

LONGWAVE

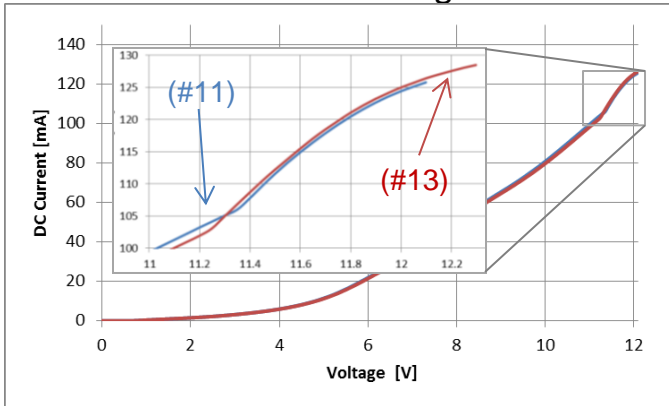
PHOTONICS

Data Sheet: THzQCL-DFB-Laser array 3.8THz (17 devices)

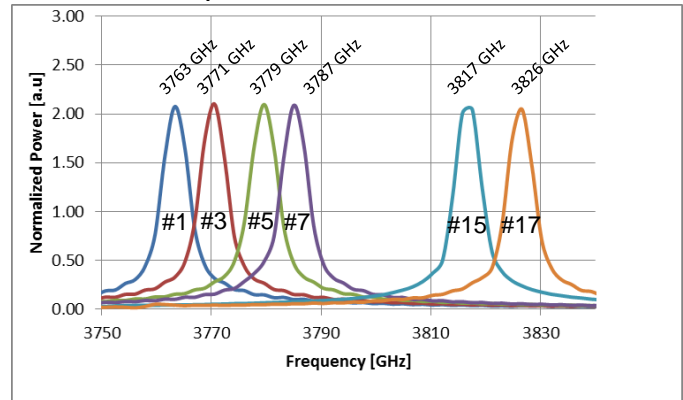
Description:

Device Type: Third-order DFB laser array with end bonding pad
 Operating Mode: CW
 Measurement Temp: 45 K
 Lasing frequency: 3763(#1) / 3771(#3) / 3779(#5) / 3787(#7) / 3817(#15) / 3826(#17) GHz +- 1.5GHz
 #11-#13 are estimated to lase within +-5GHz of 3807.26 GHz
 CW Power: 1.06 mW (#13 V=12.1 V, I = 126 mA) near absorption line
 1.05 mW(#17 V=12.04 V, I = 123 mA)

Current vs Voltage

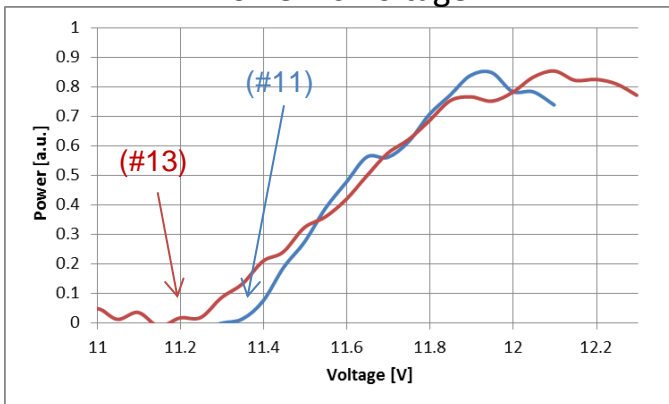


Spectral Characteristics



CW spectrum taken at 45K

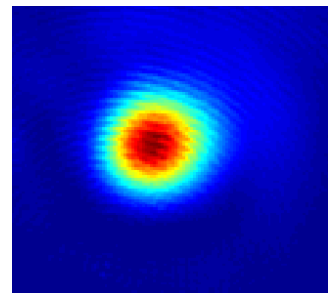
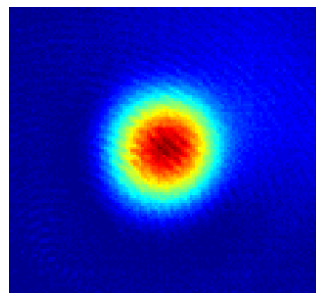
Power vs Voltage



Focused Beam

Dev #11

Dev #13



Beam focused using f/1 dia/25 mm High Resistivity Silicon Lens onto NEC IRV-TO831 Focal Plane Array

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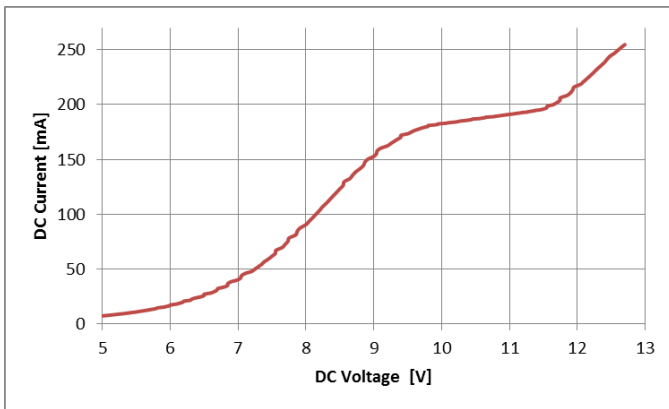
PHOTONICS

Data Sheet: THzQCL-3.1THz-DFB device #18

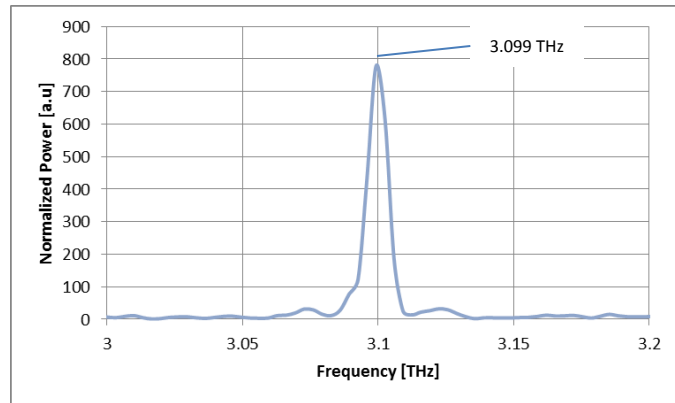
Description:

Device Type: Third-Order DFB
Operating Mode: CW
Measurement Temp: 45-48 K
Lasing frequency: single mode at 3.099 THz (see below)
CW Power: 2.3 mW ($V=12.55$ V, $I = 247$ mA)
Absolute Max Current: 255 mA (at >12.7V)

Current vs Voltage

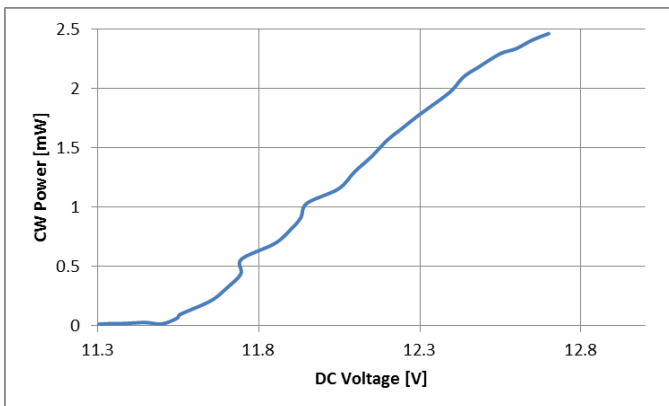


Spectral Characteristics

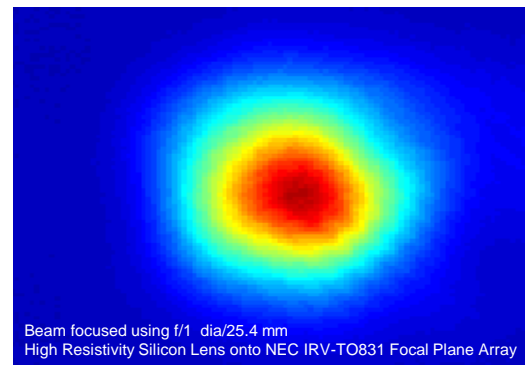


Pulse spectrum taken at 45K ($V=12.4$ V, $I=238$ mA)

Power vs Voltage



Typical Focused Beam



Beam focused using $f/1$ dia/25.4 mm
High Resistivity Silicon Lens onto NEC IRV-TO831 Focal Plane Array

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