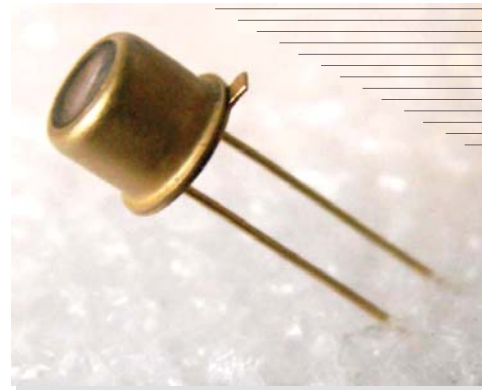




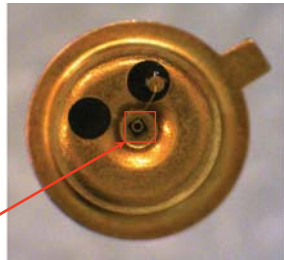
Features

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



Applications

- Measuring equipment
- Gas analysis (CO_2 , C_2H_6)
- Analytical spectral devices



LED chip

Options

- Power supply: [LED Driver D-31M](#)

Description

Light emitting diode **LED43** demonstrates typical maximum of emitting wavelength of $\lambda_p = 4.15 \mu\text{m}$ ($I = 150 \text{ mA}$, $f = 0.5 \text{ KHz}$, duty cycle: 50%).

LED chip is mounted in a standard TO-18 package.

LED heterostructure is grown on InAs substrate.

Related products: **LED43** can be used in optical pair with our [PD48-05-WS](#) photodiodes.

General characteristics

Package	Parameter	Symbol	Value	Unit
TO-18	Maximum operating current	I^*_{OCW}	220	mA
		I^{**}_{Pulsed}	2000	
	Soldering temperature	T_s	+ 230	$^{\circ}\text{C}$
	Operating temperature	T_{opr}	- 30...+ 50	$^{\circ}\text{C}$
	Storage temperature	T_{stg}	- 55...+ 60	$^{\circ}\text{C}$
	Weight	m	0.26	g
	Size	D	5.5	mm
H		17.7		

* Quasi-CW SUNSTAR自动化控制 http://www.sensor-ic.com/ TEL: 0755-83376489 FAX: 0755-83376182 E-MAIL: szss20@163.com

** Pulse mode: Repetition rate: 0.5 kHz, pulse duration: 2 μs , duty cycle: 0.1%



Electrical and optical characteristics

Parameter	Symbol	Condition $T_a \approx +20\text{ }^\circ\text{C}$	Min	Max	Unit
Peak emission wavelength	λ_p	$I_F = 150\text{ mA}$	$\lambda_{typ} = 4.15$		μm
			4.1	4.3	
Spectral FWHM	$\Delta\lambda$	$I_F = 150\text{ mA}$	700	1000	nm
Pulse optical power	P^*_{QCW}	$I_F = 200\text{ mA}$	8	26	μW
	P^{**}_{Pulsed}	$I_F = 1000\text{ mA}$	35	120	
Forward voltage	V_F	(*)	0.2	0.8	V
Switching time	τ		10	30	ns

* Quasi-CW mode: repetition rate: 0.5 kHz, pulse duration: 1 ms, duty cycle: 50%, current: 200 mA

** Pulse mode: repetition rate: 0.5 kHz, pulse duration: 2 μs , duty cycle: 0.1%, current: 1 A



Electro Optical Components, Inc.

5460 Skylane Boulevard, Santa Rosa, CA 95403

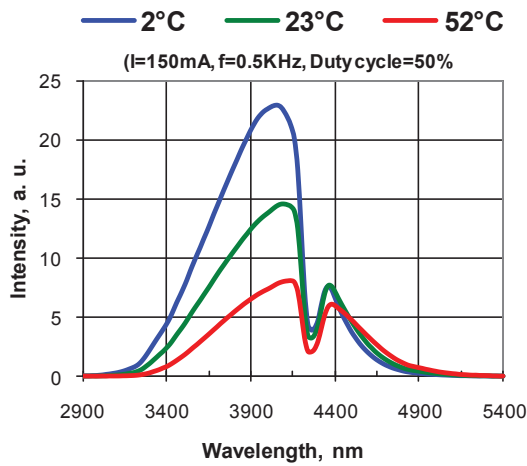
Phone: (707) 568-1642 • FAX: (707) 568-1652

SUNSTAR自动化 <http://www.sensor-ic.com/> TEL: 0755-83376489 FAX: 0755-83376182 E-MAIL: szss20@163.com

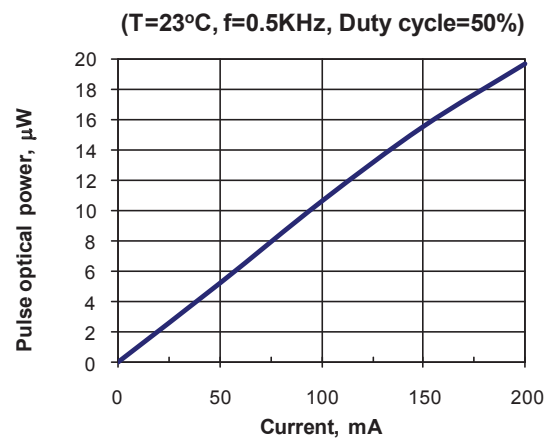
www.eoc-inc.com



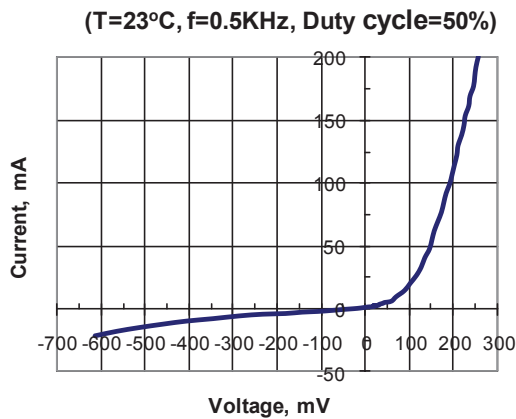
▼ Electroluminescence spectra



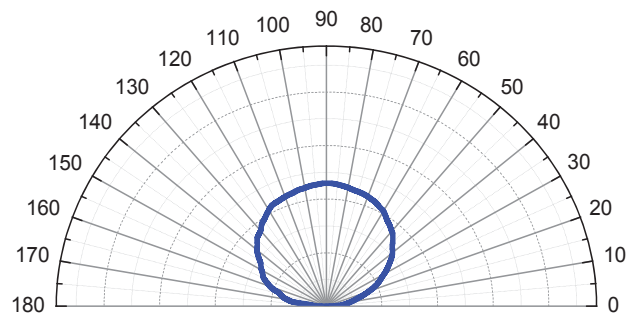
▼ Pulse optical power vs. current



▼ Current vs. voltage



▼ Field pattern



Electro Optical Components, Inc.

5460 Skylane Boulevard, Santa Rosa, CA 95403

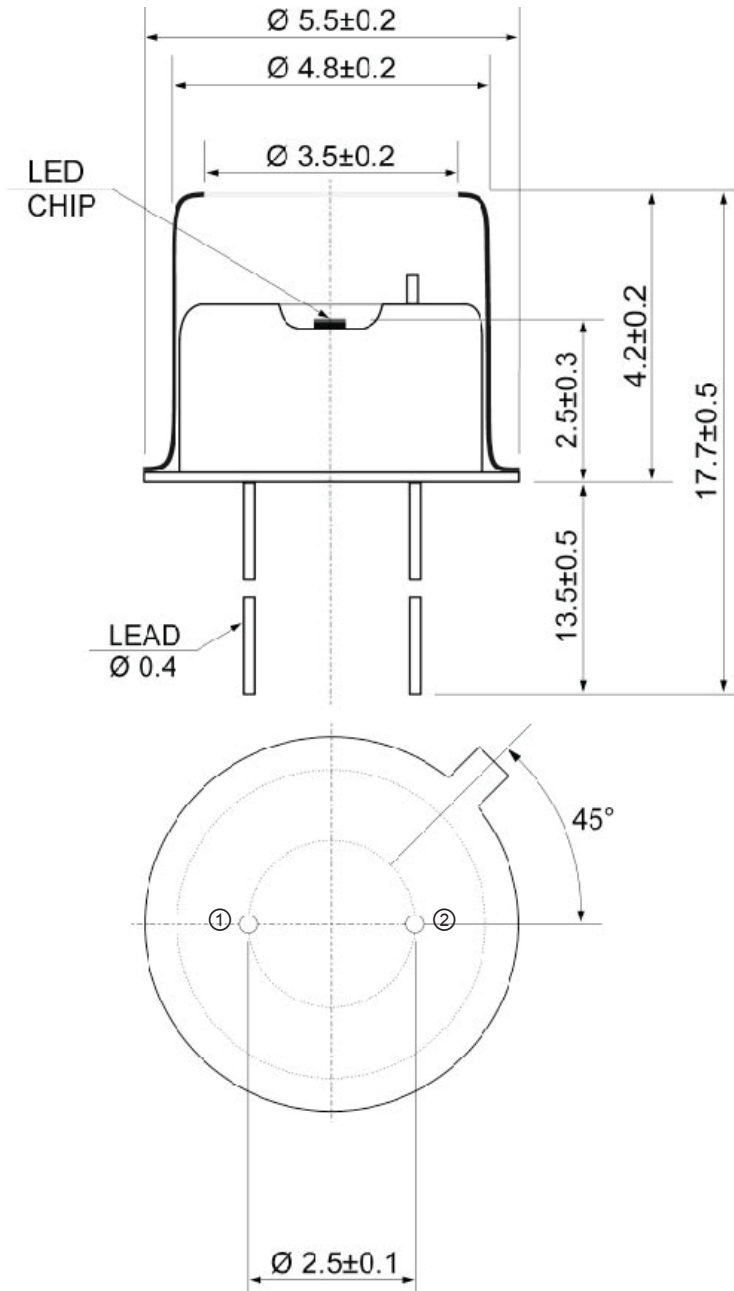
Phone: (707) 568-1642 • FAX: (707) 568-1652

SUNSTAR自动化 <http://www.sensor-ic.com/> TEL: 0755-83376489 FAX: 0755-83376182 E-MAIL: szss20@163.com

www.eoc-inc.com



▼ TO-18 package dimensions (mm)



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

* Attention: Pin polarity can be changed.



Electro Optical Components, Inc.

5460 Skylane Boulevard, Santa Rosa, CA 95403

Phone: (707) 568-1642 • FAX: (707) 568-1650

SUNSTAR自动化 <http://www.sensor-ic.com/> TEL: (0755-83376489) FAX: 0755-83376182 E-MAIL: szss20@163.com

www.eoc-inc.com