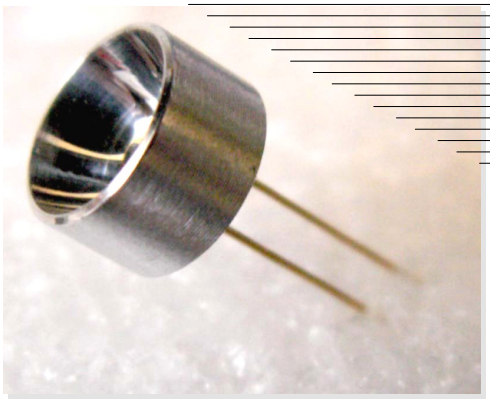
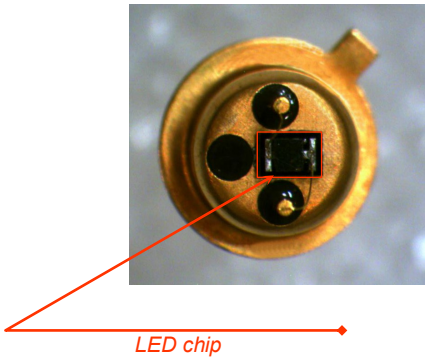
Mid infrared IBSG Optoelectronics



Features

- High reliability
- Spectral Selectivity
- Easy to use in lock-in circuits
- Parabolic reflector



Applications

- Measuring equipment
- Gas analysis
- Analytical spectral devices

Options

- Power supply: LED Driver D-31M

Description

Light emitting diode **LED09FCHP-PR** demonstrates typical maximum of emitting wavelength of λ_P**= 0.90 µm** (I= 100 mA, f= 0.5 kHz, duty cycle: 50%).

The components is mounted in a standard 5.5 mm TO-18 package with parabolic reflector (PR).

Related products: **LED09FCHP-PR** can be used in optical pair with our **PD24** photodiodes.

General characteristics

Package	Parameter	Symbol	Value	Unit
TO-18 with PR	Maximum operating current	I^*_{QCW}	150	mA
		I^{**}_{Pulsed}	1500	
	Soldering temperature	T_s	+230	°C
	Operating temperature	T_{opr}	−30…+50	°C
	Storage temperature	T_{stg}	−55…+60	°C
	Weight	m	0.68	g
	Size	D	9.0	mm
		H	18.5	

* Quasi-CW mode: Repetition rate: 0.5 kHz, pulse duration: 1 ms, duty cycle: 50%
** Pulse mode: Repetition rate: 0.5 kHz, pulse duration: 2 µs, duty cycle: 0.1%

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Electrical and optical characteristics

Parameter	Symbol	Condition $T_a \approx +20$ °C	Min	Max	Unit
Peak emission wavelength	λ_p	I_F = 100 mA	λ_{typ}= 0.90		µm
			0.86	0.93	
Spectral FWHM	D_λ	I_F = 100 mA	50	70	nm
Pulse optical power	P^*_{QCW}	I_F = 100 mA	15	45	mW
	P^{**}_{Pulsed}	I_F = 1000 mA	90	270	
Forward voltage	V_F	(*)	1.4	1.7	V
Switching time	t		10	30	ns

* Quasi-CW mode: repetition rate: 0.5 kHz, pulse duration: 1 ms, duty cycle: 50%, current: 100 mA
** Pulse mode: repetition rate: 0.5 kHz, pulse duration: 2 µs, duty cycle: 0.1%, current: 1 A

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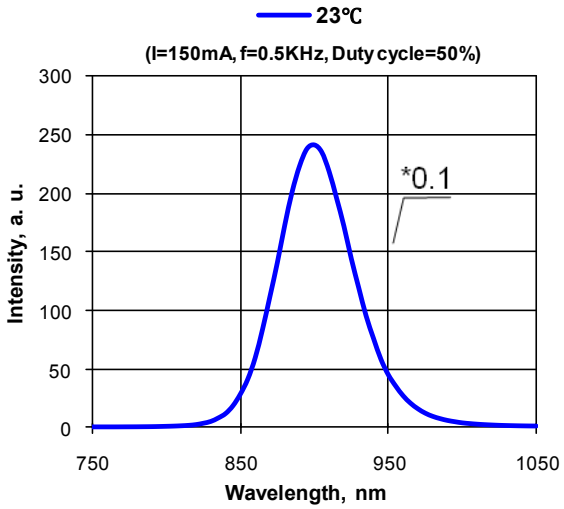
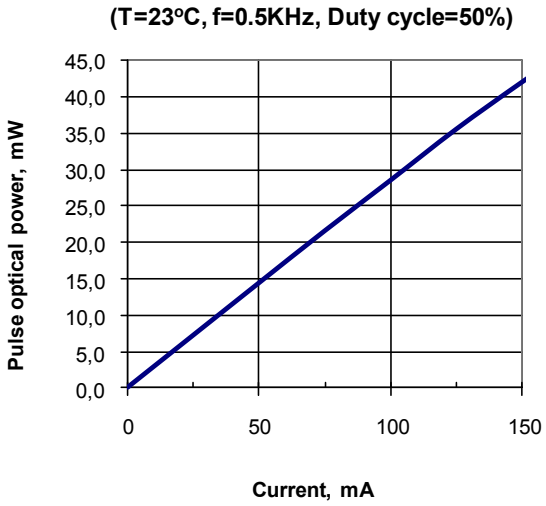
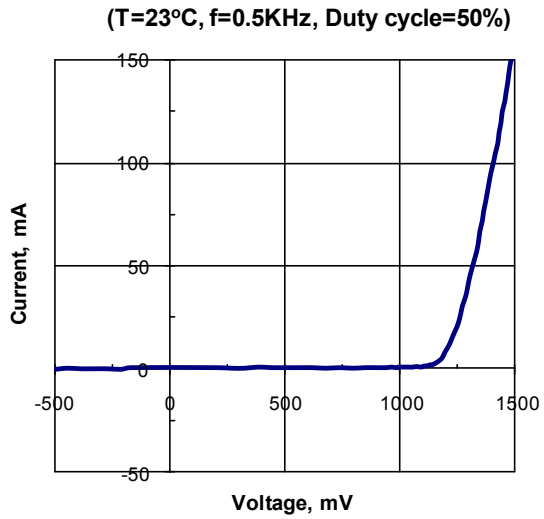
Electroluminescence spectra



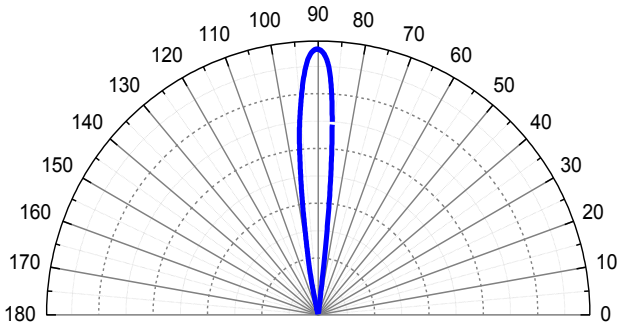
Pulse optical power vs. current



Current vs. voltage



Field pattern



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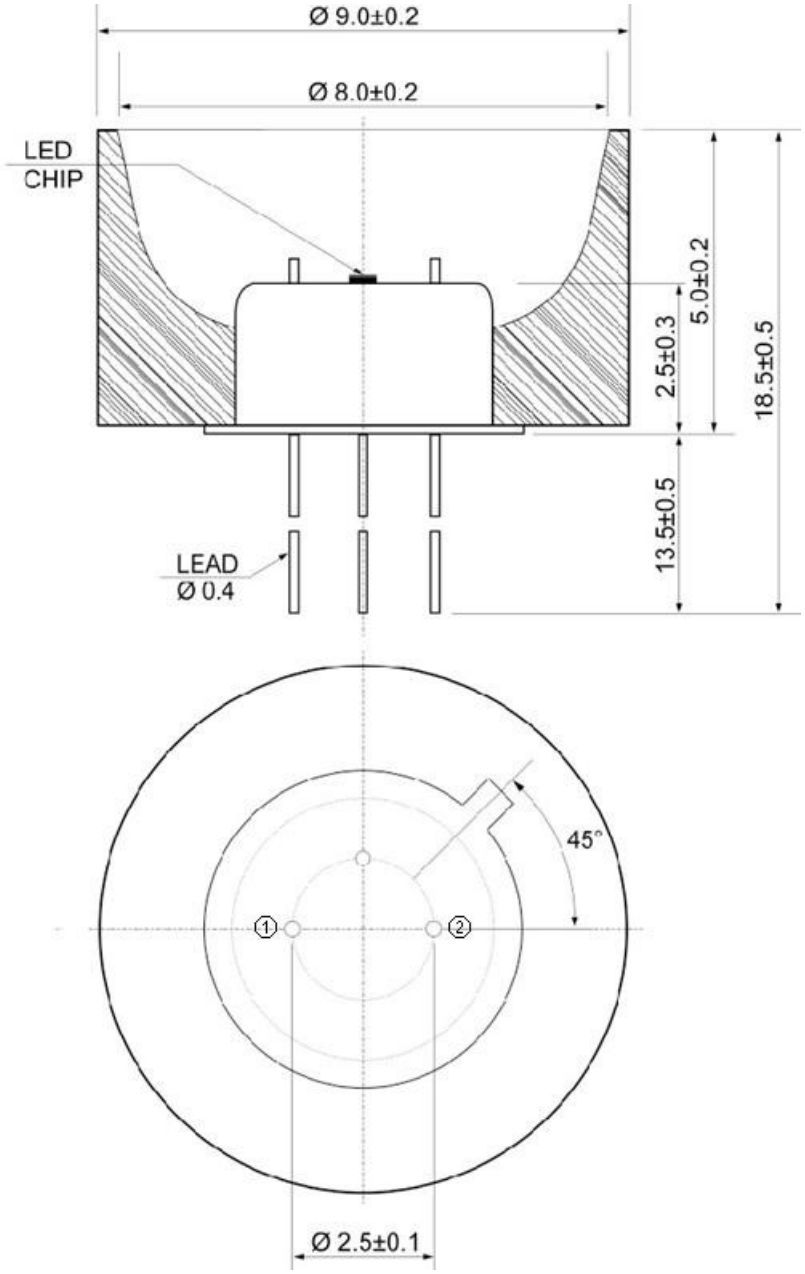
TO-18 package with PR - dimensions (mm)



Pin	Description
① Common to case	Diode (cathode)*
②	Diode (anode)*

* **Attention**: Pin polarity can be changed.

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