

Mid-Infrared LED (MIR LED)

WAVELENGTH

2800–4000 nm

4000–5300 nm

5300–6500 nm

TOP WAVELENGTH

3400 nm

4300 nm

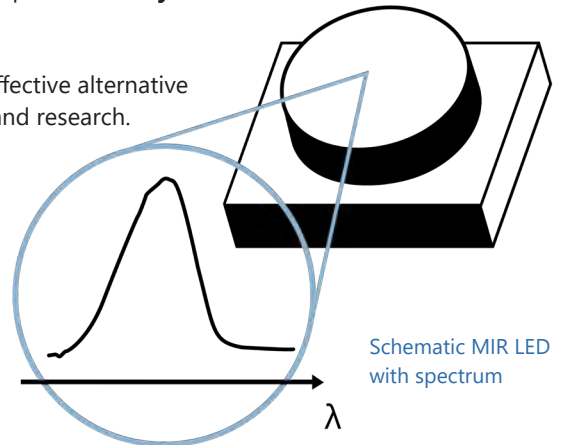
5200 nm

nanoplus **MIR LED** are specially designed and characterized to fit your requirements. For more than 20 years, nanoplus has been manufacturing Distributed Feedback and Fabry-Pérot Lasers with excellent performance. Our devices operate **reliably** in more than 50,000 installations worldwide.

nanoplus **MIR LED** are a broadband, incoherent and cost-effective alternative to lasers for e.g. many gas sensing applications in industry and research.

Key features:

- LOW POWER CONSUMPTION
- CW OPERATION
- BROADBAND
- INCOHERENT



Schematic MIR LED with spectrum

Any **custom wavelength** is possible: You tell us what you need and we deliver it. With our outstanding technology we design any wavelength **between 2800 nm and 6500 nm** with an accuracy of +/- 100 nm.

nanoplus MIR LED are the perfect light source **for mobile analyzers**, as they **consume little power**.

You can use our MIR LED in **true continuous wave operation** at **room temperature**.

The MIR LED's **output power** of > **1 mW** leads to a strong signal and increases your measurement precision. Higher output power is available upon request.

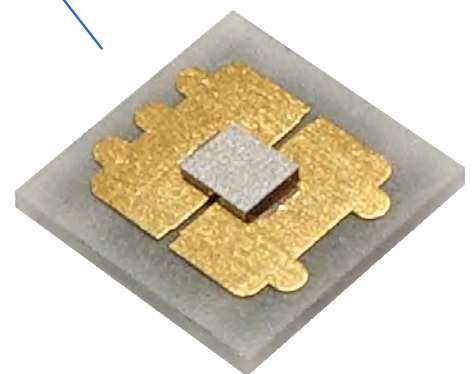
We offer **various packaging options**, with or without TEC. You tell us what you need!

Long-term stability is what our customers really want! Even in **harsh environments** nanoplus devices perform excellently – low maintenance warranted.

“Do not change your ideas, let us deliver the MIR LED that fits your application.”

If you require **custom specifications**, please contact us. Nearly 80 % of our devices are more or less customer-specific. As nanoplus is a **fully vertically integrated company**, we control the whole process chain from design to packaging. Both nanoplus production facilities are based in **Germany**. To guarantee consistent product quality we apply a strict and **ISO certified quality management system** at all levels.

Our sales and R&D teams have long-standing experience in developing lasers. They will advise you in your design and realization phase as well as after-sales:



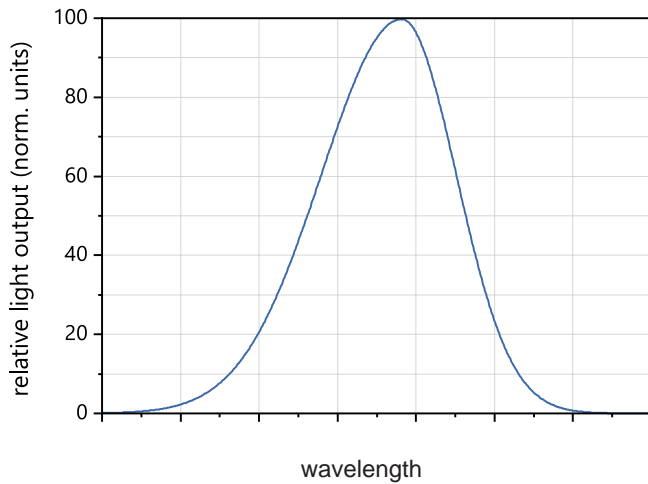
nanoplus MIR LED on ceramic submount

We make market leaders!

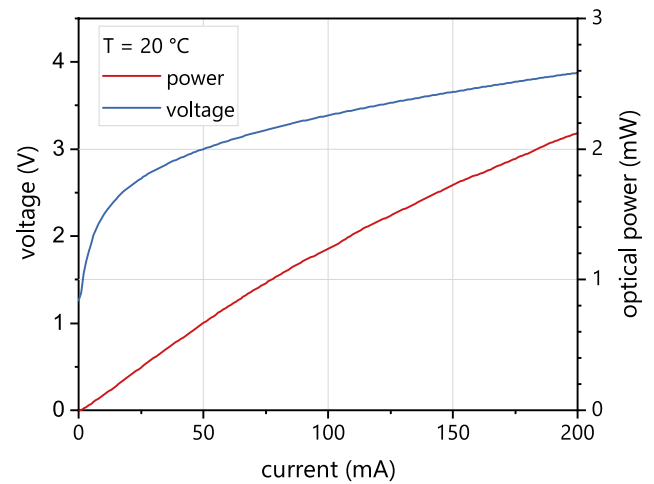


Typical Specifications: Mid-Infrared LED

This data sheet reports performance data of a **nanoplus Mid-Infrared LED**.



Typical room temperature cw spectrum
of a nanoplus MIR LED



Typical PI and VI curve
of a nanoplus MIR LED

The table below outlines typical major specifications of our Mid-Infrared LED.

Detailed specifications and packaging options are available on our website at <https://nanoplus.com/products/mid-Infrared-led>.

Define your center wavelength to +/- 100 nm*	spectral bandwidth (FWHM) $\Delta \lambda$ (μm)	optical cw output power P_{op} (mW)**	operating current I_{op} (mA)
2800 - 4000 nm	0.8	3	200
4000 - 5300 nm	0.8	1.5	200
5300 - 6500 nm	1.5	1.5	200
5200 nm	1.4	0.8	200

* ~ 20 nm peak-change per 10°C temperature-change

** power dissipation 1W [heatsink required]

Pulsed operation for low power consumption is possible.

Other operating temperatures are available on request.

