FP laser diodes from 2400 to 3000 nm

nanoplus multi mode laser diodes

nanoplus is the only manufacturer worldwide routinely providing single and multi mode lasers at any wavelength from 760 to 6000 nm. At wavelengths up to 14 μm, QCLs complete nanoplus’ laser portfolio. Our Fabry Perot laser diodes deliver multi mode emission with well defined optical properties enabling a wide range of applications including e.g. security measures and range finding. In conjunction with an external cavity they are ideally suited for all spectroscopic tasks where a wide wavelength tuning range and a narrow linewidth is required.

nanoplus lasers operate reliably in tens of thousands of installations worldwide, including chemical and metallurgical industries, gas pipelines, power plants, medical systems, airborne and satellite applications.

key features
- excellent reliability
- broad emission spectrum
- wide variety of packaging options

application areas
- range finding
- security
- spectroscopy
- illumination

nanoplus FP lasers with excellent performance are specifically designed and characterized to fit your needs. This data sheet summarizes typical properties of nanoplus FP lasers in the wavelength range from 2400 nm to 3000 nm. In this wavelength range e.g. H₂O, NO, N₂O and CO₂ can be detected with particularly high sensitivity.

On request, lasers with specifically optimized properties, e.g. higher output power, are available.

For dimensions and accessories, please see www.nanoplus.com

Further packaging options available on request.
nanoplus FP laser diodes

nanoplus FP laser diodes in the range from 2400 nm to 3000 nm are ideally suited for all spectroscopic tasks where a broad laser emission spectrum and a short coherence length is required. The variety of applications for which these FP laser diodes are key elements include range finding systems, security measures and many more. In combination with external cavity setups the laser diodes can be operated as sources for widely tunable external cavity lasers for ultra sensitive laser based gas sensing of e.g. H2O, NO, N2O and CO2.

For examples of performance data of nanoplus lasers in other wavelength ranges, please see www.nanoplus.com or contact sales@nanoplus.com

Fig. 1
Room temperature cw spectrum of a nanoplus FP laser diode operating at 2700 nm

Fig. 2
Output power versus current characteristics of a 2700 nm FP laser diode at room temperature

electrooptical characteristics (T = 25 °C)  symbol  unit  min  typ  max
peak wavelength  λ  nm  2680  2700  2720
threshold current  Ith  mA  50  60  70
slow axis (FWHM)  degrees  20  30  40
fast axis (FWHM)  degrees  40  50  60
emitting area  W x H  μm x μm  4.0 x 1.2  4.4 x 1.3  4.8 x 1.4
storage temperatures  Ts  °C  -40  +20  +80
operational temperature at case  Tc  °C  -20  +25  +50

We will be happy to answer further questions. Please contact us at sales@nanoplus.com