

4.60 μm Quantum Cascade Laser, 400 mW

QF4600T1



Description

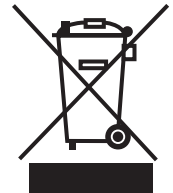
The QF4600T1 is a single-spatial-mode, Fabry-Perot quantum cascade laser (QCL) contained in a TO-9 package, designed and manufactured by Thorlabs. This laser operates in continuous wave (CW) mode at room temperature. The QF4600T1 is an environmentally-sealed module with three pins for electrical connection. The TO can does not contain a monitor photodiode. The emitting surface is protected by a ZnSe window, and the output beam is divergent. This semiconductor laser is a compact light source suited to many applications.

Specifications

QF4600T1	
LD Reverse Voltage (Max)	1 V
PD Reverse Voltage (Max)	N/A
Absolute Max Current	1 A ^a
Absolute Max Power	900 mW
Operating Temperature	15 to 50 °C ^b
Storage Temperature	-40 to 85 °C ^b

^aSpecified on a Device-by-Device Basis in Individual Datasheets

^bNon-Condensing Environment

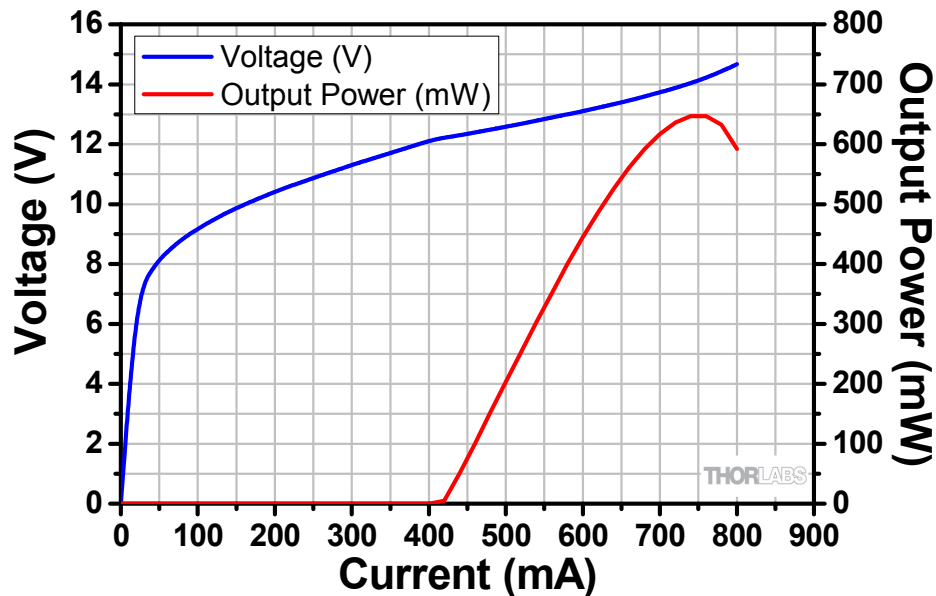


T_{Case} = 25 °C, CW Current Operation

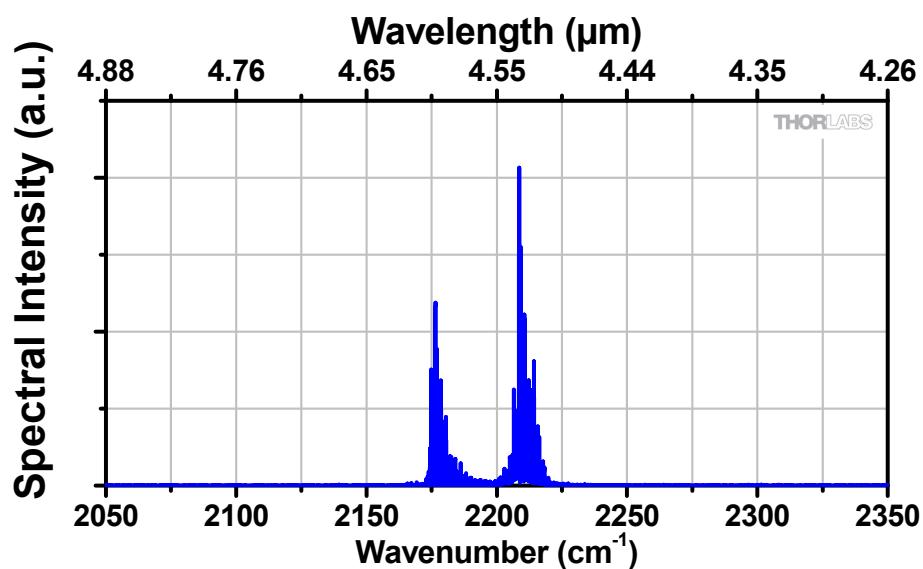
QF4600T1 Specifications, T _{Case} = 25 °C, CW Current Operation				
	Symbol	Min	Typical	Max
Center Wavelength	λ_c	4.45 μm	4.60 μm	4.75 μm
Output Power	P _{out}	400 mW	-	-
Operating Current	I _{pp}	-	-	800 mA
Threshold Current	I _{TH}	-	450 mA	-
Forward Voltage	V _F	-	12.0 V	15.0 V
Parallel Beam Divergence Angle (FWHM)	$\theta_{\parallel}$	-	30°	-
Perpendicular Beam Divergence Angle (FWHM)	$\theta_{\perp}$	-	40°	-

Sample Performance Plots

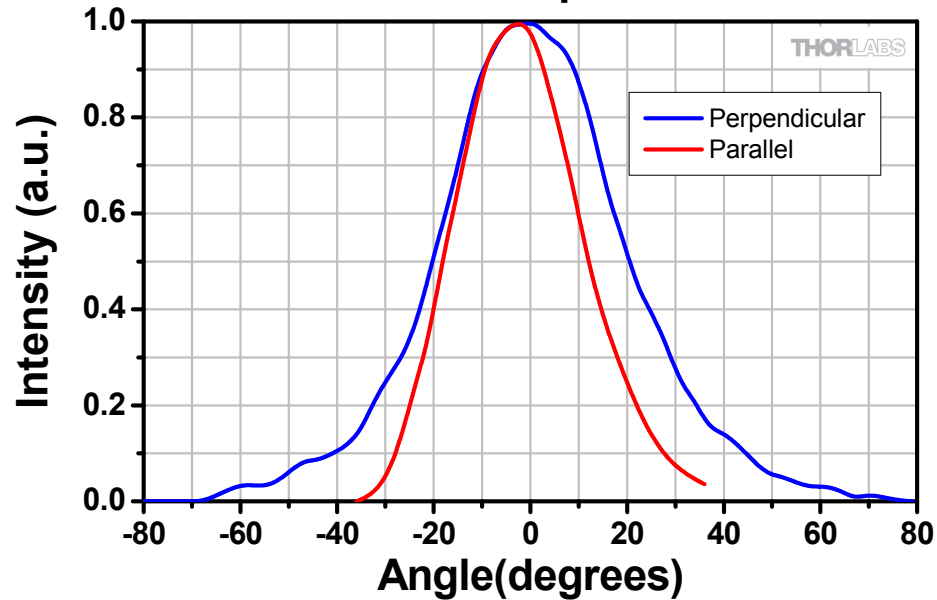
QF4600T1 Sample L-I-V Characteristics



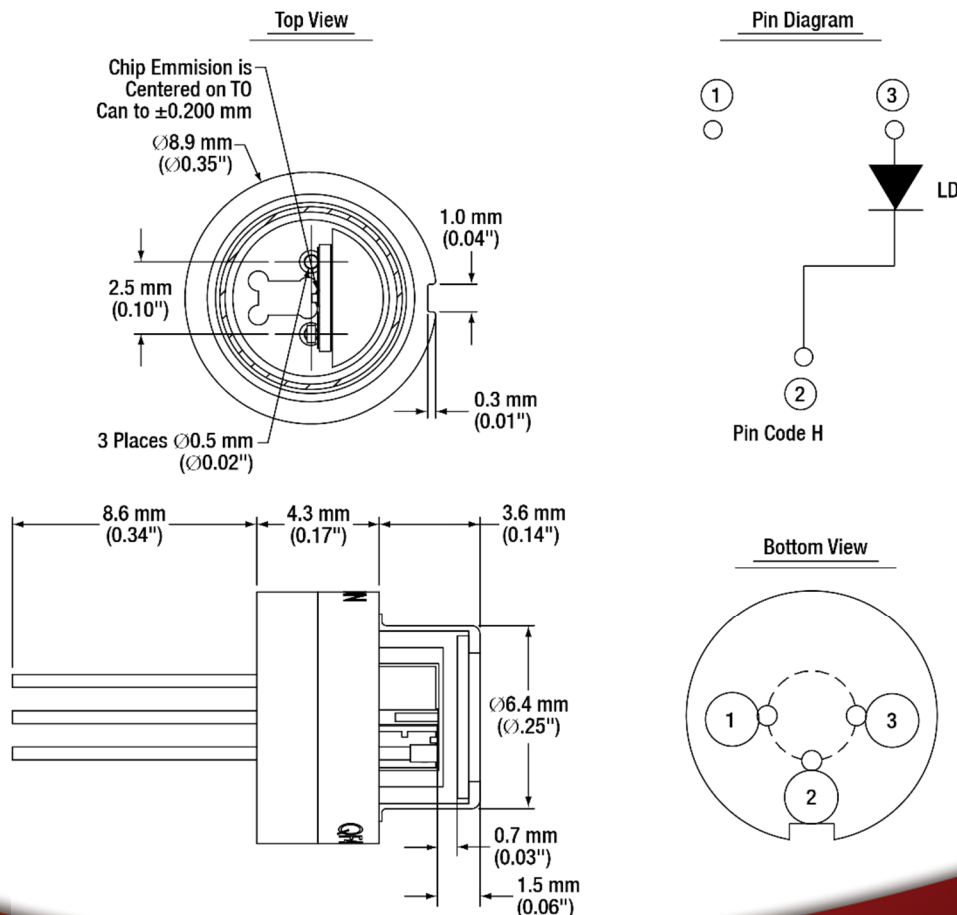
QF4600T1 Sample Output Spectrum



QF4600T1 Sample Far Field



Drawings for QF4600T1



January 31, 2019

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