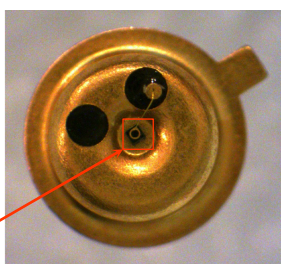


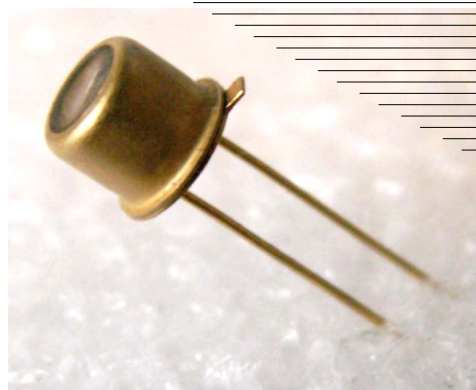


## Features

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



LED chip



## Applications

- Measuring equipment
- Gas analysis ( $\text{H}_2$ )
- Analytical spectral devices

## Options

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

## Description

Light emitting diode **LED07HP** demonstrates typical maximum of emitting wavelength of  $\lambda_p = 0.73 \mu\text{m}$  ( $I = 100 \text{ mA}$ ,  $f = 0.5 \text{ KHz}$ , duty cycle: 50%).

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

Related products: **LED07HP** can be used in optical pair with our [PD24](#) photodiodes.

## General characteristics

Package	Parameter	Symbol	Value	Unit
TO-18	Maximum operating current	$I^*_{\text{QCW}}$	150	mA
		$I^{**}_{\text{Pulsed}}$	1500	
	Soldering temperature	$T_s$	+ 230	$^{\circ}\text{C}$
	Operating temperature	$T_{\text{opr}}$	- 30...+ 50	$^{\circ}\text{C}$
	Storage temperature	$T_{\text{stg}}$	- 55...+ 60	$^{\circ}\text{C}$
	Weight	m	0.26	g
	Size	D	5.5	mm
H		17.7		

\* 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  $\mu\text{s}$ , duty cycle: 0.1%

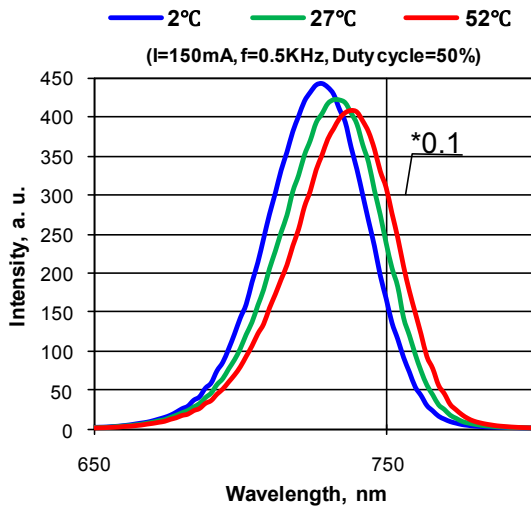
## Electrical and optical characteristics

Parameter	Symbol	Condition $T_a \approx +20\text{ }^\circ\text{C}$	Min	Max	Unit
Peak emission wavelength	$\lambda_p$	$I_F = 100\text{ mA}$	$\lambda_{typ} = 0.73$		$\mu\text{m}$
			0.72	0.74	
Spectral FWHM	$\Delta\lambda$	$I_F = 100\text{ mA}$	35	55	nm
Pulse optical power	$P^*_{QCW}$	$I_F = 100\text{ mA}$	25	55	mW
	$P^{**}_{Pulsed}$	$I_F = 1000\text{ mA}$	150	350	
Forward voltage	$V_F$	(*)	1.6	2.0	V
Switching time	$\tau$		10	30	ns

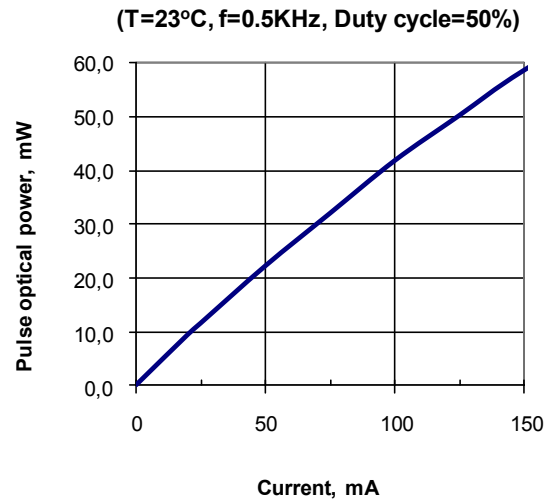
\* Quasi-CW mode: repetition rate: 0.5 kHz, pulse duration: 1 ms, duty cycle: 50%, current: 100 mA

\*\* Pulse mode: repetition rate: 0.5 kHz, pulse duration: 2  $\mu\text{s}$ , duty cycle: 0.1%, current: 1 A

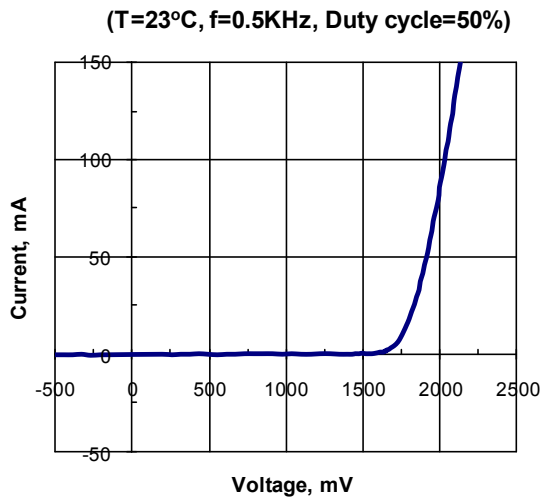
Electroluminescence spectra



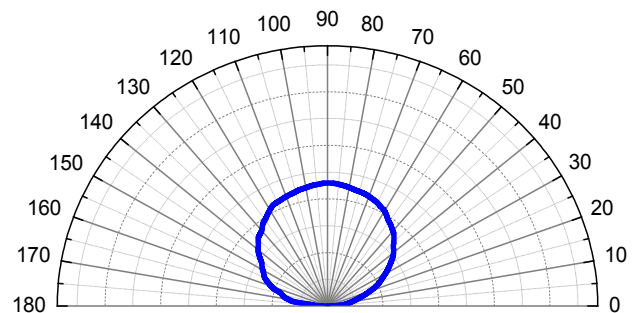
Pulse optical power vs. current



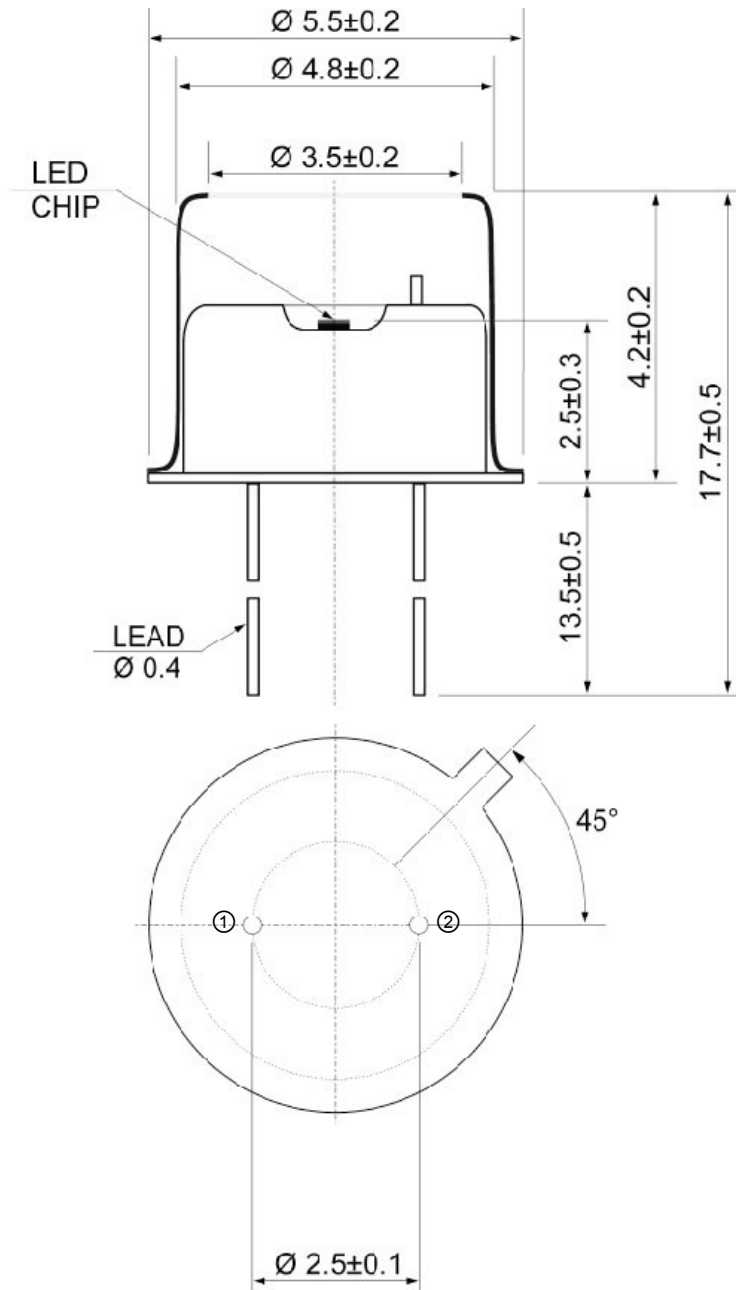
Current vs. voltage



Field pattern



▼ TO-18 package dimensions (mm)



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

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