

Infra Red LED

1.9um, 2.1um, 3.0um, 3.4um, 3.6um, 3.8um, 4.2um, 4.7um, 5.5um

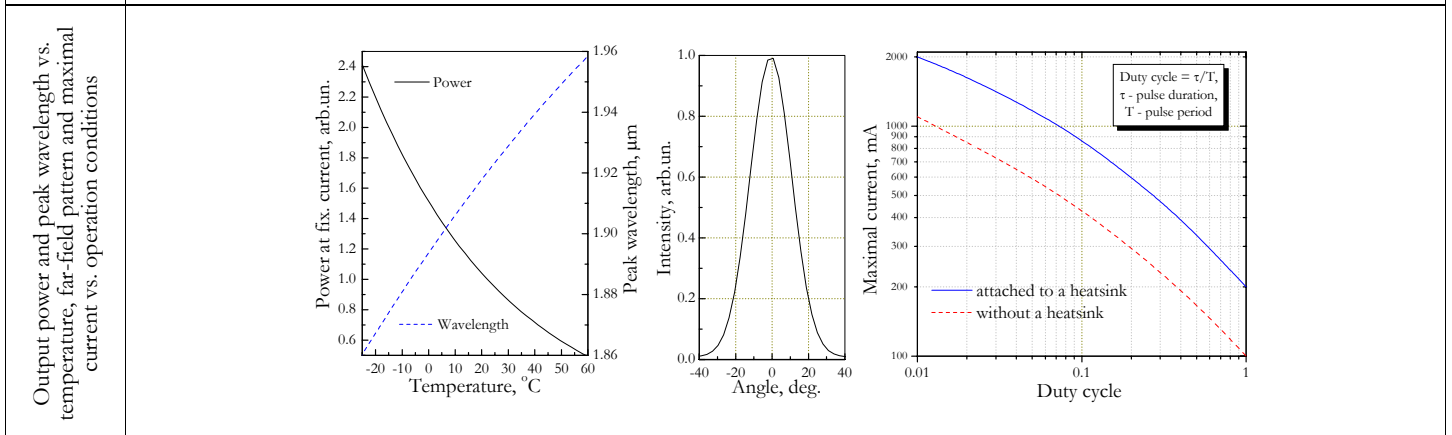
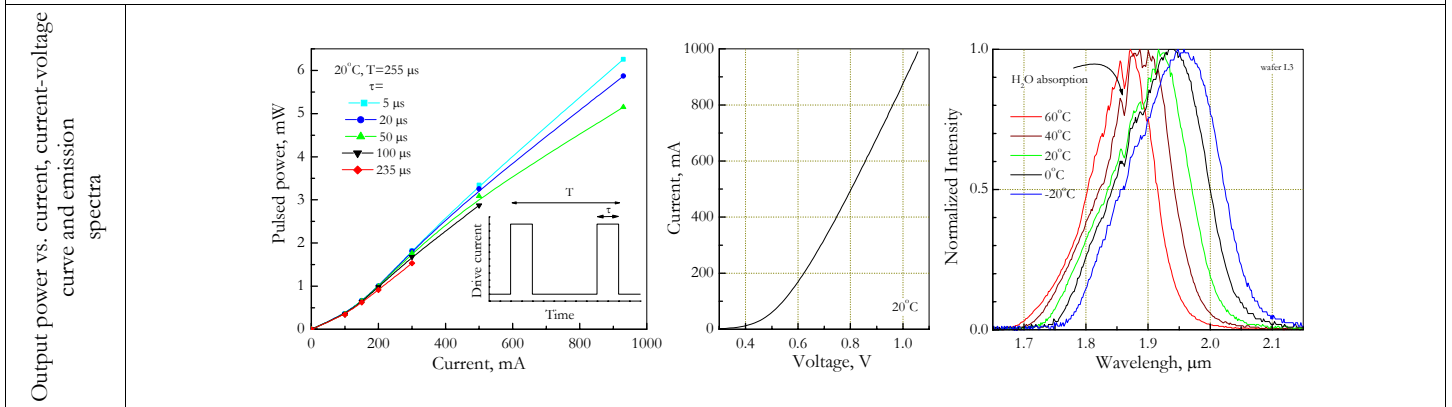


Optically Immersed 1.9 μm LED in heat-sink optimised housing				LED19Sc
Peak wavelength	λ_{max}	μm	1.95±0.05	
Pulsed power at I=1 A	P_{pulsed}	mW	6.0±1.2	
CW power at I=200 mA	P_{CW}	mW	1.0±0.2	
Switching time	τ	ns	≤20	

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED19Sc	M5×0.5	Ø 3.3	Si	≤35	-25 - +60 (+80)	short wire or black point is negative
LED19TO8TEC			Si lens and quartz window			See fig. below

	LED19Sc	LED19TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.



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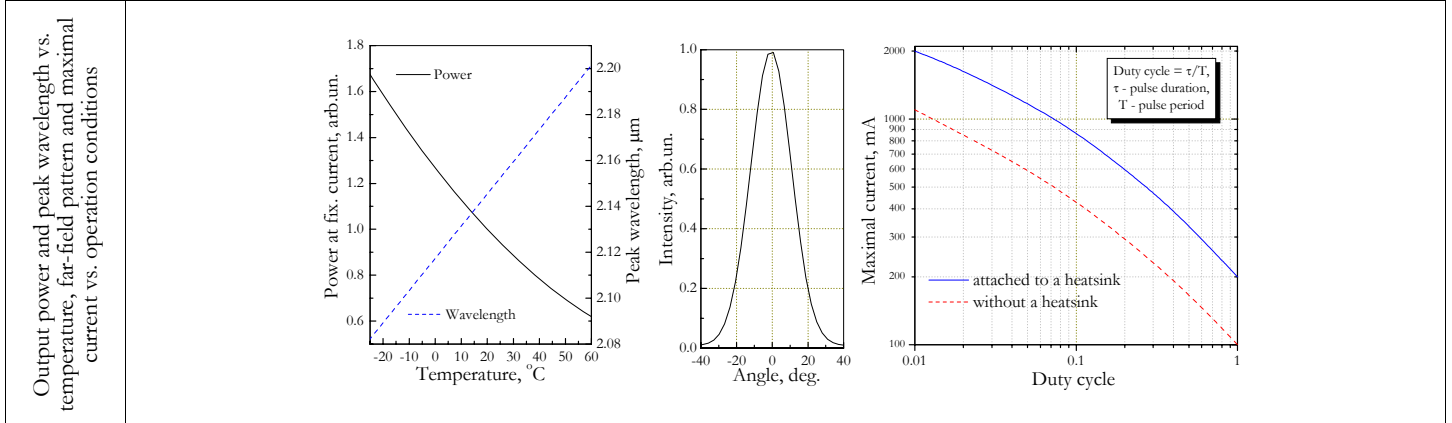
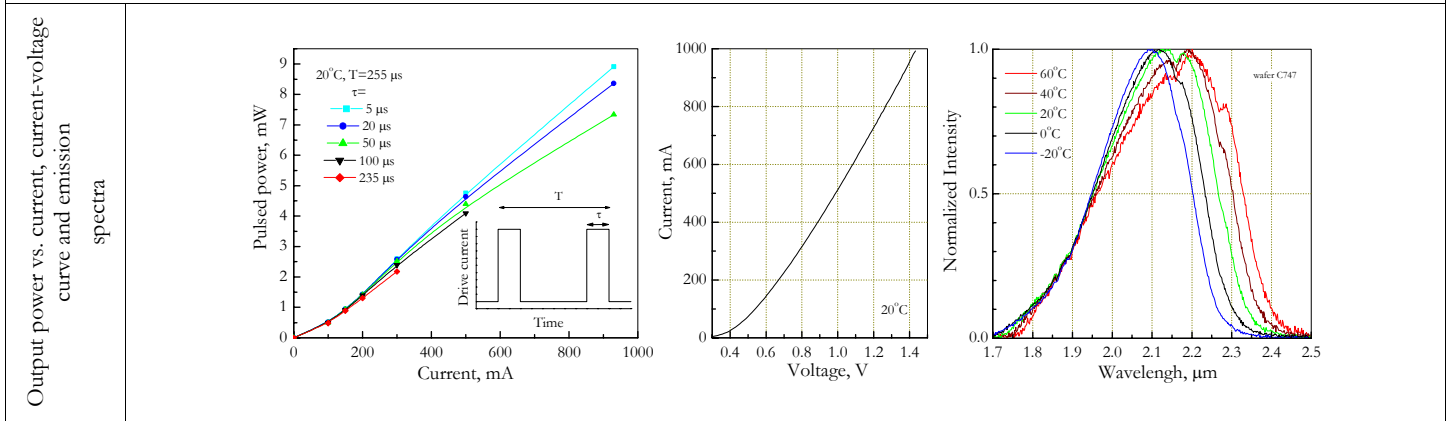


Optically Immersed 2.15 μm LED in heat-sink optimised housing				LED21Sc	
Peak wavelength	λ_{max}	μm	2.15±0.05		
Pulsed power at I=1 A	P_{pulsed}	mW	9.0±2.0		
CW power at I=200 mA	P_{CW}	mW	1.3±0.25		
Switching time	τ	ns	≤20		

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED21Sc	M5×0.5	Ø 3.3	Si	≤35	-25 - +60 (+80)	short wire or black point is negative
LED21TO8TEC			Si lens and quartz window			See fig. below

	LED21Sc	LED21TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.



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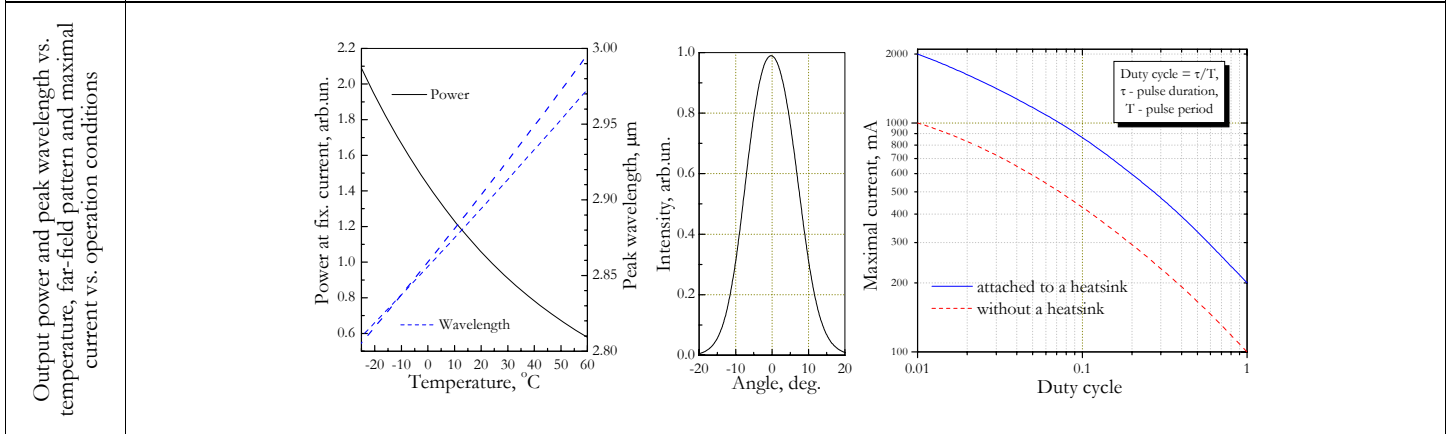
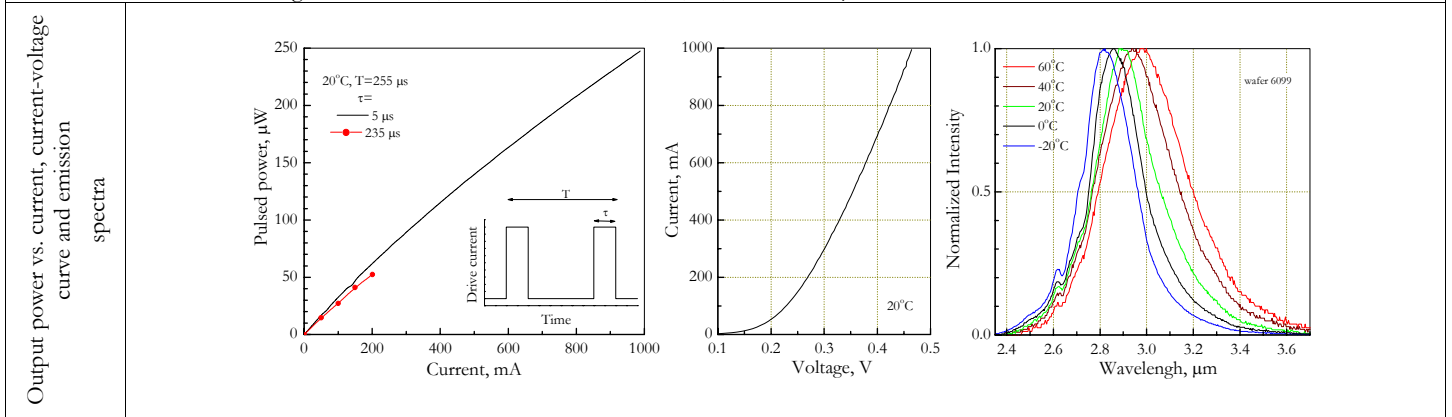


Optically Immersed 3.0 μm LED in heat-sink optimised housing				LED30Sc	
Peak wavelength	λ_{max}	μm	2.95±0.05		
Pulsed power at I=1 A	P_{pulsed}	μW	250±50		
CW power at I=200 mA	P_{CW}	μW	50±10		
Switching time	τ	ns	≤20		

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED30Sc	M5×0.5	Ø 3.3	Si	≤20	-25 - +60 (+80)	short wire or black point is negative
LED30TO8TEC			Si lens and quartz window			See fig. below

	LED30Sc	LED30TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
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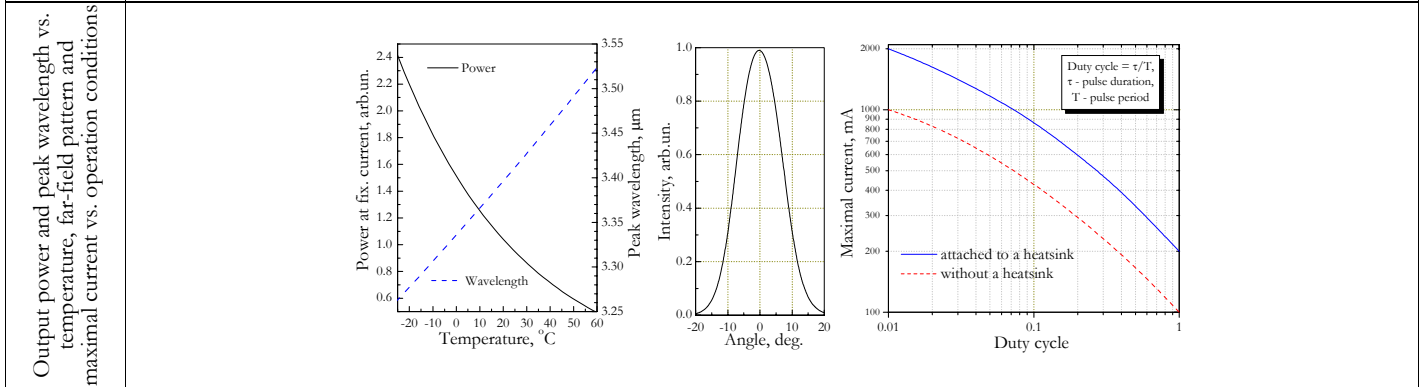
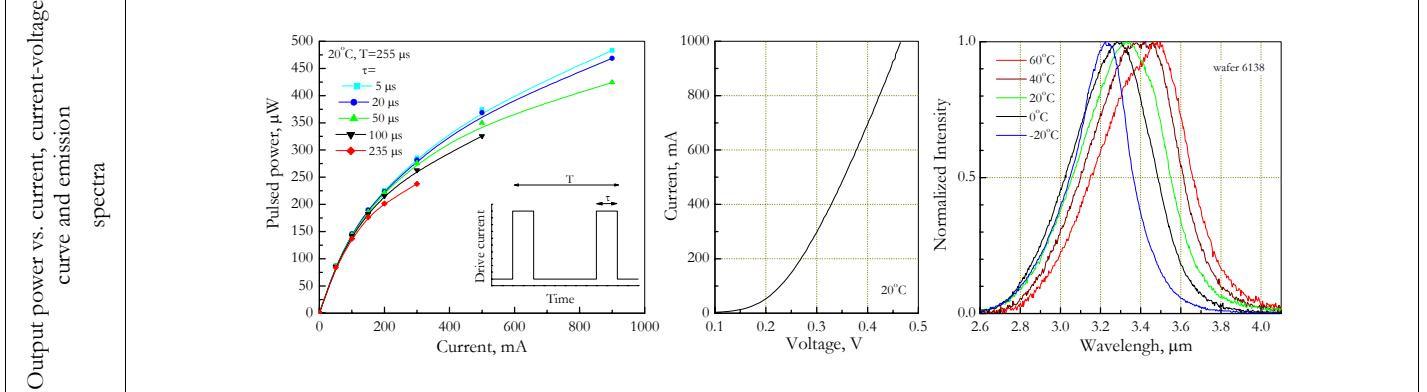


Optically Immersed 3.4 μm LED in heat-sink optimised housing				LED34Sc	
Peak wavelength	λ_{max}	μm	3.4±0.05		
Pulsed power at I=1 A	P_{pulsed}	μW	500±100		
CW power at I=200 mA	P_{CW}	μW	200±40		
Switching time	τ	ns	≤20		

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED34Sc	M5×0.5	Ø 3.3	Si	≤20	-25 - +60 (+80)	short wire or black point is negative
LED34TO8TEC			Si lens and quartz window			See fig. below

	LED34Sc	LED34TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

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- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.



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Optically Immersed 3.6 μm LED in heat-sink optimised housing				LED36Sc	
Peak wavelength	λ_{max}	μm	3.65±0.05		
Pulsed power at I=1 A	P_{pulsed}	μW	350±70		
CW power at I=200 mA	P_{CW}	μW	135±25		
Switching time	τ	ns	≤20		

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED36Sc	M5×0.5	Ø 3.3	Si	≤20	-25 - +60 (+80)	short wire or black point is negative
LED36TO8TEC			Si lens and quartz window			See fig. below

	LED36Sc	LED36TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
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Output power vs. current, current-voltage curve and emission spectra

Output power and peak wavelength vs. temperature, far-field pattern and maximal current vs. operation conditions

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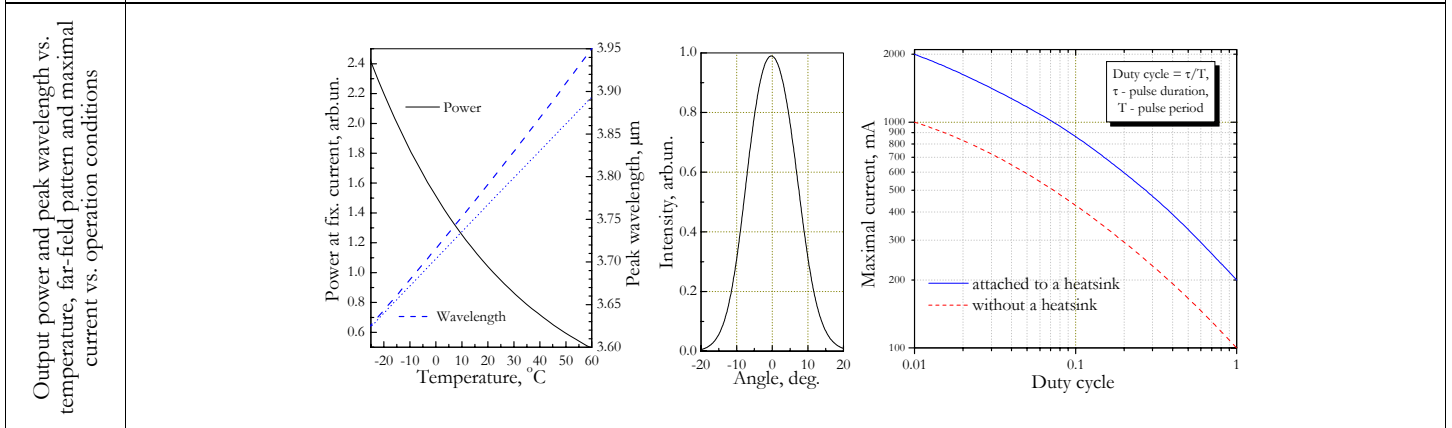
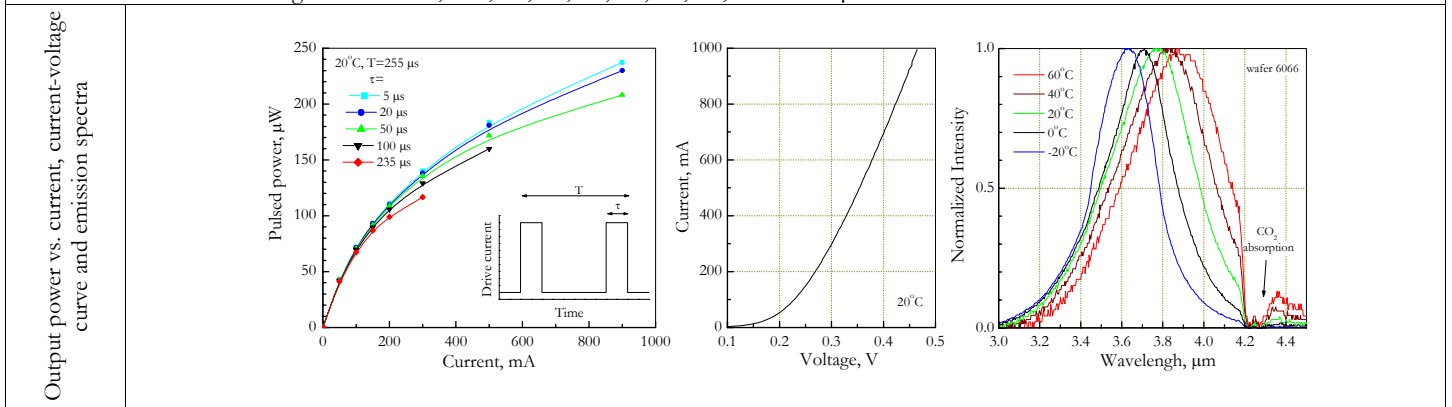


Optically Immersed 3.8 μm LED in heat-sink optimised housing				LED38Sc
Peak wavelength	λ_{max}	μm	3.85±0.05	
Pulsed power at I=1 A	P_{pulsed}	μW	250±50	
CW power at I=200 mA	P_{CW}	μW	100±20	
Switching time	τ	ns	≤20	

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED38Sc	M5×0.5	Ø 3.3	Si	≤20 (Si lens)	-25 - +60 (+80)	short wire or black point is negative
LED38TO8TEC			Si lens and quartz window			See fig. below

	LED38Sc	LED38TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.



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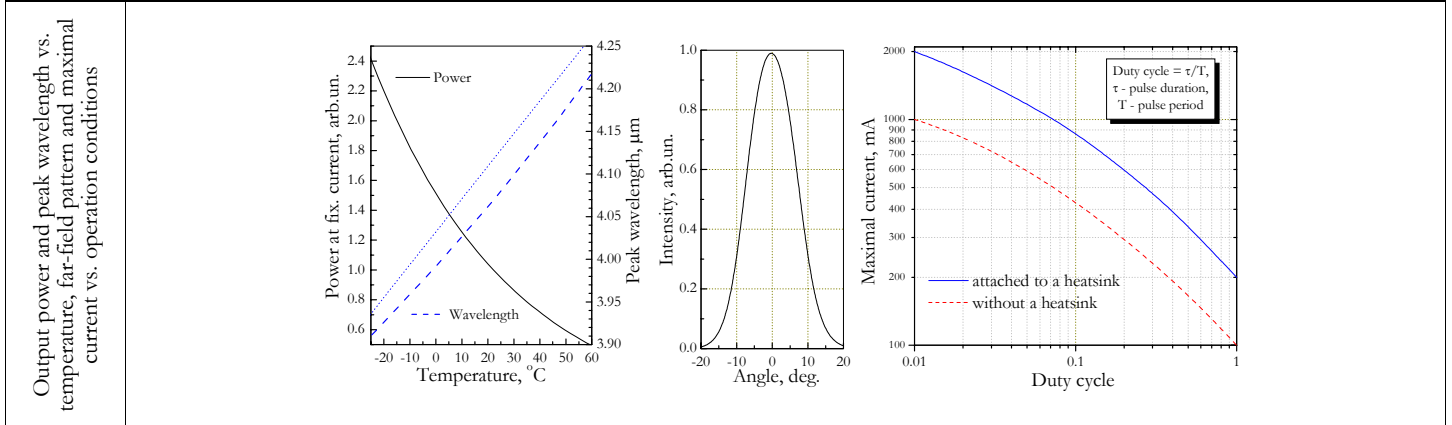
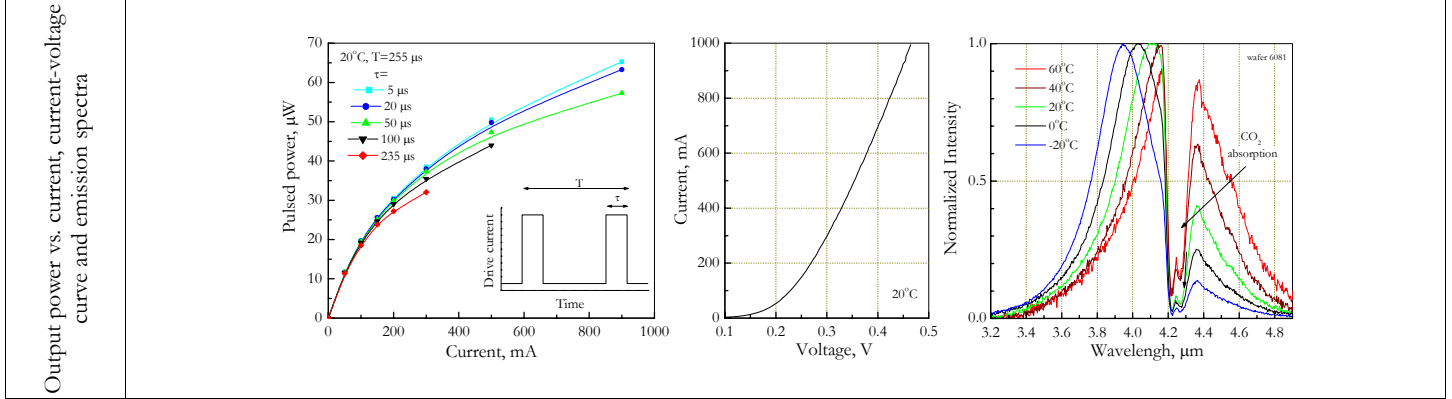


Optically Immersed 4.2 μm LED in heat-sink optimised housing				LED42Sc	
Peak wavelength	λ_{max}	μm	4.2±0.1		
Pulsed power at I=1 A	P_{pulsed}	μW	70±15		
CW power at I=200 mA	P_{CW}	μW	25±5		
Switching time	τ	ns	≤20		

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED42Sc	M5×0.5	Ø 3.3	Si	≤20	-25 - +60 (+80)	short wire or black point is negative
LED42TO8TEC			Si lens and sapphire window			See fig. below

	LED42Sc	LED42TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.
- ✓ Devices emit negative luminescence at reverse bias.



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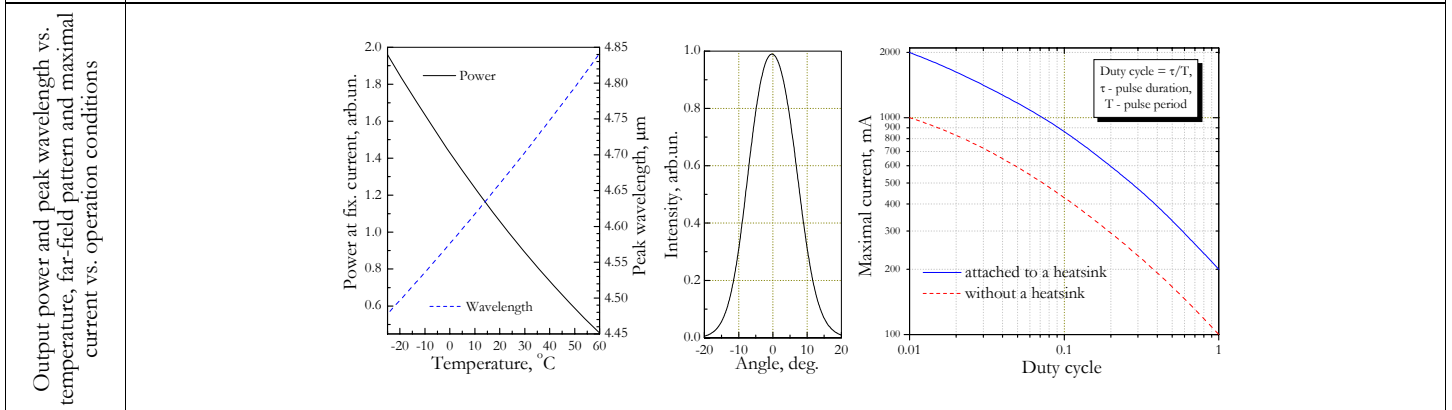
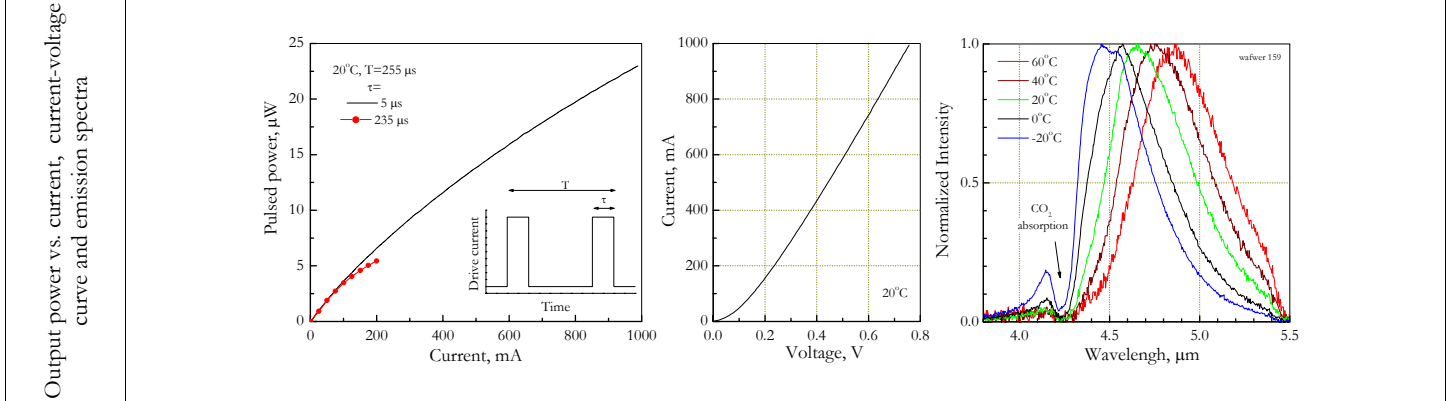


Optically Immersed 4.7 μm LED in heat-sink optimised housing				LED47Sc
Peak wavelength	λ_{max}	μm	4.7±0.05	
Pulsed power at I=1 A	P_{pulsed}	μW	25±5	
CW power at I=200 mA	P_{CW}	μW	5±1	
Switching time	τ	ns	≤20	

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED47Sc	M5×0.5	Ø 3.3	Si	≤20	-25 - +60 (+80)	short wire or black point is negative
LED47TO8TEC			Si lens and sapphire window			See fig. below

	LED47Sc	LED47TO8TEC
Product view		

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.
- ✓ Devices emit negative luminescence at reverse bias.



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Optically Immersed 5.5 μm LED in heat-sink optimised housing				LED55Sc	
Peak wavelength	λ_{max}	μm	5.5 - 5.7		
Pulsed power at I=1 A	P_{pulsed}	μW	10±2		
CW power at I=150 mA	P_{CW}	μW	2±0.5		
Switching time	τ	ns	≤20		

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Operation (storage) conditions, °C	Polarity
LED55Sc	M5×0.5	Ø 3.3	Si	≤20	-25 - +60 (+80)	short wire or black point is negative
LED55TO8TEC			Si lens and sapphire window			See fig. below

	LED55Sc	LED55TO8TEC
Product view		<p>1 TEC -; 2 TEC + 3 PD +; 6 PD - 4, 5 thermosensor</p>

- ✓ All devices are stressed at 80°C and I=200 mA (CW) for 10 hrs before final test and shipping.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding the detector system before final evaluation/use of the devices.
- ✓ All data is valid for room temperature (22°C) and LED attached to a heatsink. A heatsink is important for normal LED operation especially in the CW mode.
- ✓ Available accessories include driver electronics and detectors.
- ✓ Available wavelengths include 1.9, 2.15, 3.0, 3.4, 3.6, 3.8, 4.2, 4.7, 5.5 and 7.0 μm.
- ✓ Devices emit negative luminescence at reverse bias.

