

## Multi Wavelength LEDs

## KED541H

## Characteristics

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

## Applications

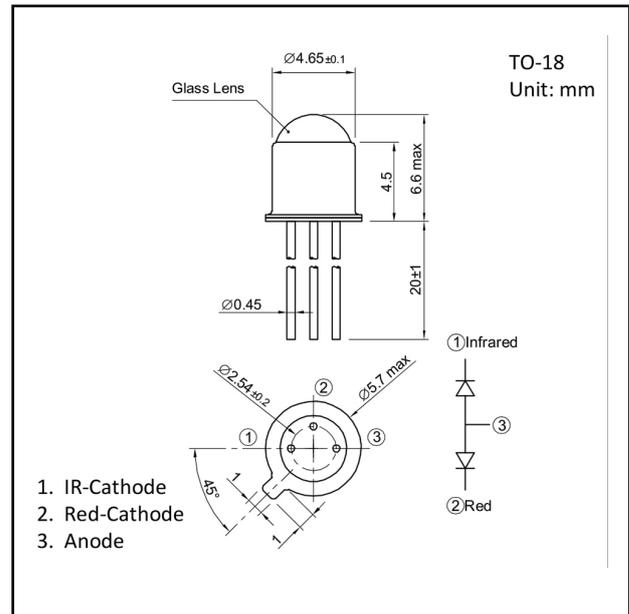
- Bull recognition
- Color sensors

## Chip Material

- Red : GaAlAs
- Infrared : GaAlAs

## Package

- TO-CAN



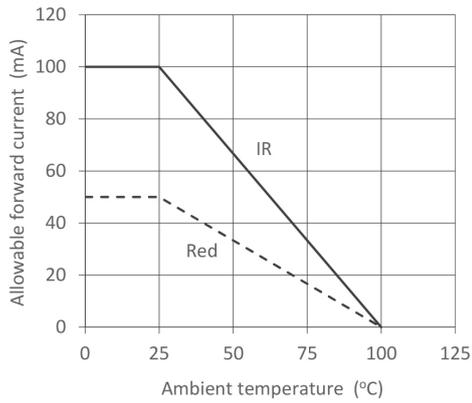
**Absolute Maximum Ratings**

Parameter	Symbol	Wavelength	Value	Unit	Conditions
Reverse voltage	$V_R$	Red	5	V	-
		Infrared	5		
Forward current	$I_F$	Red	50	mA	$T_a=25$
		Infrared	100		
Peak forward current	$I_{FP}$	Red	0.5	A	Pulse width=100 $\mu$ s Duty ratio=0.1%
		Infrared	1		Puls width=100 $\mu$ s Duty ratio=0.1%
Power dissipation	$P_D$	Red	100	mW	150mW max.in total
		Infrared	150		
Operating temperature	$T_{opr}$	-	-25 to +100		Avoid dew condensation
Storage temperature	$T_{stg}$	-	-40 to +100		Avoid dew condensation
Soldering temperature	$T_{sol}$	-	260		Max 5 sec. at 2.6mm from body

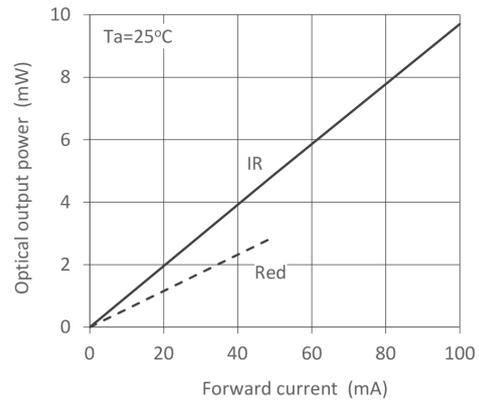
**Electrical and Optical characteristics** ( $T_a=25$  unless otherwise noted)

Parameter	Symbol	Wavelength	Min.	Typ.	Max.	Unit	Conditions
Reverse Current	$I_R$	-	-	-	10	$\mu$ A	$V_R=5V$
Forward voltage	$V_F$	Red	-	1.8	2.3	V	$I_F=50mA$
		Infrared	-	1.3	1.6		
Optical output power	$P_O$	Red	-	3	-	mW	$I_F=50mA$
		Infrared	-	5	-		
Peak wavelength	$\lambda_p$	Red	-	660	-	nm	$I_F=50mA$
		Infrared	-	880	-		
Spectral width		Red	-	20	-	nm	$I_F=50mA$
		Infrared	-	55	-		
Half angle	2	Red	-	10	-	deg.	$I_F=50mA$
		Infrared	-	10	-		

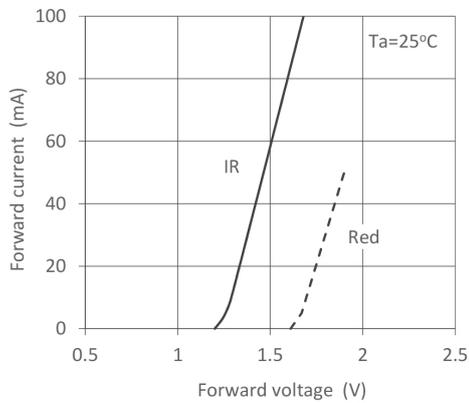
**Allowable Forward Current-Ambient Temperature**



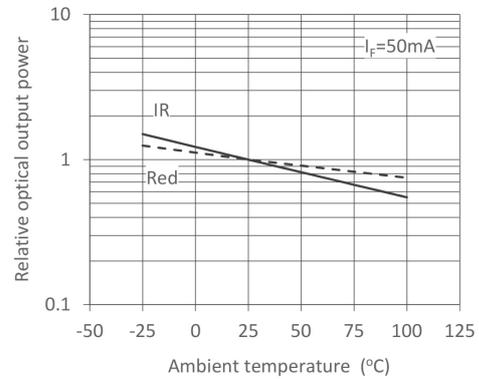
**Optical Output Power - Forward Current**



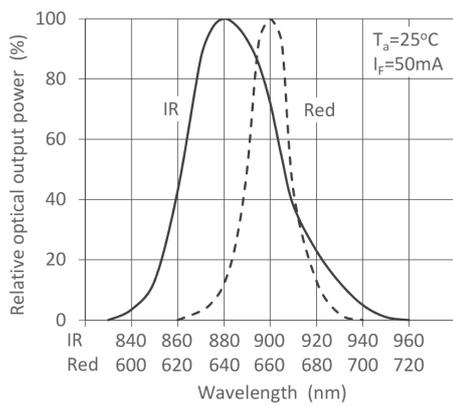
**Forward Current - Forward Voltage**



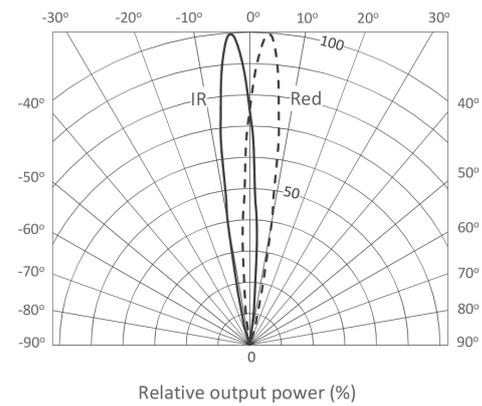
**Relative Optical Output Power - Ambient Temperature**



**Spectral Distribution**



**Directivity**



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## **KYOTO SEMICONDUCTOR Co.,Ltd.**

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**Western Japan Office**

Laxa Osaka, North Office 6F, 5-6-16 Fukushima, Fukushima-ku, Osaka-shi, Osaka 553-0003 Japan  
TEL:+81-6-6690-8660 FAX:+81-6-6690-8666

**Tokyo Office**

Mitsui Sumitomo Kaijo Tepco Building 9F, 1-6-1 Kyobashi, Chuo-ku, Tokyo 104-0031 Japan  
TEL:+81-3-3528-6510 FAX:+81-3-3528-6530

**Kyosemi Opto  
America Corp.**

440 N. Wolfe Rd. #158, Sunnyvale, CA 94085, USA  
TEL : +1 669-292-3949