

# Multi-wavelength LED

# KED530HDB

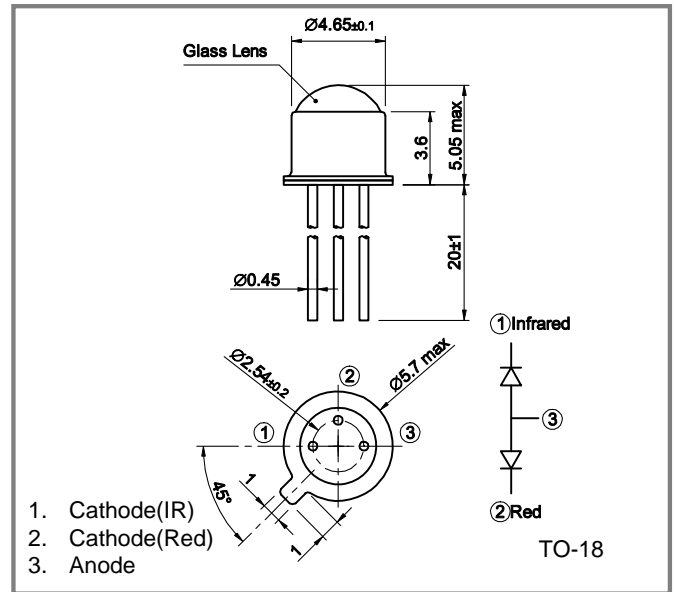
### Features

- Red and IR emitters in a single package
- Broad directivity with a glass lens
- Highly reliable hermetic seal
- Direct modulation

### Applications

- Bill recognition
- Color sensors
- Spectroscopic sensors

### Dimensions (unit: mm)



### Absolute Maximum Ratings

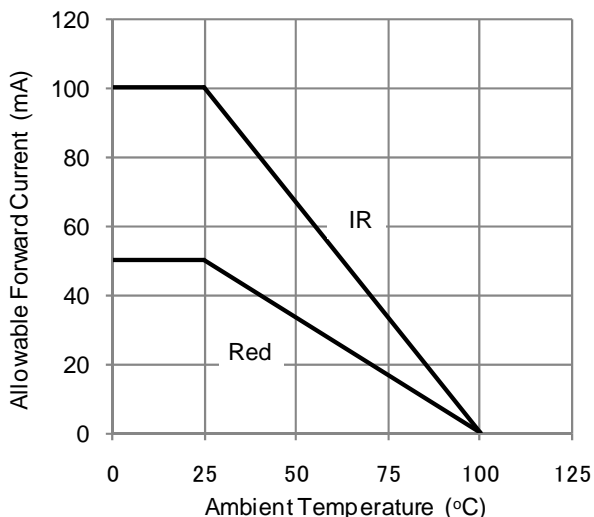
Parameter	Symbol	Value		Unit	Note
		Infrared	Red		
Forward current	$I_F$	100	50	mA	$T_a=25^\circ\text{C}$
Peak forward current	$I_{FP}$	1	0.5	A	Pulse width=100 $\mu\text{s}$ , Duty ratio=0.1%
Reverse voltage	$V_R$	5	5	V	
Power dissipation	$P_D$	150	100	mW	Max power dissipation=150mW
Operating temperature	$T_{opr}$	-25 to +100		$^\circ\text{C}$	Avoid dew condensation
Storage temperature	$T_{stg}$	-40 to +100		$^\circ\text{C}$	Avoid dew condensation
Soldering Temperature	$T_{sol}$	260		$^\circ\text{C}$	Max 5 sec. at 2.6mm above case bottom

### Electrical and Optical Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise noted)

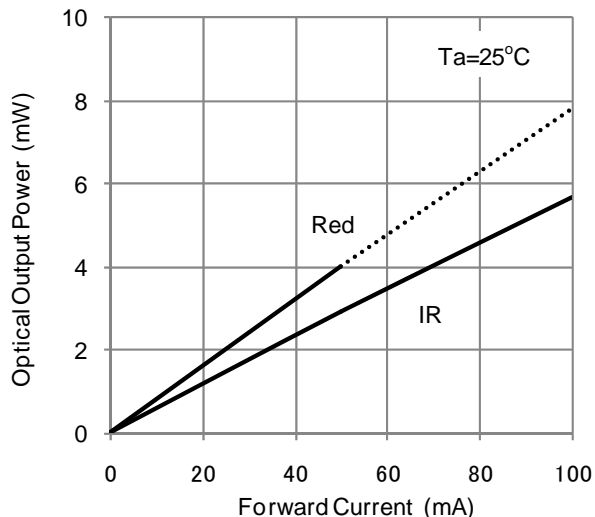
Parameter		Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	Infrared	$V_F$	-	1.3	1.5	V	$I_F=50\text{mA}$
	Red			1.9	2.3		$I_F=50\text{mA}$
Reverse Current		$I_R$	-	-	10	$\mu\text{A}$	$V_R=5\text{V}$
Optical Output Power	Infrared	$P_o$	-	3	-	mW	$I_F=50\text{mA}$
	Red			4			$I_F=50\text{mA}$
Peak emission wavelength	Infrared	$\lambda_P$	-	940	-	nm	$I_F=50\text{mA}$
	Red			660			$I_F=50\text{mA}$
Spectral bandwidth at 50%	Infrared	$\Delta\lambda$	-	50	-	nm	$I_F=50\text{mA}$
	Red			20			$I_F=50\text{mA}$
Half Angle	Infrared	$2\theta$	-	60	-	deg	$I_F=50\text{mA}$
	Red			60			$I_F=50\text{mA}$

Specifications are subject to change without notice.

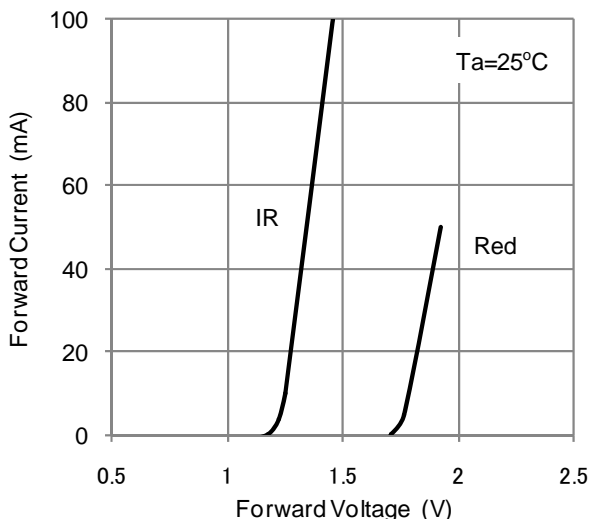
**Allowable Forward Current - Ambient Temperature**



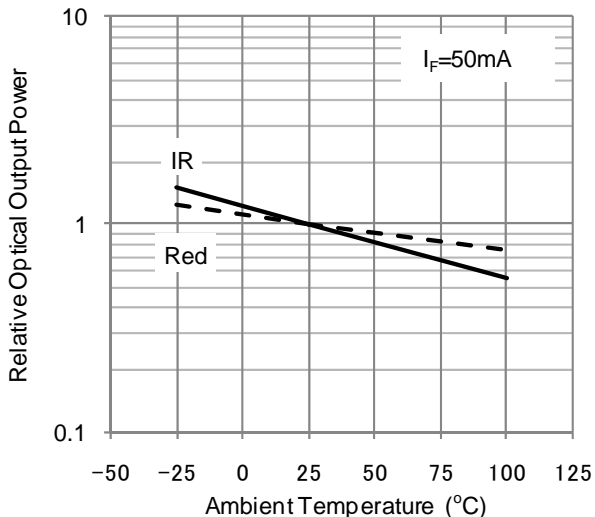
**Optical Output Power - Forward Current**



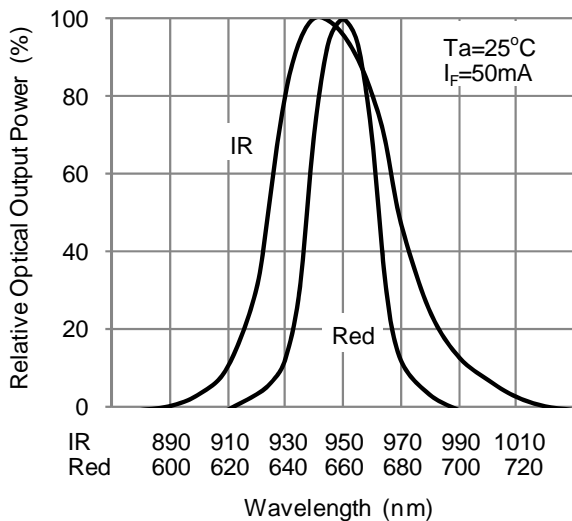
**Forward Current - Forward Voltage**



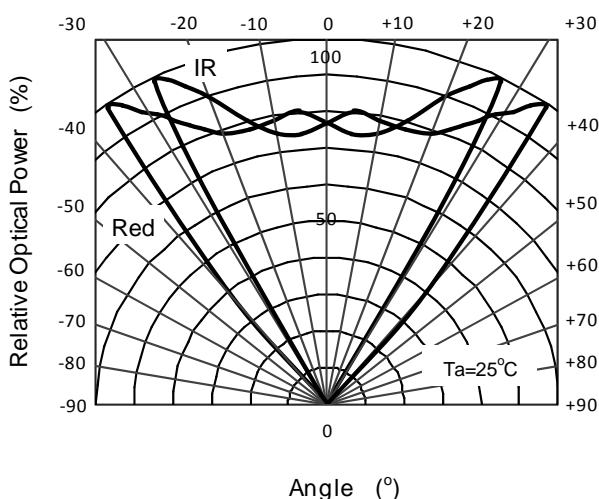
**Relative Optical Output Power - Ambient Temperature**



**Spectral Distribution**



**Directivity**



Specifications are subject to change without notice.

**Contacts:**

[www.kyosemi.co.jp](http://www.kyosemi.co.jp) / [info@kyosemi.co.jp](mailto:info@kyosemi.co.jp)

Kansai Sales Office: 949-2 Ebisu-cho, Fushimi-ku, Kyoto, 612-8201 Japan Tel: +81 75 605 7311 Fax: +81 75 605 7312 (Overseas Sales Dept.)

Tokyo Sales Office: 24th Sky Building, 2nd Floor, 1-34-3 Shinjuku, Shinjuku-ku, Tokyo 160-0022 Japan Tel: +81 3 5312 5360 Fax: +81 3 5312 5367

Eniwa Operation: 385-31 Toiso, Eniwa-shi, Hokkaido 061-1405 Japan Tel: +81 123 34 3111 Fax: +81 123 34 2110

Kyosemi Opto America Corp: 3003 Bunker Hill Lane, Suite 102, Santa Clara, CA 95054 USA Tel: +1 408 492 1486 Fax: +1 408 492 9843