

# Fabry-Pérot Laser Diodes (FP): 760 nm - 840 nm

## WAVELENGTH

760–840 nm

840–1100 nm

1100–1700 nm

1700–2400 nm

2400–2900 nm

2800–6500 nm

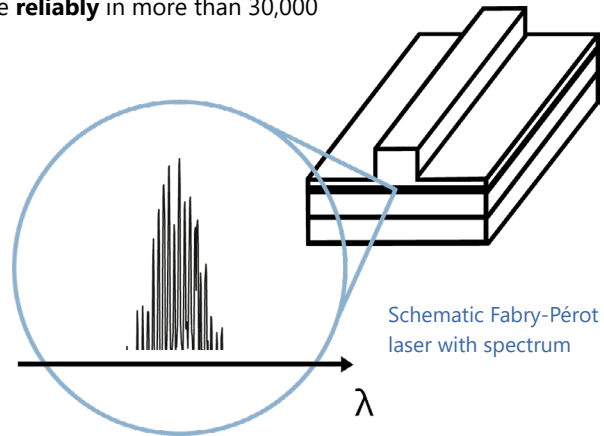
6000–14000 nm

High-Power OPT

nanoplus FPs are specially designed and characterized to fit your requirements. For more than 20 years, nanoplus has been manufacturing DFB and FP lasers with excellent performance. Our devices operate **reliably** in more than 30,000 installations worldwide.

### Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



Any **custom wavelength** is possible: You tell us what you need! With our outstanding technology we design any wavelength **between 760 nm and 2900 nm** with an accuracy of +/- 20 nm.

The **output power** of **several mW** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

We offer **various packaging options**, e. g. several free space housings including TEC and NTC, fiber coupling, **collimation** and **custom designs**. What are your requirements?

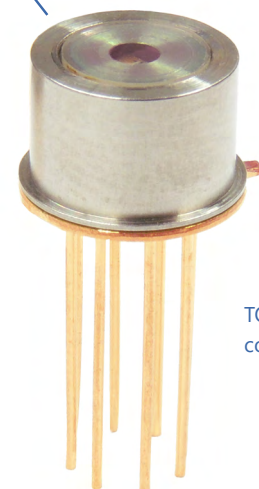
**Long-term stability** is one of the principal features customers value about our lasers! Even in **harsh environments** nanoplus devices perform excellently – low maintenance warranted.

**“Do not change your ideas, let us deliver a laser that fits your application.”**

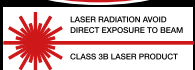
If you require **custom specifications**, please contact us. Nearly 80 % of our devices are more or less customer-specific. As nanoplus is a **fully vertically integrated company**, we control the entire process chain from design to packaging. Both nanoplus production facilities are based in **Germany**. 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 be pleased to provide advice at any time - rely on us from design stage to product realization as well as after-sales:

**We make market leaders!**

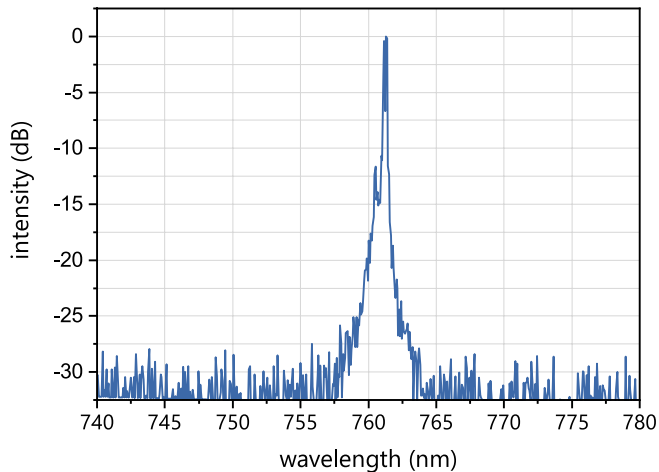


TO5 with cap and AR coated window

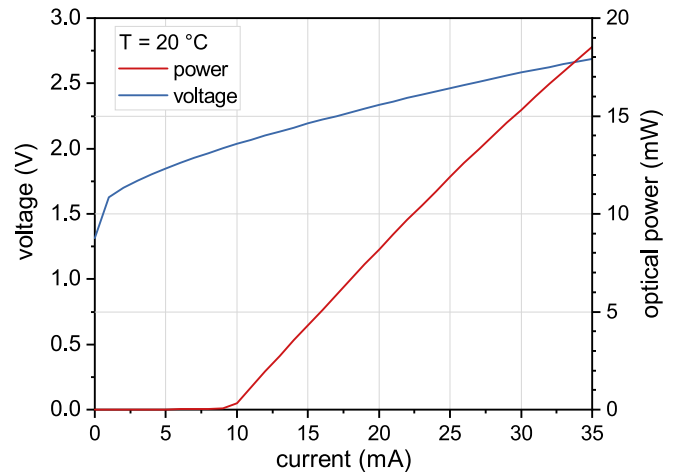


# Typical Specifications: 760 nm - 840 nm

This data sheet reports performance data of a **sample Fabry-Pérot laser at 761 nm**, which is representative for the entire wavelength range. If you need more power, please check our [High-Power Option](#).



Typical room temperature cw spectrum  
of a nanoplus FP laser at 761 nm



Typical PI and VI curve  
of a nanoplus FP laser at 761 nm

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	761	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		10	
operating current	$I_{op}$	mA		30	
operating voltage	$V_{op}$	V		3	
threshold current	$I_{th}$	mA		50	
operating chip temperature	$T_{op}$	°C	+20	+25	+50
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

**TO5 with TEC and NTC, black cap, AR coated window**

**TO56 without TEC or NTC, sealed, window**

**c-mount or other submounts without TEC or NTC**

**butterfly package with TEC and NTC, SM fiber, FC/APC connector**

**chip on carrier without TEC, with NTC**

Technical drawings & accessories are available at: <https://nanoplus.com/packaging-options>

# Fabry-Pérot Laser Diodes (FP): 840 nm - 1100 nm

## WAVELENGTH

760–840 nm

**840–1100 nm**

1100–1700 nm

1700–2400 nm

2400–2900 nm

2800–6500 nm

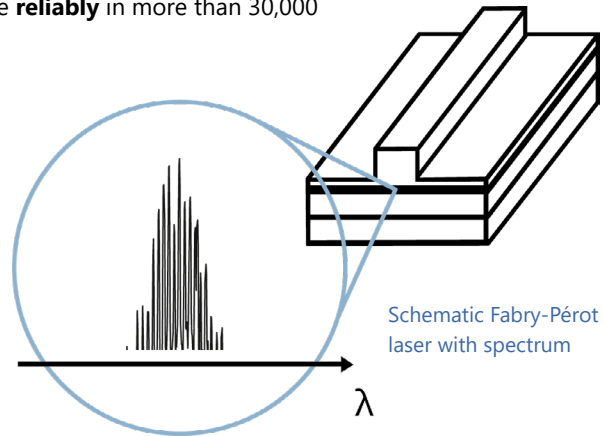
6000–14000 nm

High-Power OPT

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### Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



Any **custom wavelength** is possible: You tell us what you need! With our outstanding technology we design any wavelength **between 760 nm and 2900 nm** with an accuracy of +/- 20 nm.

The **output power** of **several mW** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

We offer **various packaging options**, e. g. several free space housings including TEC and NTC, fiber coupling, **collimation** and **custom designs**. What are your requirements?

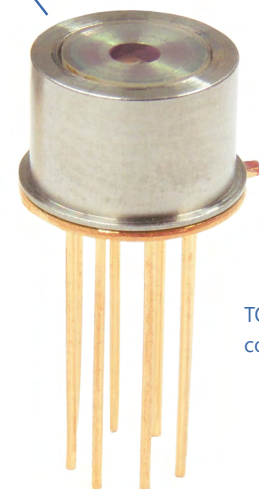
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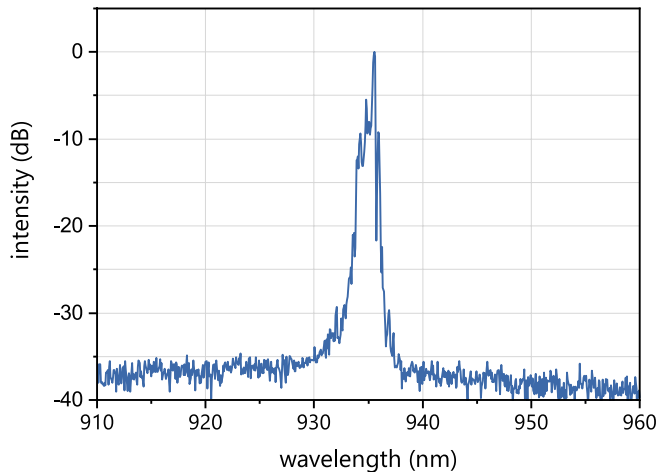


TO5 with cap and AR coated window

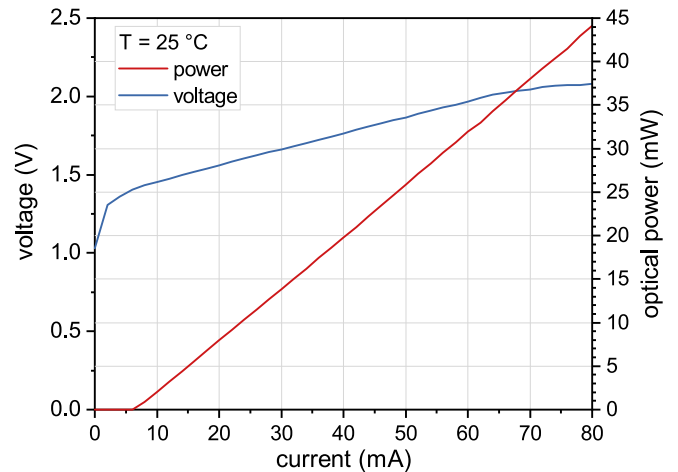


# Typical Specifications: 840 nm - 1100 nm

This data sheet reports performance data of a **sample Fabry-Pérot laser at 935 nm**, which is representative for the entire wavelength range. If you need more power, please check our [High-Power Option](#).



Typical room temperature cw spectrum  
of a nanoplus FP laser at 935 nm



Typical PI and VI curve  
of a nanoplus FP laser at 935 nm

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	935	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		35	
operating current	$I_{op}$	mA		70	
operating voltage	$V_{op}$	V		3	
threshold current	$I_{th}$	mA		50	
operating chip temperature	$T_{op}$	°C	+20	+25	+50
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

**TO5 with TEC and NTC, black cap, AR coated window**

**TO56 without TEC or NTC, sealed, window**

**c-mount or other submounts without TEC or NTC**

**butterfly package with TEC and NTC, SM fiber, FC/APC connector**

**chip on carrier without TEC, with NTC**

Technical drawings & accessories are available at: <https://nanoplus.com/packaging-options>

# Fabry-Pérot Laser Diodes (FP): 1100 nm - 1700 nm

## WAVELENGTH

760–840 nm

840–1100 nm

## 1100–1700 nm

1700–2400 nm

2400–2900 nm

2800–6500 nm

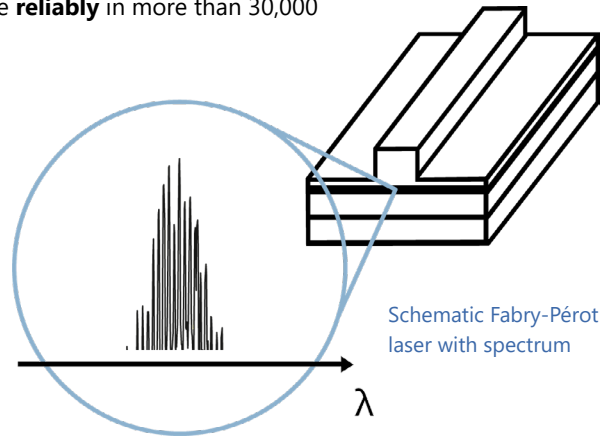
6000–14000 nm

High-Power OPT

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### Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



Schematic Fabry-Pérot laser with spectrum

Any **custom wavelength** is possible: You tell us what you need! With our outstanding technology we design any wavelength **between 760 nm and 2900 nm** with an accuracy of +/- 20 nm.

The **output power** of **several mW** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

We offer **various packaging options**, e. g. several free space housings including TEC and NTC, fiber coupling, **collimation** and **custom designs**. What are your requirements?

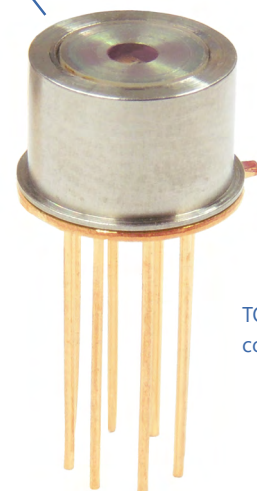
**Long-term stability** is one of the principal features customers value about our lasers! Even in **harsh environments** nanoplus devices perform excellently – low maintenance warranted.

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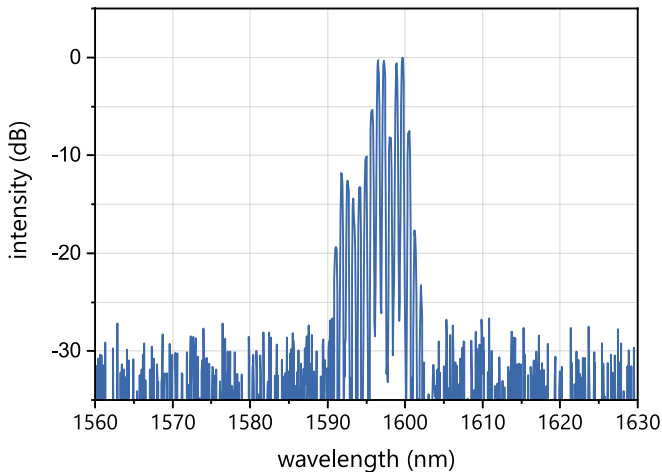


TO5 with cap and AR coated window

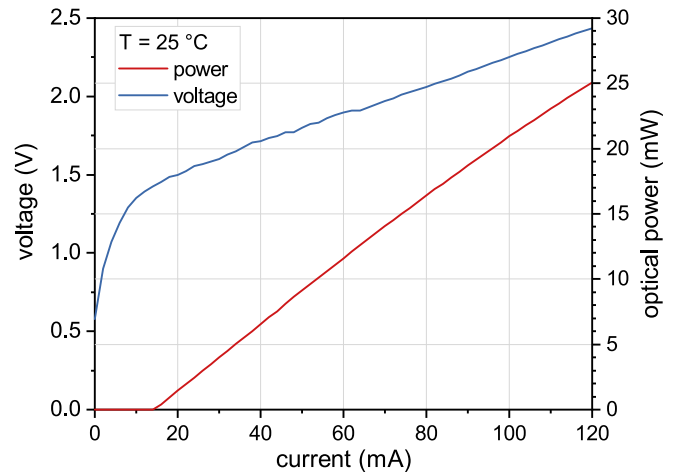


# Typical Specifications: 1100 nm - 1700 nm

This data sheet reports performance data of a **sample Fabry-Pérot laser at 1590 nm**, which is representative for the entire wavelength range. If you need more power, please check our [High-Power Option](#).



Typical room temperature cw spectrum  
of a nanoplus FP laser at 1590 nm



Typical PI and VI curve  
of a nanoplus FP laser at 1590 nm

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	please specify	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		10	
operating current	$I_{op}$	mA		45	
operating voltage	$V_{op}$	V		2	
threshold current	$I_{th}$	mA		50	
operating chip temperature	$T_{op}$	°C	+20	+25	+50
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

**TO5 with TEC and NTC, black cap, AR coated window**

**TO56 without TEC or NTC, sealed, window**

**c-mount or other submounts without TEC or NTC**

**butterfly package with TEC and NTC, SM fiber, FC/APC connector**

**chip on carrier without TEC, with NTC**

Technical drawings & accessories are available at: <https://nanoplus.com/packaging-options>

# Fabry-Pérot Laser Diodes (FP): 1700 nm - 2400 nm

## WAVELENGTH

760–840 nm

840–1100 nm

1100–1700 nm

**1700–2400 nm**

2400–2900 nm

2800–6500 nm

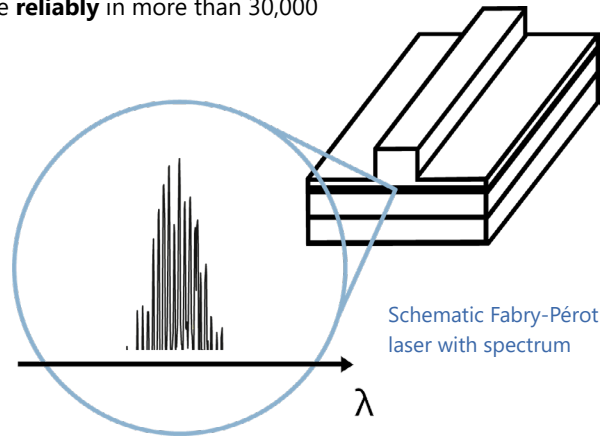
6000–14000 nm

High-Power OPT

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## Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



Any **custom wavelength** is possible: You tell us what you need! With our outstanding technology we design any wavelength **between 760 nm and 2900 nm** with an accuracy of +/- 20 nm.

The **output power** of **several mW** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

We offer **various packaging options**, e. g. several free space housings including TEC and NTC, fiber coupling, **collimation** and **custom designs**. What are your requirements?

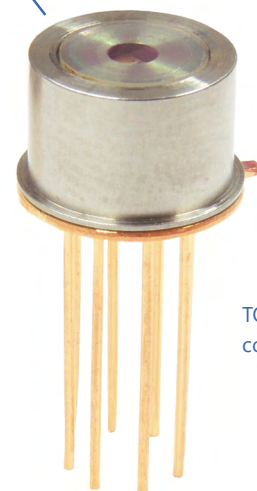
**Long-term stability** is one of the principal features customers value about our lasers! Even in **harsh environments** nanoplus devices perform excellently – low maintenance warranted.

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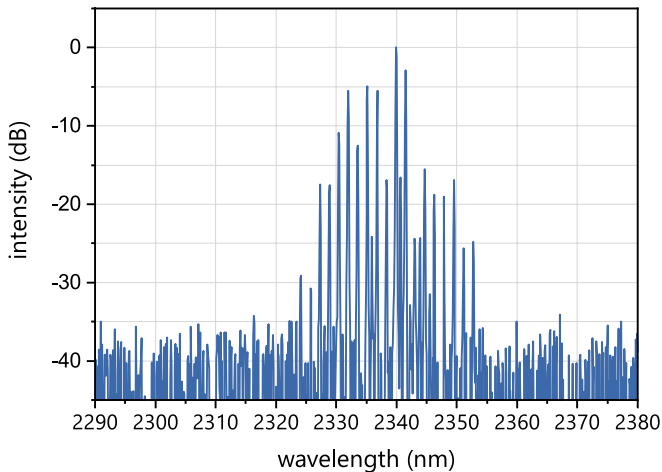


TO5 with cap and AR coated window

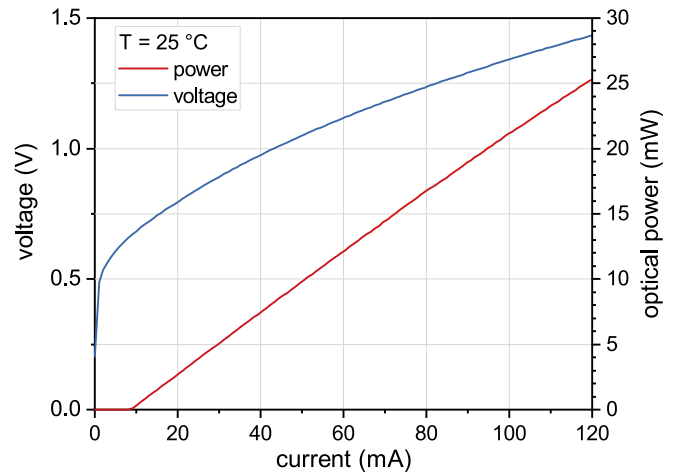


# Typical Specifications: 1700 nm - 2400 nm

This data sheet reports performance data of a **sample Fabry-Pérot laser at 2330 nm**, which is representative for the entire wavelength range. If you need more power, please check our [High-Power Option](#).



Typical room temperature cw spectrum  
of a nanoplus FP laser at 2330 nm



Typical PI and VI curve  
of a nanoplus FP laser at 2330 nm

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	2330	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		10	
operating current	$I_{op}$	mA		120	
operating voltage	$V_{op}$	V		2	
threshold current	$I_{th}$	mA		45	
operating chip temperature	$T_{op}$	°C	+20	+25	+50
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

**TO5 with TEC and NTC, black cap, AR coated window**

**TO56 without TEC or NTC, sealed, window**

**c-mount or other submounts without TEC or NTC**

**butterfly package with TEC and NTC, SM fiber, FC/APC connector; up to 2360 nm**

**chip on carrier without TEC, with NTC**

Technical drawings & accessories are available at: <https://nanoplus.com/packaging-options>



# Fabry-Pérot Laser Diodes (FP): 2400 nm - 2900 nm

## WAVELENGTH

760–840 nm

840–1100 nm

1100–1700 nm

1700–2400 nm

**2400–2900 nm**

2800–6500 nm

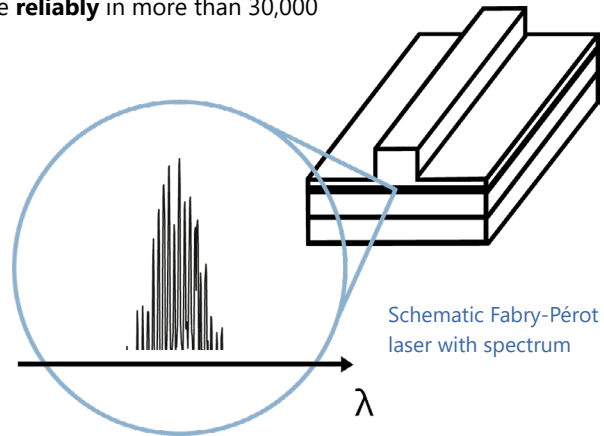
6000–14000 nm

High-Power OPT

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## Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



Schematic Fabry-Pérot laser with spectrum

Any **custom wavelength** is possible: You tell us what you need! With our outstanding technology we design any wavelength **between 760 nm and 2900 nm** with an accuracy of +/- 20 nm.

The **output power** of **several mW** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

We offer **various packaging options**, e. g. several free space housings including TEC and NTC, fiber coupling, **collimation** and **custom designs**. What are your requirements?

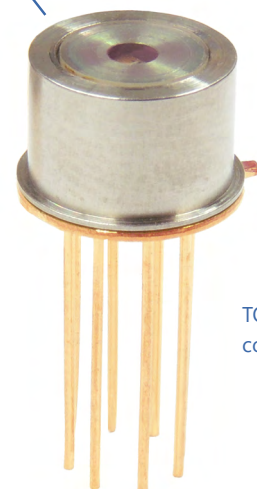
**Long-term stability** is one of the principal features customers value about our lasers! Even in **harsh environments** nanoplus devices perform excellently – low maintenance warranted.

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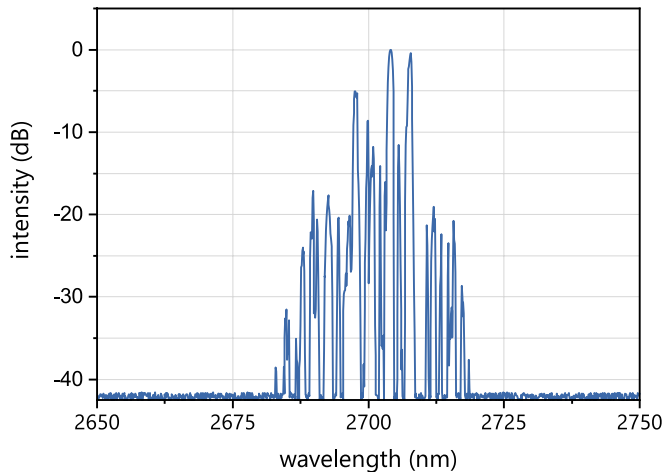


TO5 with cap and AR coated window

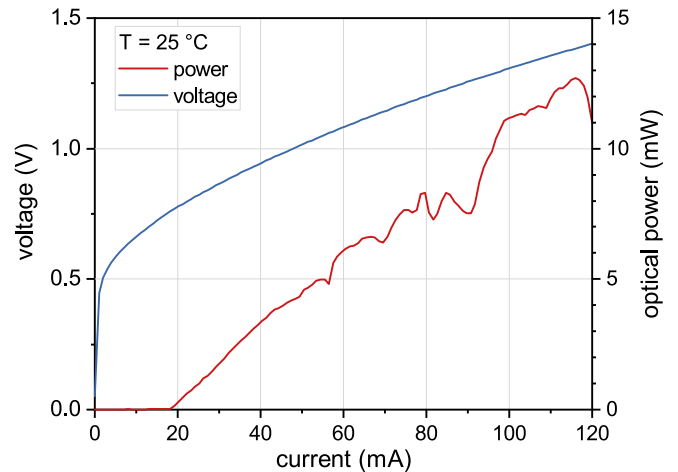


# Typical Specifications: 2400 nm - 2900 nm

This data sheet reports performance data of a **sample Fabry-Pérot laser at 2700 nm**, which is representative for the entire wavelength range. If you need more power, please check our [High-Power Option](#).



Typical room temperature cw spectrum  
of a nanoplus FP laser at 2700 nm



Typical PI and VI curve  
of a nanoplus FP laser at 2700 nm

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	2700	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		5	
operating current	$I_{op}$	mA		100	
operating voltage	$V_{op}$	V		2	
threshold current	$I_{th}$	mA		50	
operating chip temperature	$T_{op}$	°C	+20	+25	+50
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

**TO5 with TEC and NTC, black cap, AR coated window**

**TO56 without TEC or NTC, sealed, window**

**c-mount or other submounts without TEC or NTC**

**chip on carrier without TEC, with NTC**

Technical drawings & accessories are available at: <https://nanoplus.com/packaging-options>

# Fabry-Pérot Laser Diodes (FP): 2800 nm - 6500 nm

## WAVELENGTH

760–840 nm

840–1100 nm

1100–1700 nm

1700–2400 nm

2400–2900 nm

**2800–6500 nm**

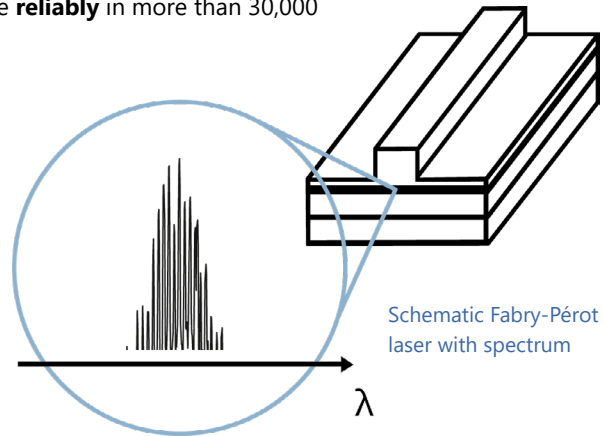
6000–14000 nm

High-Power OPT

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## Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



Schematic Fabry-Pérot laser with spectrum

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The **output power** of **several mW** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

We offer **various packaging options**, e. g. several free space housings including TEC and NTC, fiber coupling, **collimation** and **custom designs**. What are your requirements?

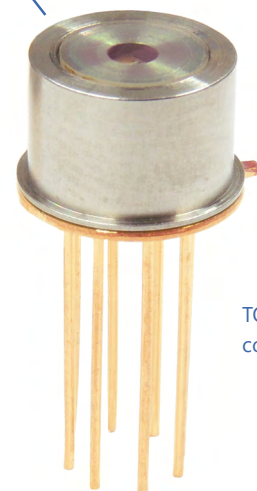
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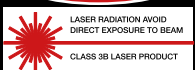
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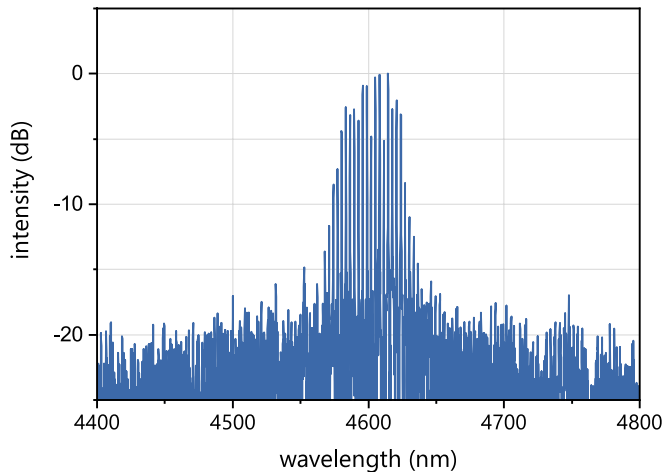


TO5 with cap and AR coated window

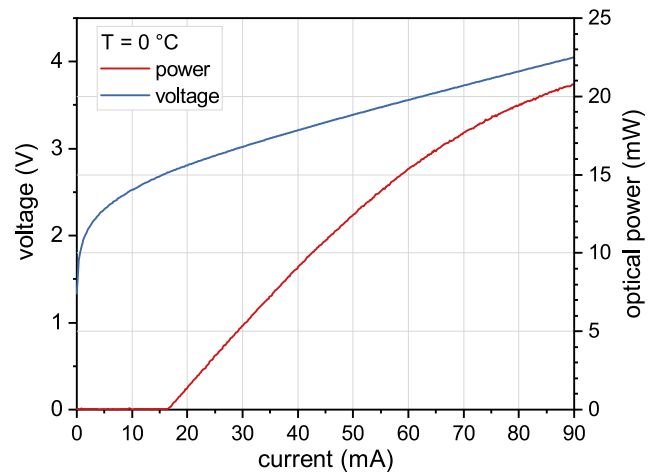


# Typical Specifications: 2800 nm - 6500 nm

This data sheet reports performance data of a **sample Fabry-Pérot laser at 4600 nm**, which is representative for the entire wavelength range. If you need more power, please check our [High-Power Option](#).



Typical room temperature cw spectrum  
of a nanoplus FP laser at 4600 nm



Typical PI and VI curve  
of a nanoplus FP laser at 4600 nm

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	4600	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		5	
operating current	$I_{op}$	mA		100	
operating voltage	$V_{op}$	V	4		6
threshold current	$I_{th}$	mA		50	
operating chip temperature	$T_{op}$	°C	-10	depending on $\lambda$	+50
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

**TO66 with TEC and NTC, black cap, AR coated window**

**Other packaging options may be discussed on request.**

**Technical drawings & accessories are available at:** <https://nanoplus.com/packaging-options>

# Fabry-Pérot Laser Diodes (FP): High-Power Option

## WAVELENGTH

760–840 nm

840–1100 nm

1100–1700 nm

1700–2400 nm

2400–2900 nm

2800–6500 nm

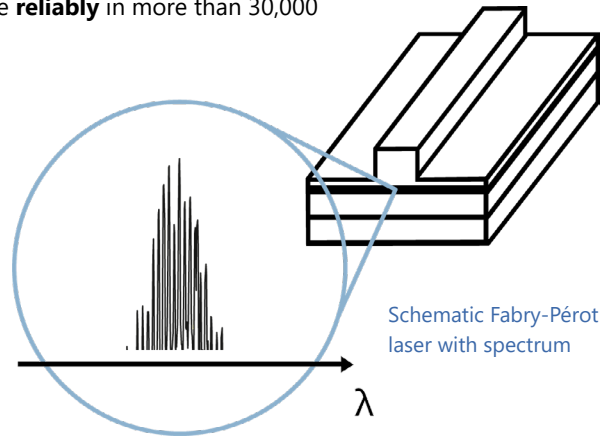
6000–14000 nm

High-Power OPT

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## Key features:

- BROADBAND
- HIGH-POWER
- SMALL FOOTPRINT



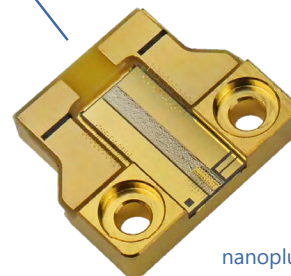
Schematic Fabry-Pérot laser with spectrum

Any **custom wavelength** is possible: You tell us what you need! With our outstanding technology we design any wavelength **between 1950 nm and 2350 nm** with an accuracy of +/- 20 nm. Other wavelengths are available on request.

The **output power** of **up to 1 W** yields a strong signal and gives large flexibility to your application. High power up to 1 W for diverse applications is available on request.

**Long-term stability** is one of the principal features customers value about our lasers! Even in **harsh environments** nanoplus devices perform excellently – low maintenance warranted.

**“Do not change your ideas, let us deliver a laser that fits your application.”**

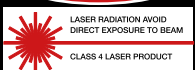


nanoplus high-power Fabry-Pérot laser on submount with AlN carrier

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 entire 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.

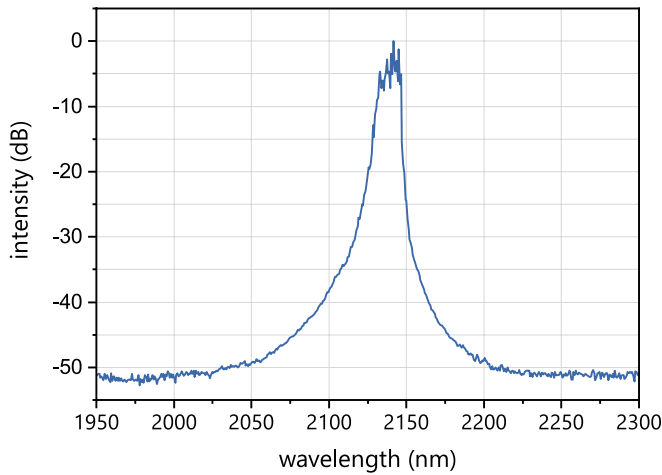
Our sales and R&D teams have long-standing experience in developing lasers. They will be pleased to provide advice at any time - rely on us from design stage to product realization as well as after-sales:

**We make market leaders!**

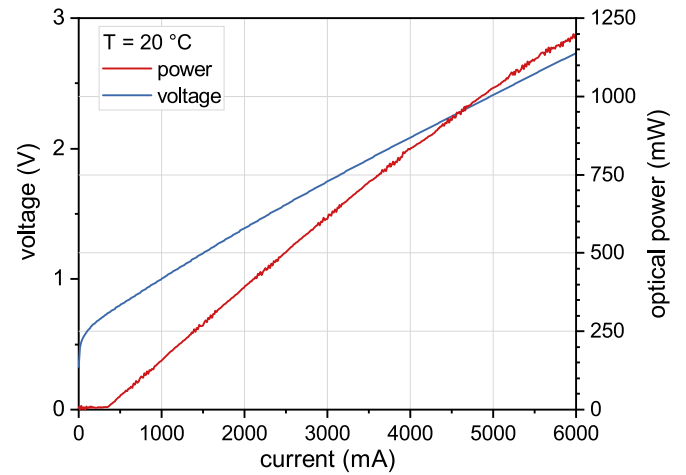


# Typical Specifications: High-Power Option

This data sheet reports performance data of a **sample High-Power Fabry Pérot Laser at 2145 nm**, which is representative for all wavelengths between 1950 nm and 2350 nm with **high-power option**.



Typical room temperature cw spectrum of a nanoplus HPFP laser at 2145 nm



Typical PI and VI curve of a nanoplus HPFP laser at 2145 nm

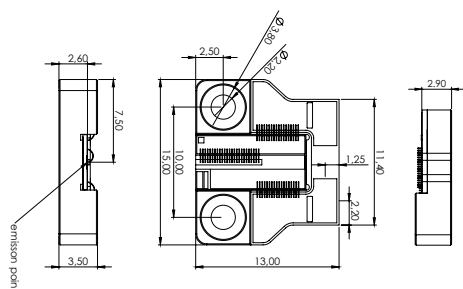
electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at $T_{op}$ , $I_{op}$ )	$\lambda_{op}$	nm	-20	please specify	+20
optical output power (at $\lambda_{op}$ )	$P_{op}$	mW		1000	
operating current	$I_{op}$	mA		5000	
operating voltage	$V_{op}$	V		2.5	
threshold current	$I_{th}$	mA		300	
operating case temperature*	$T_c$	°C	-20	+25	+50
storage temperature*	$T_s$	°C	-40	+20	+80

\* non condensing

## laser packaging options

submount with AlN carrier, without TEC, without NTC

Technical drawings & accessories are available at: <https://nanoplus.com/packaging-options>



Technical drawing of submount with AlN carrier

