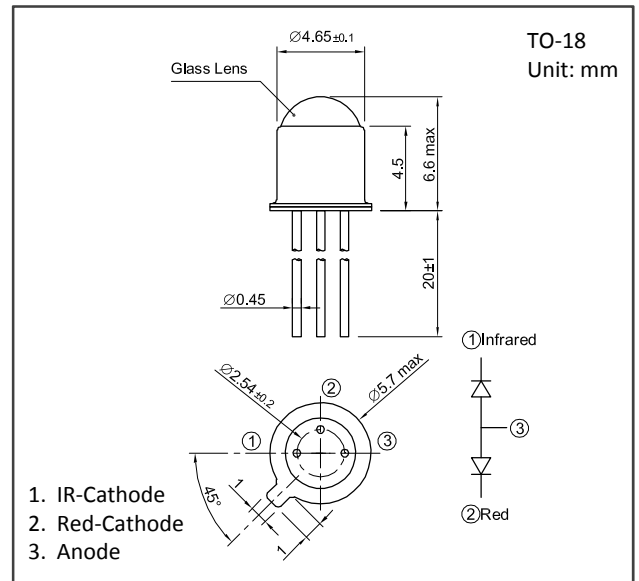


## Features

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

## Applications

- Bill recognition
- Color sensors



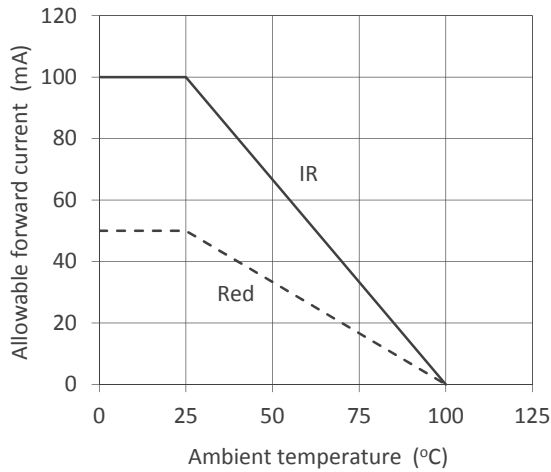
## Absolute Maximum Ratings

Parameter	Symbol	Value		Unit	Note
		Infrared	Red		
Forward current	$I_F$	100	50	mA	Ta=25°C
Peak forward current	$I_{FP}$	1	0.5	A	Pulse width=100μs 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		°C	Avoid dew condensation
Storage temperature	$T_{stg}$	-40 to +100		°C	Avoid dew condensation
Soldering temperature	$T_{sol}$	260		°C	Max 5 sec. at 2.6mm from body

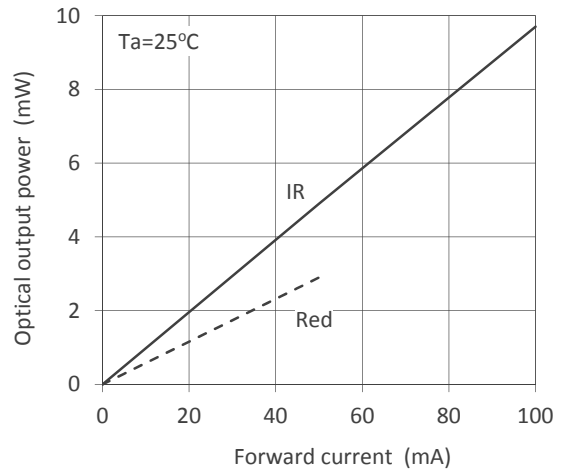
## Electrical and Optical Characteristics (Ta=25°C unless otherwise noted)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward voltage	Infrared	$V_F$	-	1.3	1.6	V	$I_F=50mA$
	Red			1.8	2.3		
Reverse current		$I_R$	-	-	10	μA	$V_R=5V$
Optical output power	Infrared	$P_O$	-	5	-	mW	$I_F=50mA$
	Red			3			
Peak emission wavelength	Infrared	$\lambda_p$	-	880	-	nm	$I_F=50mA$
	Red			660			
Spectral bandwidth at 50%	Infrared	$\Delta\lambda$	-	55	-	nm	$I_F=50mA$
	Red			20			
Half angle	Infrared	$2\theta$	-	10	-	deg.	
	Red			10			

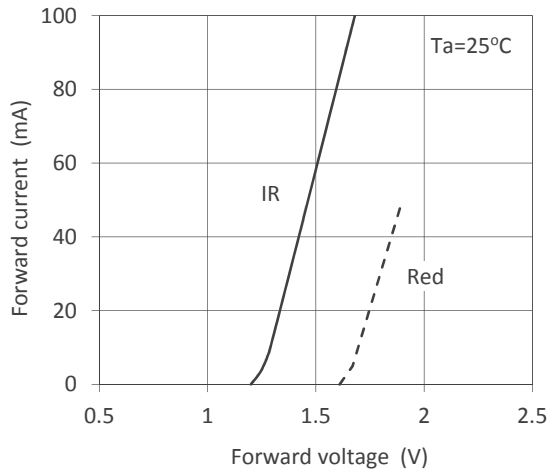
**Allowable Forward Current-Ambient Temperature**



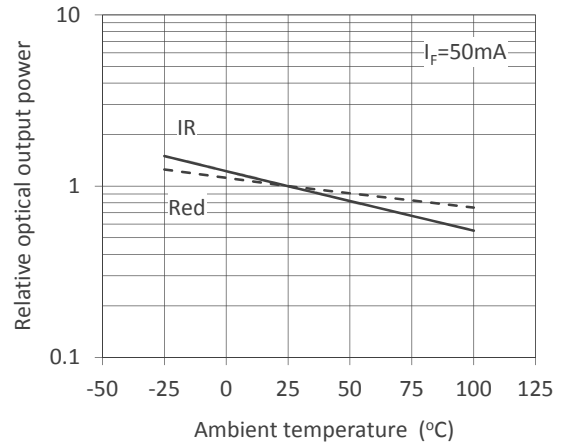
**Optical Output Power - Forward Current**



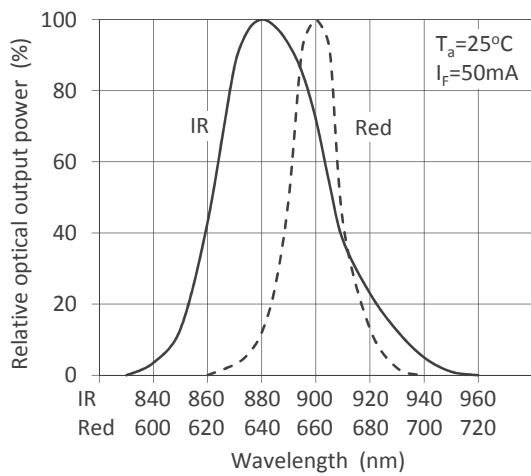
**Forward Current - Forward Voltage**



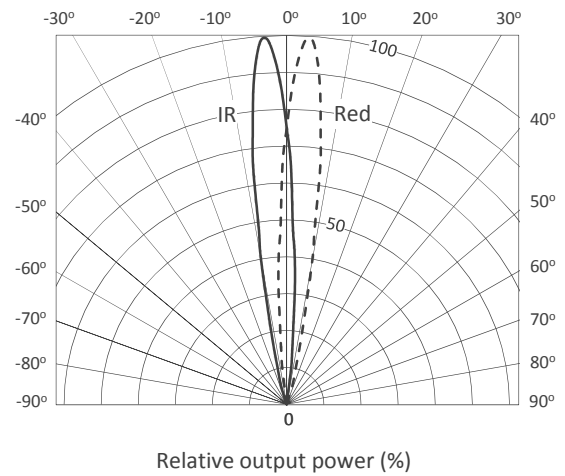
**Relative Optical Output Power - Ambient Temperature**



**Spectral Distribution**



**Directivity**



- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (EU2002/95/EC).

## Opto-technologies for the Future



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### KYOSEMI CORPORATION

<http://www.kyosemi.co.jp/>

**Headquarters :** 949-2 Ebisucho Fushimi-ku, Kyoto 612-8201 Japan

TEL: +81-75-605-7311

**Tokyo Sales Office:** 24<sup>th</sup> Sky Bldg.2F, 1-34-3 Shinjuku Shinjuku-ku, Tokyo 160-0022 Japan

TEL: +81-3-5312-5360

**Kansai Sales Office:** 949-2 Ebisucho Fushimi-ku, Kyoto 612-8201 Japan

TEL: +81-75-605-7311

**Kyosemi Opto America Corp:** 4655 Old Ironsides Suite 230 Santa Clara, California 95054 USA

TEL: +1-408-492-9361

**Eniwa Operation:** 385-31 Toiso Eniwa-shi, Hokkaido 061-1405 Japan

TEL: +81-123-34-3111

**Kamisunagawa Operation:** 70-1 Kamisunagawa Kamisunagawa-cho Sorachi-gun, Hokkaido 073-0200 Japan

TEL: +81-125-62-3611