
Divergence	< 10	*mrad*
Beam Pointing	< 1	mrad
M2	< 1.5	----
Dimensions	45 x 32 x 18	mm
Weight	110.0	g



NOTES
1. All Dimensions in Millimeters
2. Tolerance: 0.13 mm (unless otherwise noted)
3. TEC: Details Specs. Upon Request
4. Thermal Sensor: RTD 100 or 10k Thermistor
5. ZnSe Window:
   AR Coated: 3-7 um or 7-14 um (upon request)
6. Collimating Lens Inside (upon request)

PIN LAYOUT

Pin 1: TEC (-)
Pin 2: Not Installed
Pin 3:
Pin 4: Laser (+)
Pin 5: Thermal Sensor
Pin 6: Thermal Sensor
Pin 7: Laser (-)
Pin 8:
Pin 9:
Pin 10: TEC (+)

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