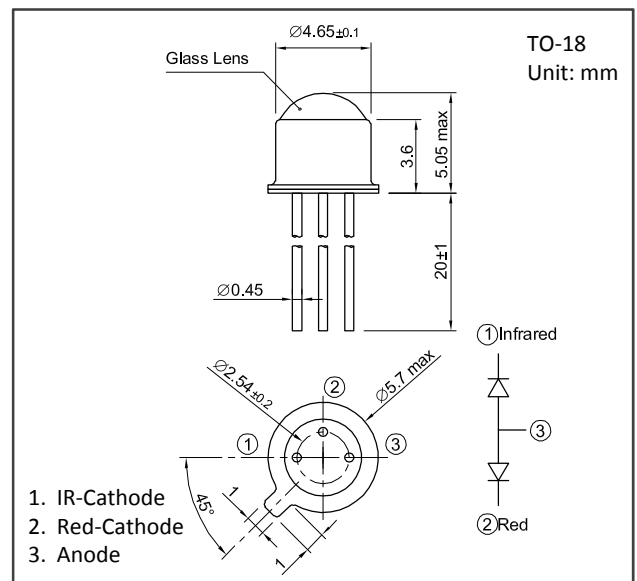


**Features**

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

**Applications**

- Bill recognition
- Color sensors

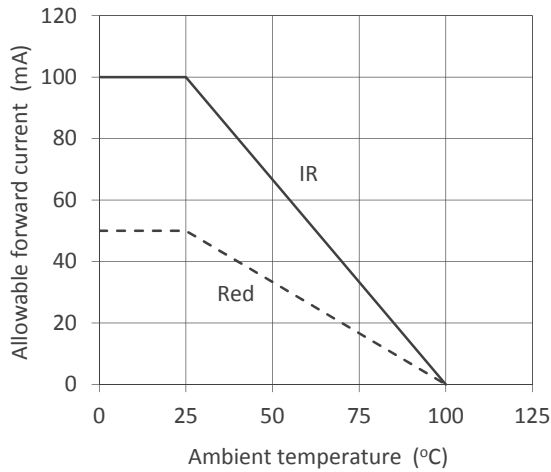
**Absolute Maximum Ratings**

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 temperater	$T_{sol}$	260		°C	Max 5 sec. at 2.6mm from body

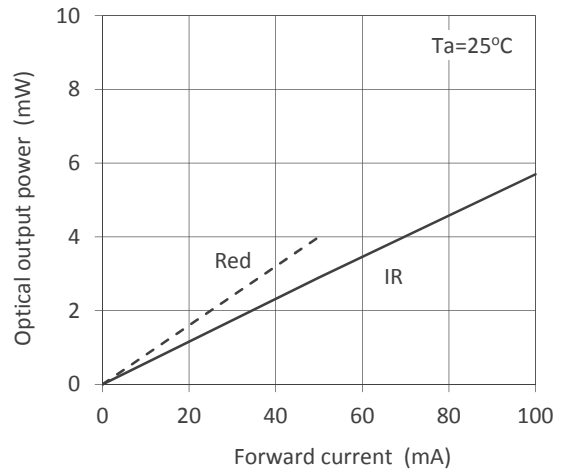
**Electrical and Optical Characteristics (Ta=25°C unless otherwise noted)**

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward voltage	Infrared	$V_F$	-	1.3	1.5	V	$I_F=50mA$ $I_F=50mA$
	Red			1.9	2.3		
Reverse current		$I_R$	-	-	10	μA	$V_R=5V$
Optical output power	Infrared	$P_O$	-	3	-	mW	$I_F=50mA$ $I_F=50mA$
	Red			4			
Peak emission wavelength	Infrared	$\lambda_p$	-	940	-	nm	$I_F=50mA$ $I_F=50mA$
	Red			660			
Spectral bandwidth at 50%	Infrared	$\Delta\lambda$	-	50	-	nm	$I_F=50mA$ $I_F=50mA$
	Red			20			
Half angle	Infrared	$2\theta$	-	60	-	deg.	
	Red			60			

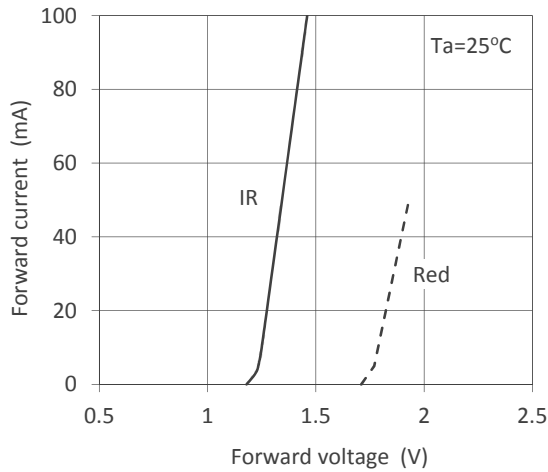
Allowable Forward Current-Ambient Temperature



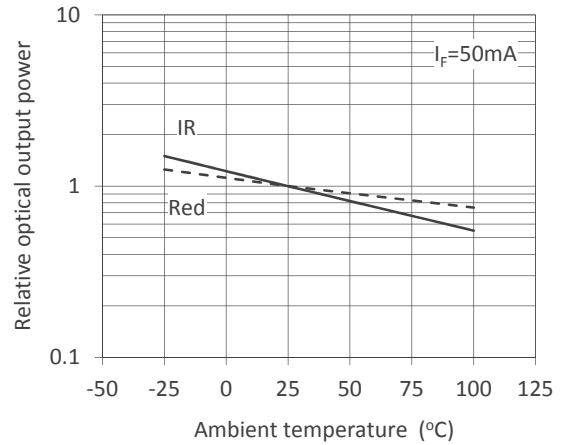
Optical Output Power - Forward Current



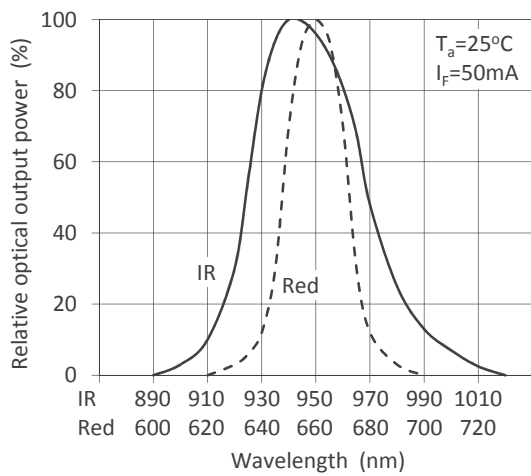
Forward Current - Forward Voltage



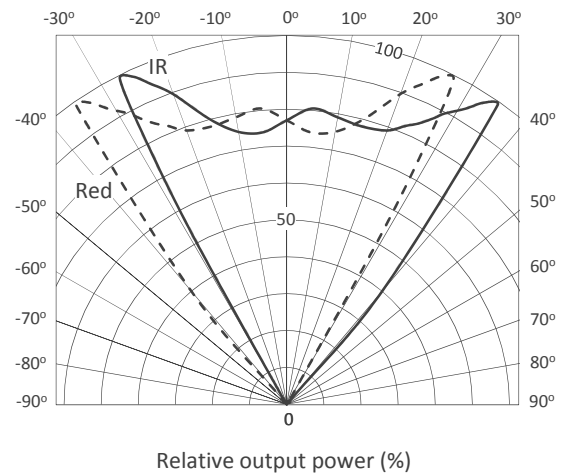
Relative Optical Output Power - Ambient Temperature



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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