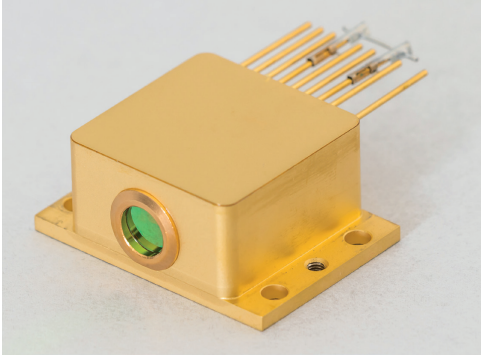
ALPES LASERS

pioneering photonics for a brighter future

Broadgain Illuminators



Broad Gain Illuminators are Fabry-Pérot lasers designed for maximum width of the gain profile. They can be used as broad spectrum illuminators for spectroscopy or imaging. Combined with an anti-reflection coating, they are suitable for use in an external cavity to obtain a tunable laser with wide tuning range.

Key Features

- Large Spectral Width
- Gapless coverage
- High radiance
- Smooth spectrum possible through dithering

Key Applications

- Mid-IR Illumination
- Globar replacement
- Imaging

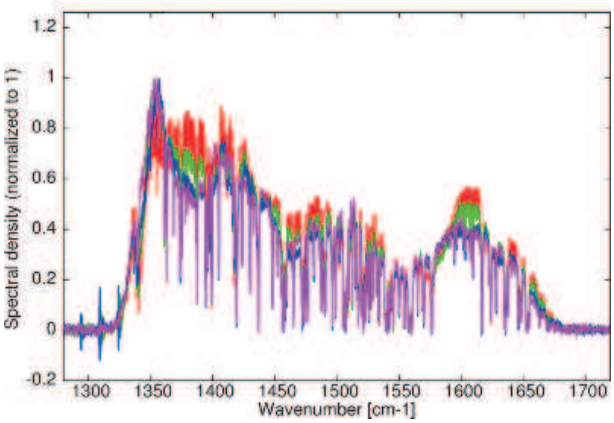
LASER RADIATION

SWISS MADE

Specifications

LASER TYPE	LASER NAME	TYPICAL SPECTRAL RANGE	POWER
Pulsed	BG-5.5-6.2	1670 – 1780 cm^{-1}	>50 mW
Pulsed	BG-6.2-7.4	1380 – 1600 cm^{-1}	>30 mW
Pulsed	BG-7.4-9.7	1090 – 1280 cm^{-1}	>80 mW
Pulsed	BG-9.7-13.1	800 – 980 cm^{-1}	>5 mW
Pulsed	P-FP-6.3	1560 – 1620 cm^{-1}	>50 mW
CW	BG-CW-5.9-6.2	1640 – 1700 cm^{-1}	>100 mW
CW	FP-CW-6.3	1530 – 1585 cm^{-1}	>100 mW

Broadgain Illuminators are available in the well-defined bands defined here. Test data is shown for operation as an illuminator devices; refer to the external cavity brochure for EC operation test data for these same chips.



This figure shows a sample spectrum from the BG-6.2-7.4 series which shows the dense coverage that can be reached with these lasers. The different colours correspond to different temperatures of operation. The laser is pulsed in this setup. The narrow dips correspond to narrow water absorption lines in the beam path.

Specifications

PARAMETER NAME	MINIMUM VALUE	TYPICAL VALUE	MAXIMUM VALUE	UNIT	NOTE
Spectral Width	55	200	300	cm^{-1}	Depends on model chosen
Average Power	5	50	100	mW	Depends on model chosen
Output Spectrum		MM			Multimode spectrum
Duty cycle	0	20	100	%	Only certain models can reach CW operation
Beam Divergence	-	-	6	mrad	Is defined as FWHM along the fast axis
Beam Diameter	-	4	-	mm	Measured at the window of the HHL
Pulse Width	20	300	CW	ns	Only certain models can reach CW operation
Packaging		HHL			Data for HHL shown but chips on submount also available
Dimensions		33×45×19		mm^3	Excluding 20 mm pins
TEC Current	1.5	2	3	A	
TEC Voltage	9	12	18	V	
Heatsink Cooling Capacity	25	35	65	W	A heat dissipation capacity of 10 W/K is recommmended to ensure optimal performances.
Lead Time	-	8	-	weeks	

Alpes Lasers SA | Pâquiers 1 | CH-2072 St-Blaise | Switzerland
PHONE +41 32 729 95 10 | FAX + 41 32 729 95 19 | www.alpeslasers.ch | info@alpeslasers.ch