

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.

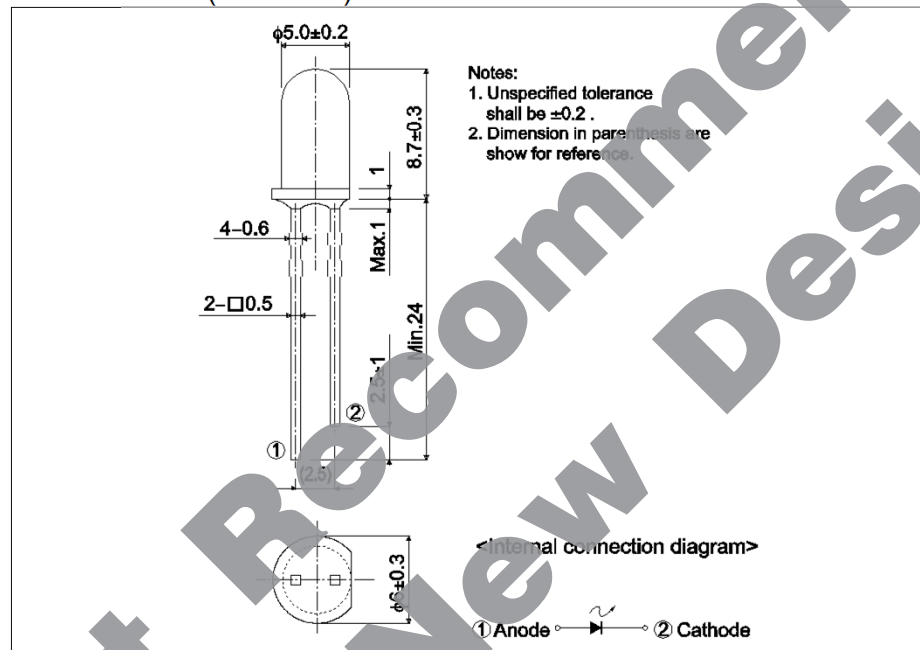
●Applications

- 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_a = 25°C)

Parameter	Symbol	Value	Unit
Forward current	I _F	100	mA
Reverse voltage	V _R	4.0	V
Power dissipation	P _D	230	mW
Pulse forward current	I _{FP} *	500	mA
Operating temperature	T _{opr}	-25 to +85	°C
Storage temperature	T _{stg}	-40 to +85	°C

*Pulse width = 0.1 msec, duty ratio 1%

●Electrical and optical characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	Values			Unit	
			Min.	Typ.	Max.		
Optical output	P _O	I _F = 50mA	-	13	-	mW	
Emitting strength	I _E	I _F = 50mA	18	38	-	mW/sr	
Forward voltage	V _F	I _F = 50mA	-	1.0	2.1	V	
Reverse current	I _R	V _R = 2V	-	-	10	μA	
Peak light emitting wavelength	λ _p	I _F = 20mA	-	850	-	nm	
Spectral line half width	Δλ	I _F = 20mA	-	40	-	nm	
Half-viewing angle	θ _{1/2}	I _F = 50mA	-	±13	-	deg	
Response time	Rise time	t _r	I _F = 50mA	-	8.0	-	μs
	Fall time	t _f	I _F = 50mA	-	6.0	-	μs
Cut-off frequency	f _C	I _F = 30mA DC, 20mA p-p	-	50	-	MHz	

●Classified table of rank

Item	Emitting Strength I _E	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_F = 50mA

●Electrical and optical characteristics curves

Fig.1 Forward Current Falloff

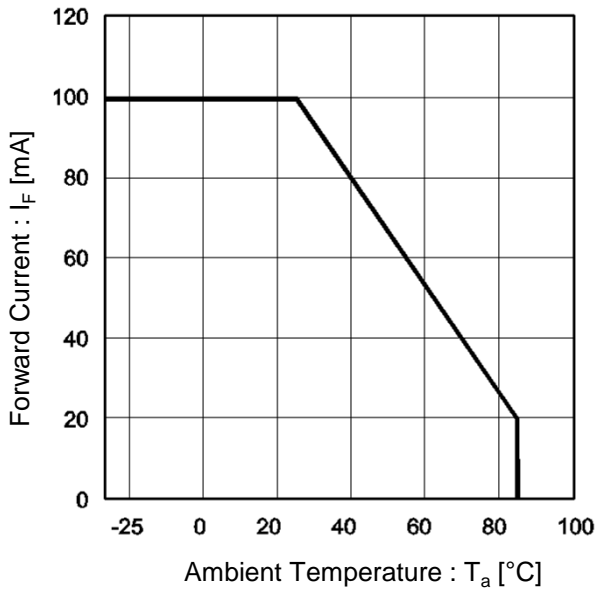


Fig.2 Forward Current vs. Forward Voltage

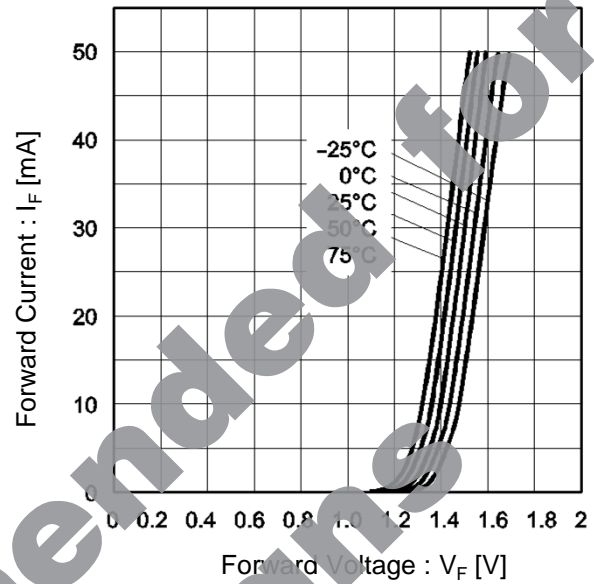


Fig.3 Wavelength

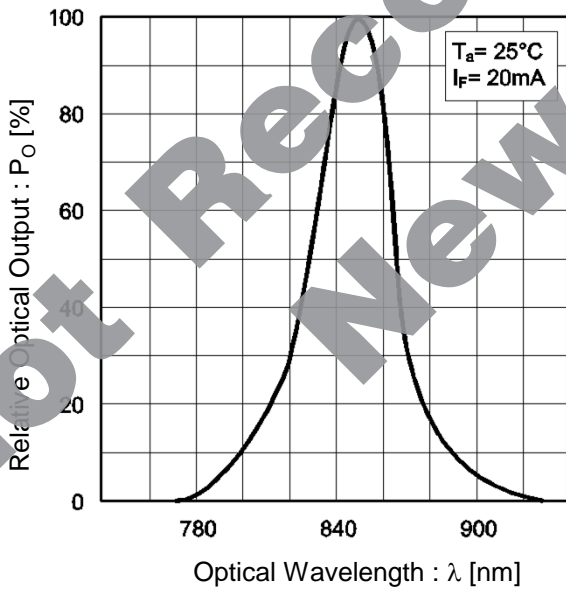
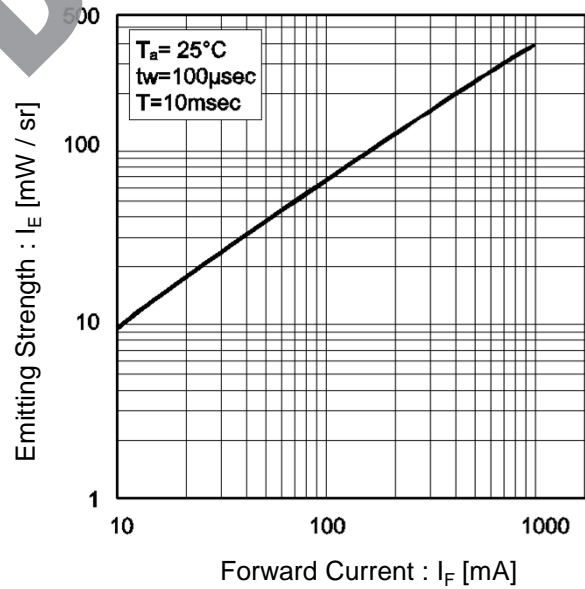


Fig.4 Emitting Strength vs. Forward Current



●Electrical and optical characteristics curves

Fig.5 Relative Emitter Strength vs. Ambient Temperature

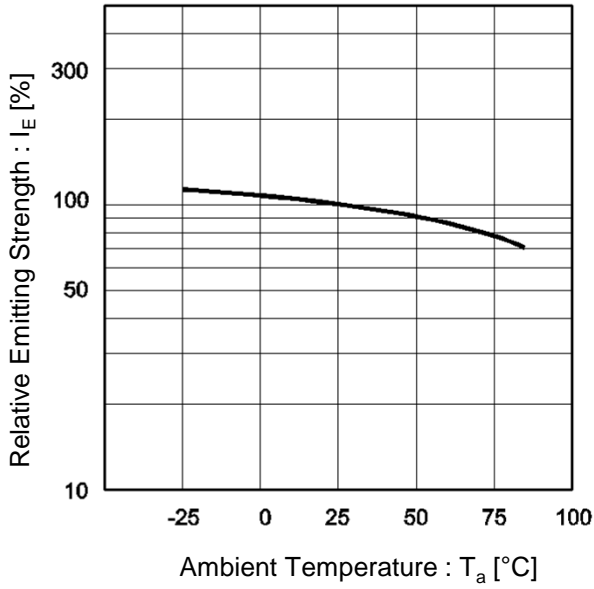


Fig.6 Frequency Characteristics

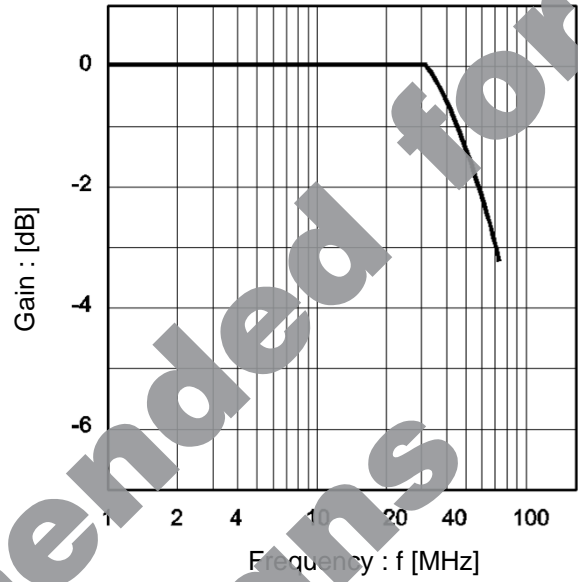
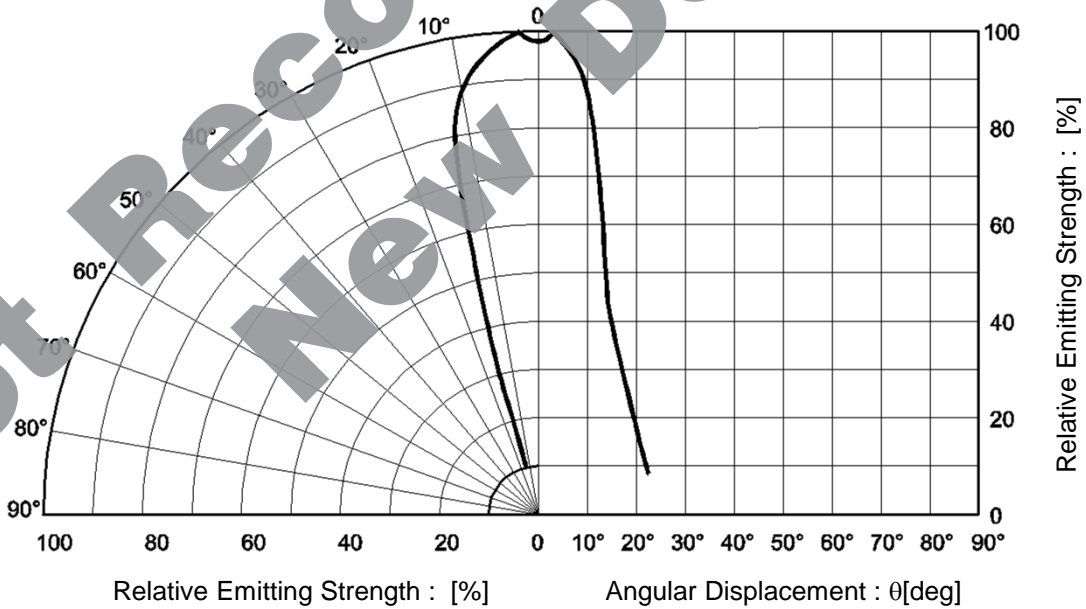


Fig.7 Directional Pattern



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