

DFB Interband Cascade Lasers (ICL): 2800 nm - 4000 nm

WAVELENGTH

2800–4000 nm

4000–4600 nm

4600–5300 nm

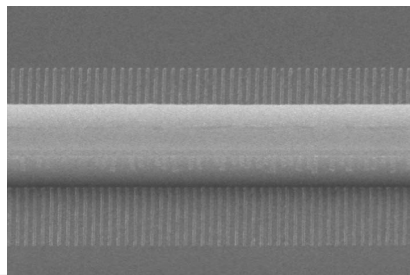
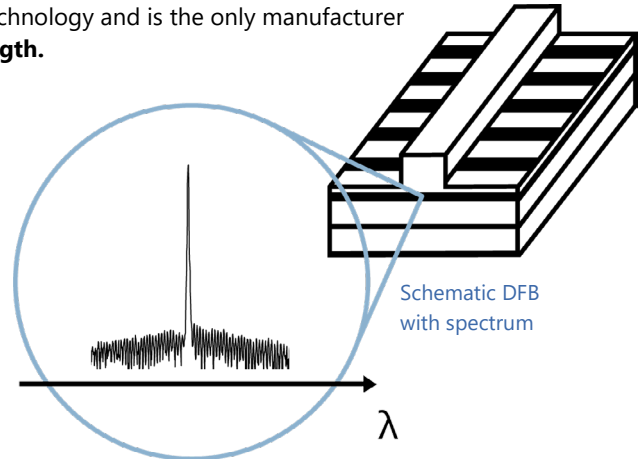
5300–5800 nm

5800–6500 nm

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Key features:

- MONOMODE
- CONTINUOUS WAVE
- ROOM TEMPERATURE
- MODE HOP FREE TUNING



Overgrowth-free DFB device processing

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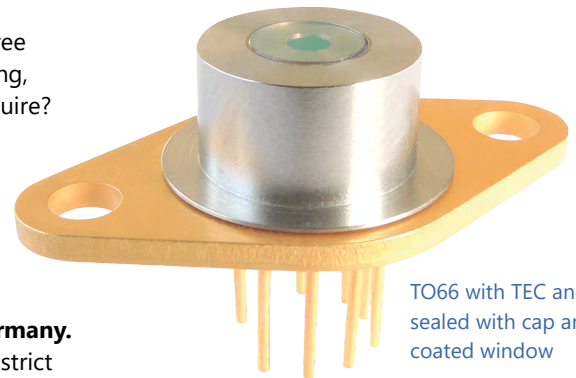
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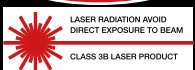
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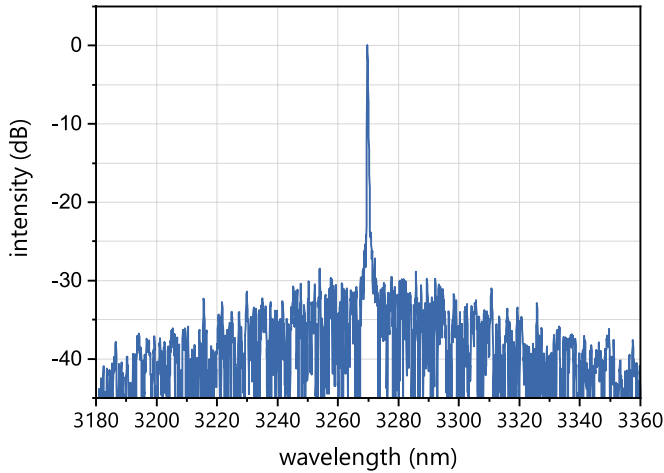
TO66 with TEC and NTC, sealed with cap and AR coated window

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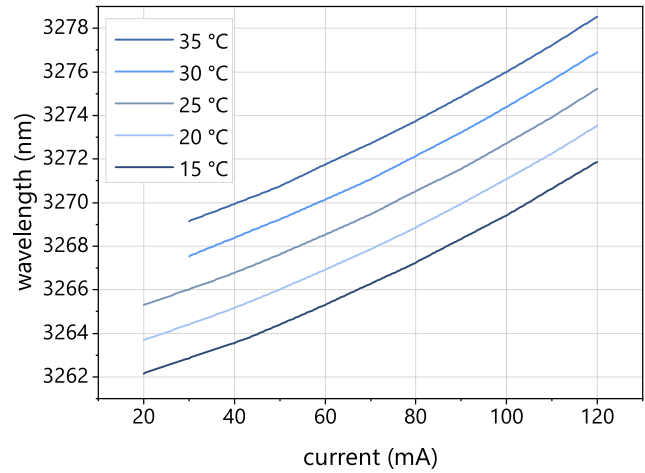


Typical Specifications: 2800 nm - 4000 nm

This data sheet reports performance data of a **sample DFB ICL at 3270 nm**, which is representative for the entire wavelength range. We offer enhanced specifications for 3270 nm, 3345 nm and 3375 nm. Please refer to our TOP Wavelengths for further details.



Typical room temperature cw spectrum of a nanoplus DFB ICL at 3270 nm



Typical mode hop free tuning of a nanoplus DFB ICL at 3270 nm by current and temperature

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at T_{op} , I_{op})	λ_{op}	nm		Please specify to 0.1 nm.	
optical output power (at λ_{op})	P_{op}	mW		10	
operating current	I_{op}	mA		120	
operating voltage	V_{op}	V		5	
threshold current	I_{th}	mA	15	30	50
side mode suppression ratio	SMSR	dB		> 35	
current tuning coefficient	C_I	nm / mA		0.10	
temperature tuning coefficient	C_T	nm / K		0.35	
operating chip temperature	T_{op}	°C	+10	+20	+50
operating case temperature*	T_c	°C	-20	+25	+50
storage temperature*	T_s	°C	-30	+20	+70

* 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>

DFB Interband Cascade Lasers (ICL): 4000 nm - 4600 nm

WAVELENGTH

2800–4000 nm

4000–4600 nm

4600–5300 nm

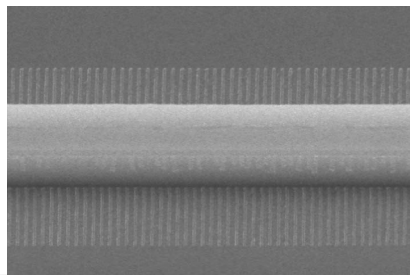
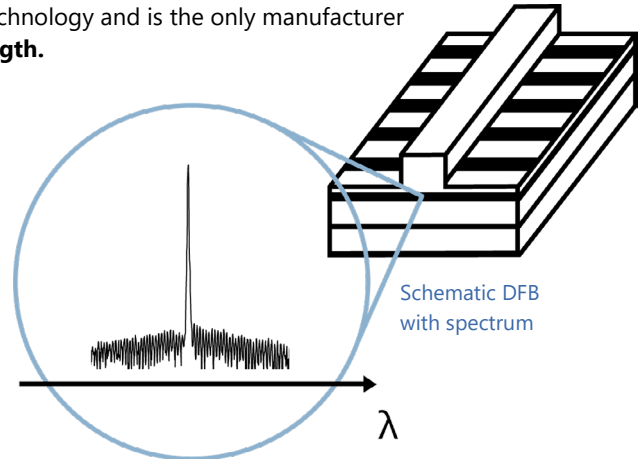
5300–5800 nm

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- ROOM TEMPERATURE
- MODE HOP FREE TUNING



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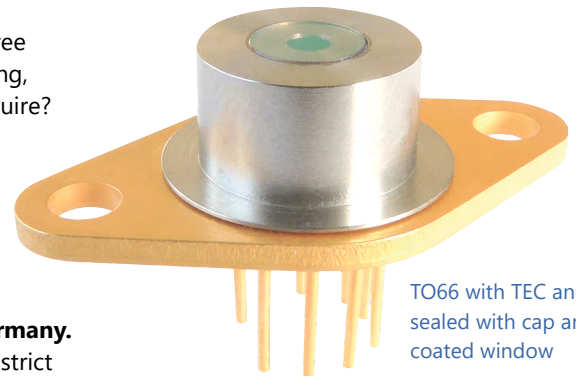
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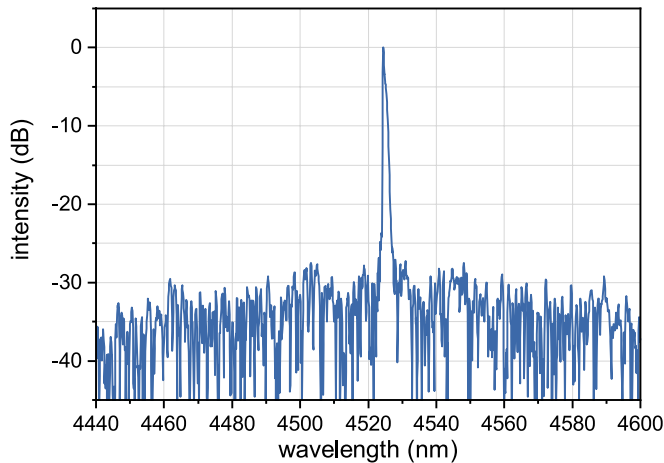
TO66 with TEC and NTC, sealed with cap and AR coated window

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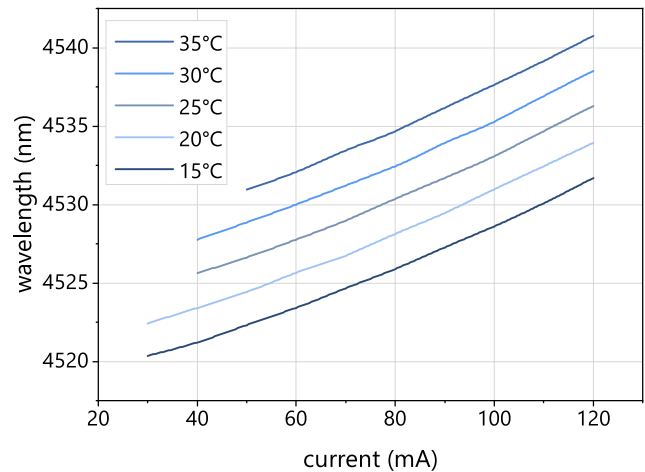


Typical Specifications: 4000 nm - 4600 nm

This data sheet reports performance data of a **sample DFB ICL at 4524 nm**, which is representative for the entire wavelength range. We offer enhanced specifications for 4524 nm and 4534 nm. Please refer to our TOP Wavelengths for further details.



Typical room temperature cw spectrum
of a nanoplus DFB ICL at 4524 nm



Typical mode hop free tuning of a nanoplus
DFB ICL at 4524 nm by current and temperature

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at T_{op} , I_{op})	λ_{op}	nm		Please specify to 0.1 nm.	
optical output power (at λ_{op})	P_{op}	mW		5	
operating current	I_{op}	mA		120	
operating voltage	V_{op}	V		5	
threshold current	I_{th}	mA	20	40	60
side mode suppression ratio	SMSR	dB		> 35	
current tuning coefficient	C_I	nm / mA		0.12	
temperature tuning coefficient	C_T	nm / K		0.45	
operating chip temperature	T_{op}	°C	+10	+20	+50
operating case temperature*	T_c	°C	-20	+25	+50
storage temperature*	T_s	°C	-30	+20	+70

* non-condensing

laser packaging options

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

Other packaging options may be discussed on request.

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DFB Interband Cascade Lasers (ICL): 4600 nm - 5300 nm

WAVELENGTH

2800–4000 nm

4000–4600 nm

4600–5300 nm

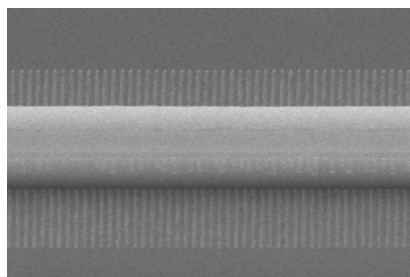
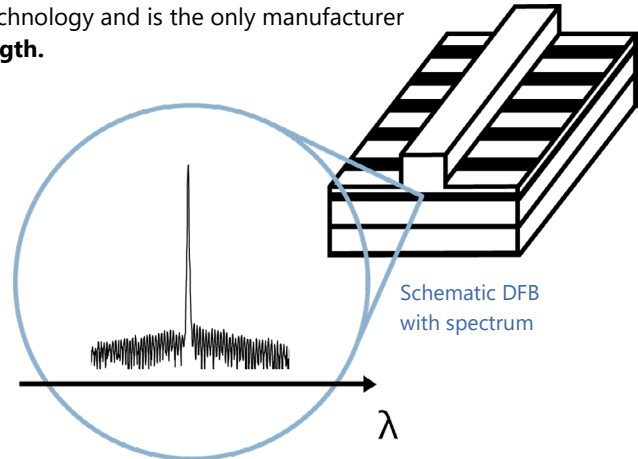
5300–5800 nm

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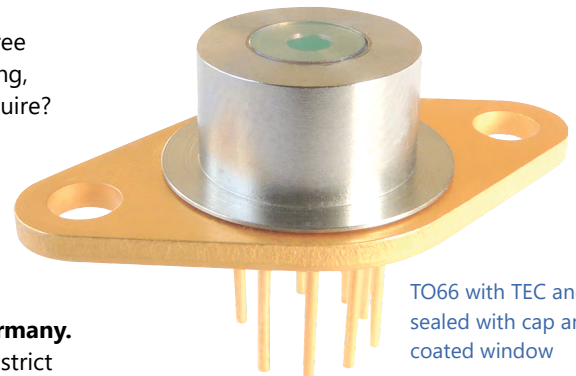
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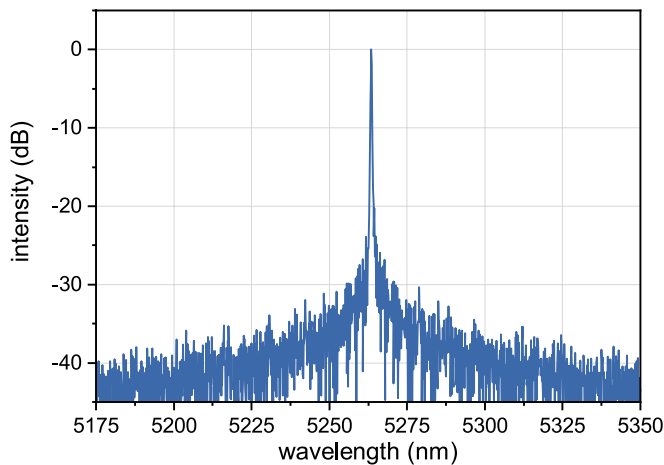
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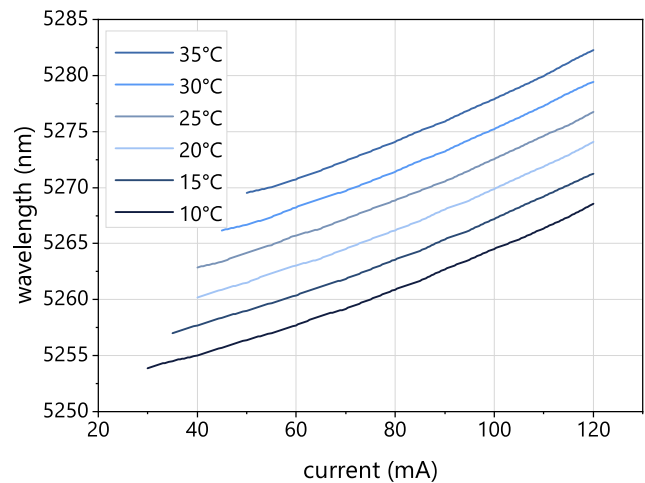


Typical Specifications: 4600 nm - 5300 nm

This data sheet reports performance data of a **sample DFB ICL at 5263 nm**, which is representative for the entire wavelength range. We offer enhanced specifications for 5184nm and 5263 nm. Please refer to our TOP Wavelengths for further details.



Typical room temperature cw spectrum
of a nanoplus DFB ICL at 5263 nm



Typical mode hop free tuning of a nanoplus
DFB ICL at 5263 nm by current and temperature

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at T_{op} , I_{op})	λ_{op}	nm		Please specify to 0.1 nm.	
optical output power (at λ_{op})	P_{op}	mW		3	
operating current	I_{op}	mA		120	
operating voltage	V_{op}	V		5	
threshold current	I_{th}	mA	30	40	70
side mode suppression ratio	SMSR	dB		> 35	
current tuning coefficient	C_I	nm / mA		0.14	
temperature tuning coefficient	C_T	nm / K		0.48	
operating chip temperature	T_{op}	°C	+10	+20	+50
operating case temperature*	T_c	°C	-20	+25	+50

* non-condensing

laser packaging options

TO66 with TEC and NTC, sealed, AR coated window

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DFB Interband Cascade Lasers (ICL): 5300 nm - 5800 nm

WAVELENGTH

2800–4000 nm

4000–4600 nm

4600–5300 nm

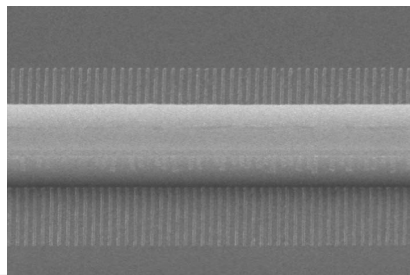
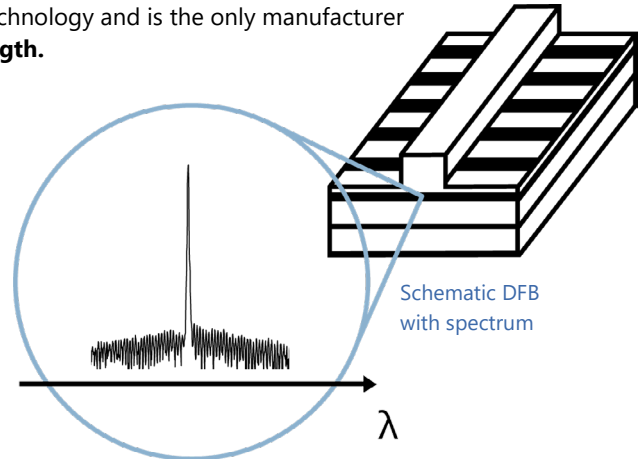
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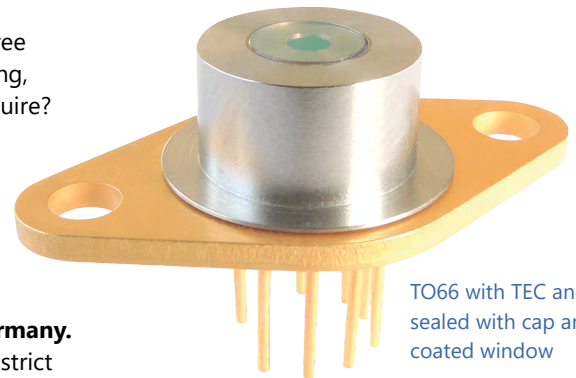
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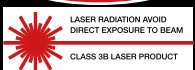
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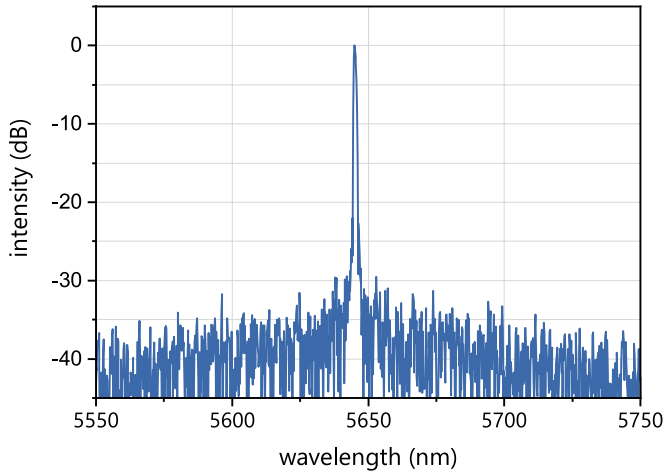
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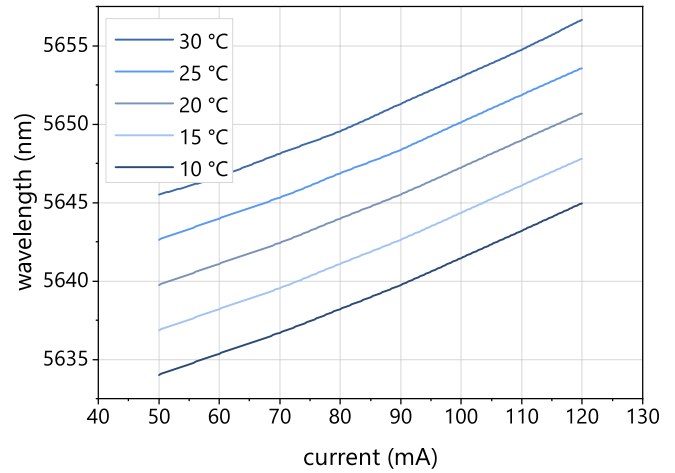


Typical Specifications: 5300 nm - 5800 nm

This data sheet reports performance data of a **sample DFB ICL at 5645 nm**, which is representative for the entire wavelength range.



Typical room temperature cw spectrum
of a nanoplus DFB ICL at 5645 nm



Typical mode hop free tuning of a nanoplus
DFB ICL at 5645 nm by current and temperature

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at T_{op} , I_{op})	λ_{op}	nm		Please specify to 0.1 nm.	
optical output power (at λ_{op})	P_{op}	mW		1	
operating current	I_{op}	mA		120	
operating voltage	V_{op}	V		5	
threshold current	I_{th}	mA	30	40	70
side mode suppression ratio	SMSR	dB		> 35	
current tuning coefficient	C_I	nm / mA		0.15	
temperature tuning coefficient	C_T	nm / K		0.5	
operating chip temperature	T_{op}	°C	+5	+20	+50
operating case temperature*	T_c	°C	-20	+25	+45
storage temperature*	T_s	°C	-30	+20	+70

* non-condensing

laser packaging options

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

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DFB Interband Cascade Lasers (ICL): 5800 nm - 6500 nm

WAVELENGTH

2800–4000 nm

4000–4600 nm

4600–5300 nm

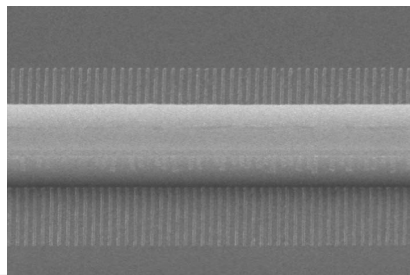
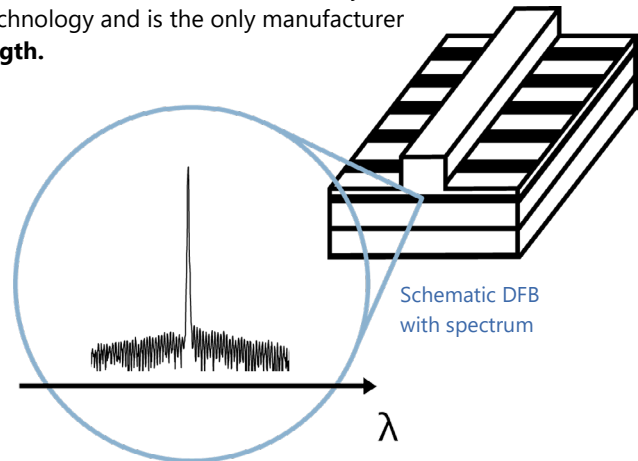
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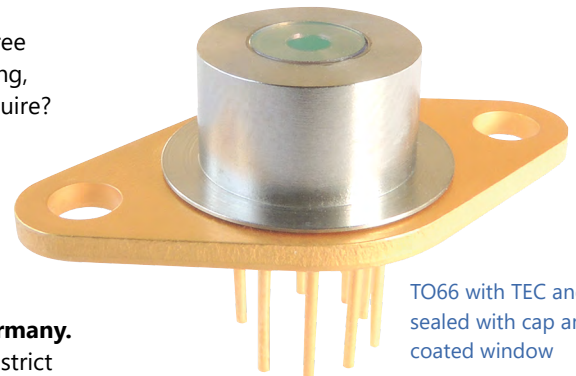
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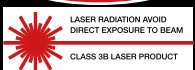
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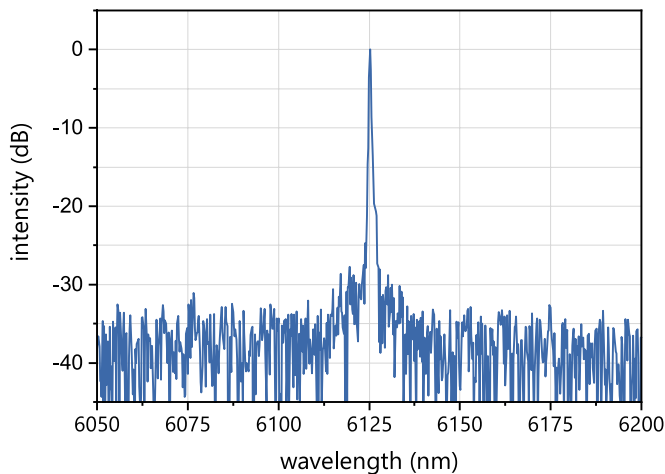
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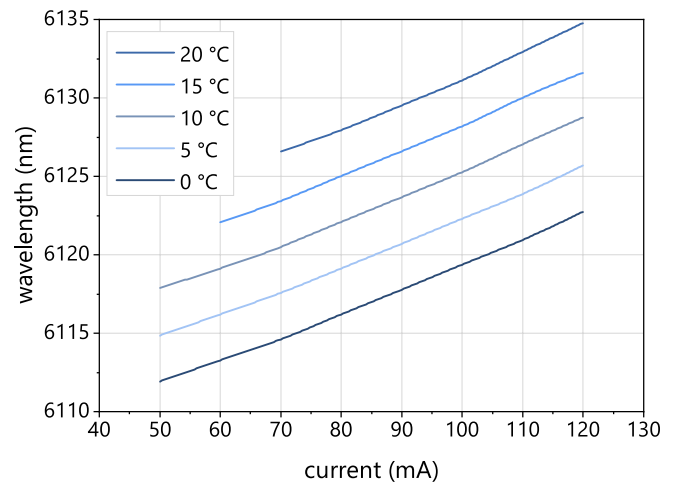


Typical Specifications: 5800 nm - 6500 nm

This data sheet reports performance data of a **sample DFB ICL at 6125 nm**, which is representative for the entire wavelength range.



Typical room temperature cw spectrum
of a nanoplus DFB ICL at 6125 nm



Typical mode hop free tuning of a nanoplus
DFB ICL at 6125 nm by current and temperature

electro-optical characteristics	symbol	unit	min.	typ	max.
operating wavelength (at T_{op} , I_{op})	λ_{op}	nm		Please specify to 0.1 nm.	
optical output power (at λ_{op})	P_{op}	mW		1	
operating current	I_{op}	mA		120	
operating voltage	V_{op}	V		5	
threshold current	I_{th}	mA	30	40	70
side mode suppression ratio	SMSR	dB		> 35	
current tuning coefficient	C_I	nm / mA		0.15	
temperature tuning coefficient	C_T	nm / K		0.5	
operating chip temperature	T_{op}	°C	-10	+5	+15
operating case temperature*	T_c	°C	-20	+25	+40
storage temperature*	T_s	°C	-30	+20	+70

* non-condensing

laser packaging options

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Other packaging options may be discussed on request.

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