

The SIR-568ST3F has the response speed and luminous output necessary for image transmission in audio-visual applications. It can support almost all types of optical transmission through air, including audio and data transmission. The luminous output is 13mW and the cutoff frequency is 50MHz.

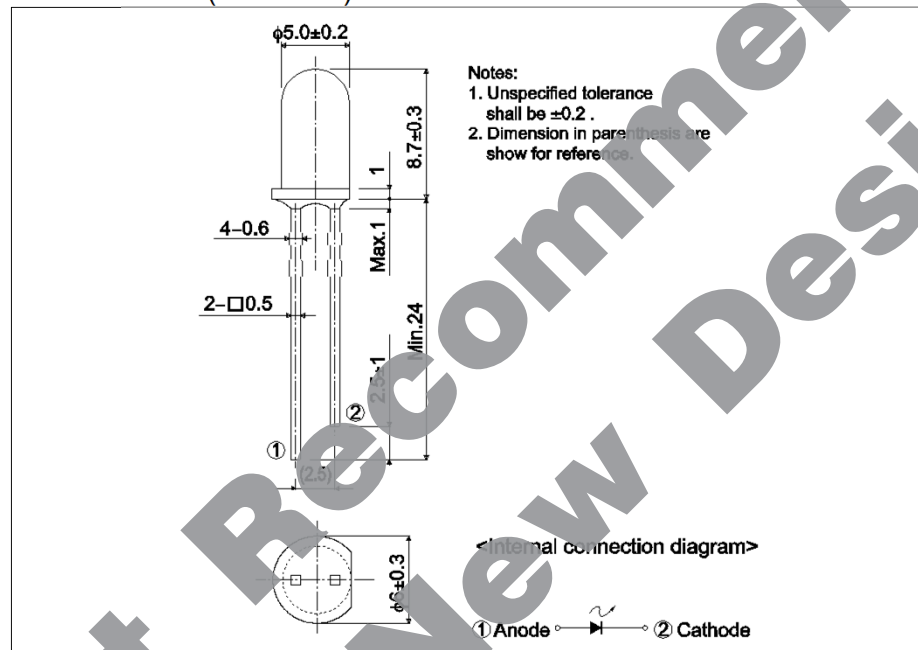
### ●Applications

- Transmission of images from a video cassette recorder to a television.
- ETransmission of audio signals between audio devices.
- High speed data transmission.

### ●Features

- 1) High luminous output 13mW.
- 2) Fast response is possible 50MHz cutoff frequency.

### ●Dimensions (Unit : mm)



### ●Outline



### ●Absolute maximum ratings (T<sub>a</sub> = 25°C)

Parameter	Symbol	Value	Unit
Forward current	I <sub>F</sub>	100	mA
Reverse voltage	V <sub>R</sub>	4.0	V
Power dissipation	P <sub>D</sub>	230	mW
Pulse forward current	I <sub>FP</sub> *	500	mA
Operating temperature	T <sub>opr</sub>	-25 to +85	°C
Storage temperature	T <sub>stg</sub>	-40 to +85	°C

\*Pulse width = 0.1 msec, duty ratio 1%

**●Electrical and optical characteristics (T<sub>a</sub> = 25°C)**

Parameter		Symbol	Conditions	Values			Unit
				Min.	Typ.	Max.	
Optical output		P <sub>O</sub>	I <sub>F</sub> = 50mA	-	13	-	mW
Emitting strength		I <sub>E</sub>	I <sub>F</sub> = 50mA	18	38	-	mW/sr
Forward voltage		V <sub>F</sub>	I <sub>F</sub> = 50mA	-	1.6	2.1	V
Reverse current		I <sub>R</sub>	V <sub>R</sub> = 2V	-	-	10	μA
Peak light emitting wavelength		λ <sub>p</sub>	I <sub>F</sub> = 20mA	-	850	-	nm
Spectral line half width		Δλ	I <sub>F</sub> = 20mA	-	40	-	nm
Half-viewing angle		θ <sub>1/2</sub>	I <sub>F</sub> = 50mA	-	±13	-	deg
Response time	Rise time	t <sub>r</sub>	I <sub>F</sub> = 50mA	-	8.0	-	μs
	Fall time	t <sub>f</sub>	I <sub>F</sub> = 50mA	-	6.0	-	μs
Cut-off frequency		f <sub>C</sub>	I <sub>F</sub> = 30mA DC, 20mA p-p	-	50	-	MHz

**●Classified table of rank**

Item	Emitting Strength : I <sub>E</sub>		Unit
P	18.0	to 38.8	mW / sr
Q	27.1	to 55.3	mW / sr
R	38.6	to 83.1	mW / sr
S	57.8	to 110.0	mW / sr

 ◎ Condition I<sub>F</sub> = 50mA

●Electrical and optical characteristics curves

Fig.1 Forward Current Falloff

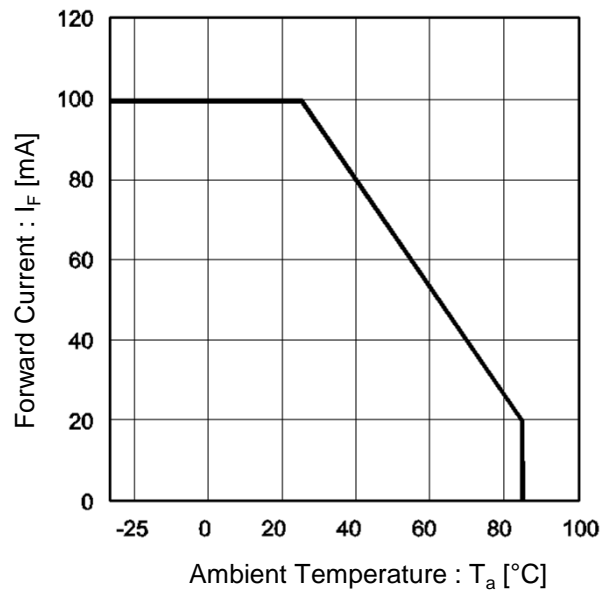


Fig.2 Forward Current vs. Forward Voltage

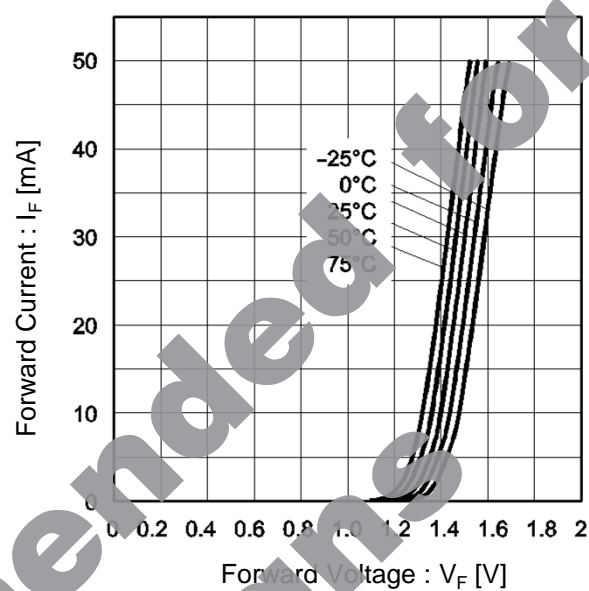


Fig.3 Wavelength

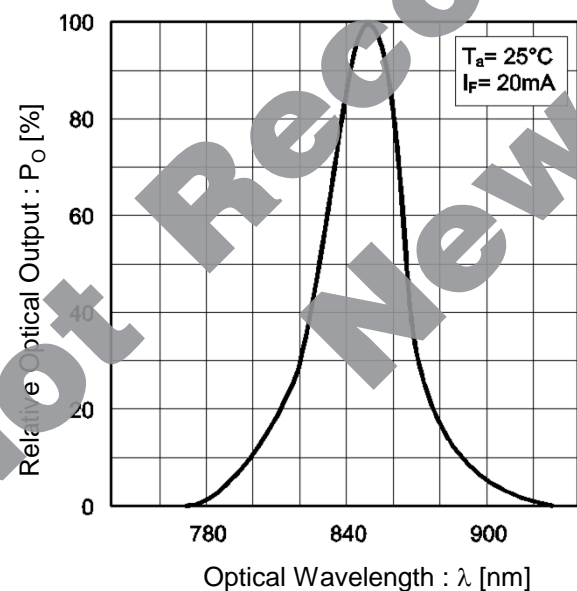
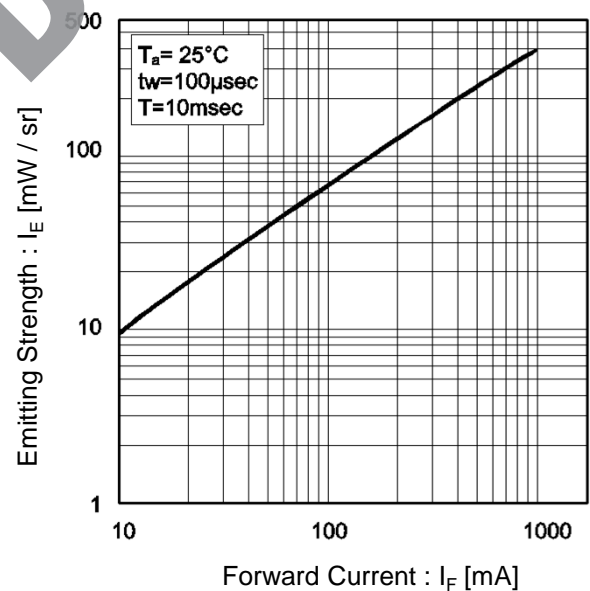


Fig.4 Emitting Strength vs. Forward Current



●Electrical and optical characteristics curves

Fig.5 Relative Emitter Strength vs. Ambient Temperature

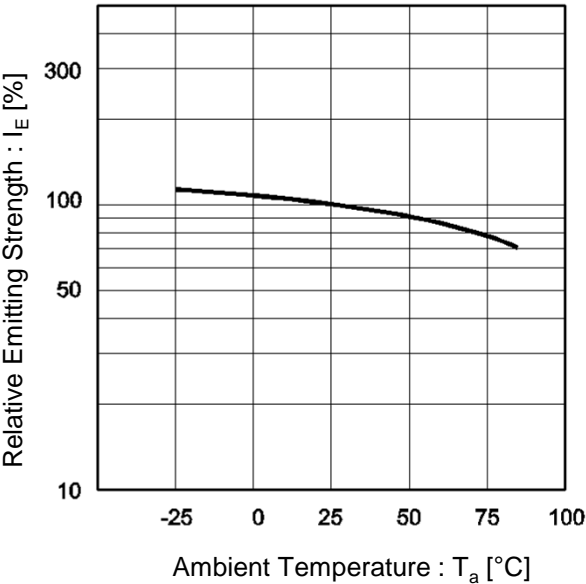


Fig.6 Frequency Characteristics

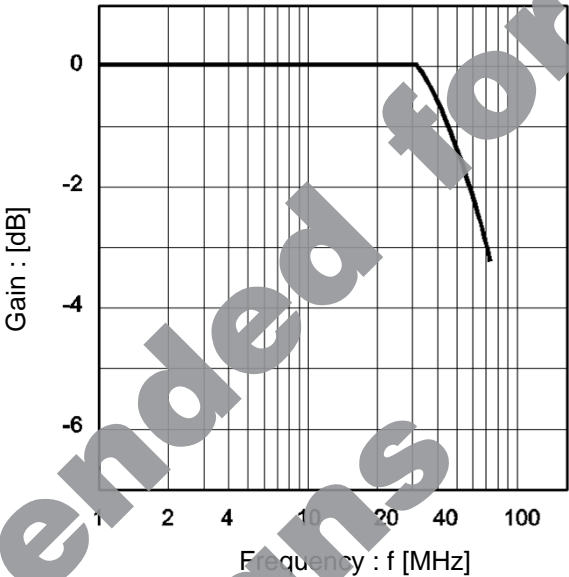
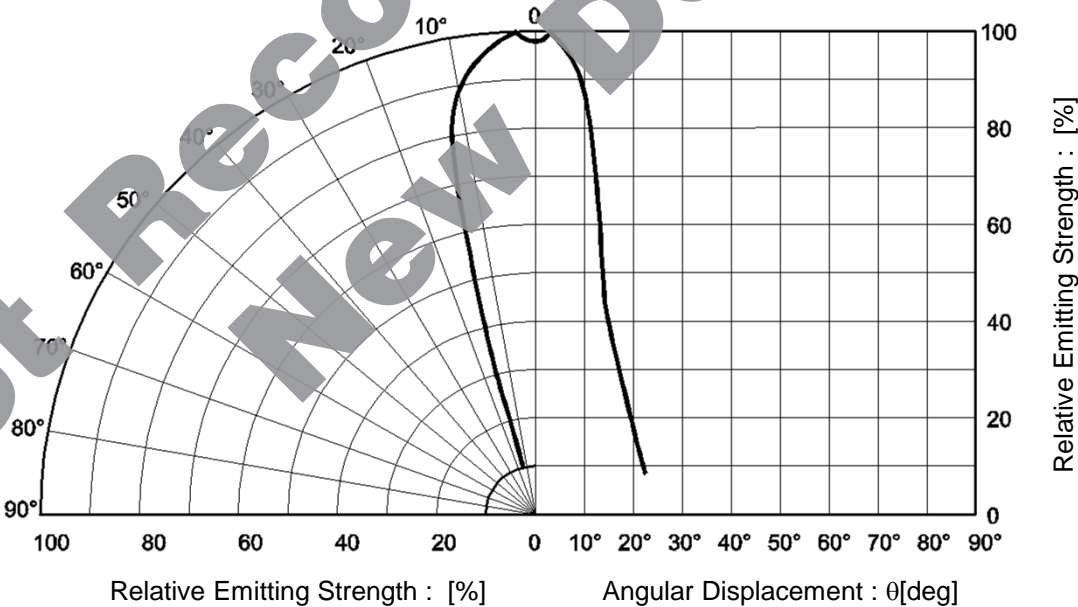


Fig.7 Directional Pattern



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