

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.

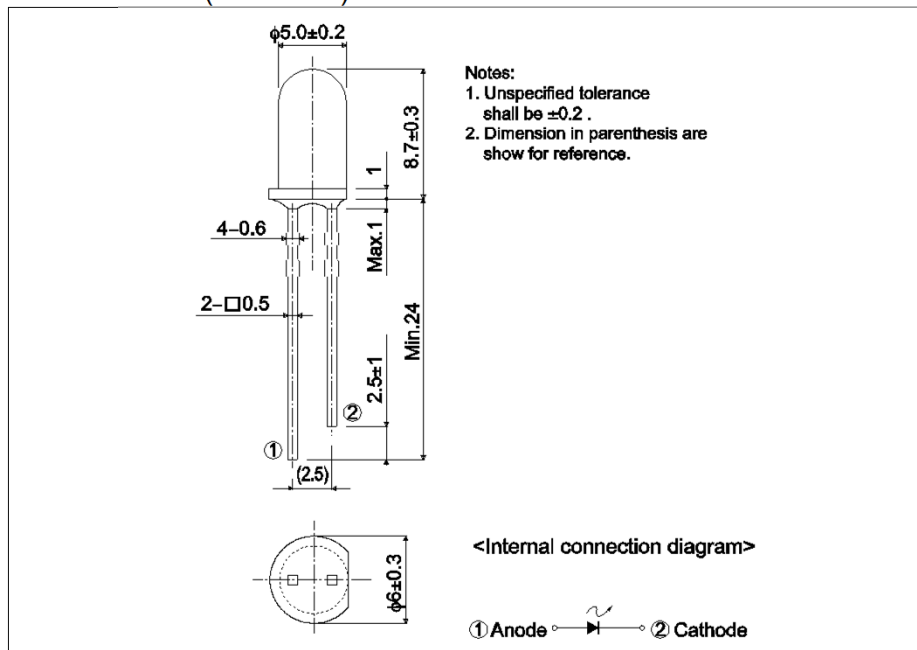
●Applications

- 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 ($T_a = 25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

*Pulse width = 0.1 msec, duty ratio 1%

●Electrical and optical characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Values			Unit	
			Min.	Typ.	Max.		
Optical output	P_O	$I_F = 50\text{mA}$	-	13	-	mW	
Emitting strength	I_E	$I_F = 50\text{mA}$	18	38	-	mW/sr	
Forward voltage	V_F	$I_F = 50\text{mA}$	-	1.6	2.1	V	
Reverse current	I_R	$V_R = 2\text{V}$	-	-	10	μA	
Peak light emitting wavelength	λ_p	$I_F = 20\text{mA}$	-	850	-	nm	
Spectral line half width	$\Delta\lambda$	$I_F = 20\text{mA}$	-	40	-	nm	
Half-viewing angle	$\theta_{1/2}$	$I_F = 50\text{mA}$	-	± 13	-	deg	
Response time	Rise time	t_r	$I_F = 50\text{mA}$	-	8.0	-	μs
	Fall time	t_f	$I_F = 50\text{mA}$	-	6.0	-	μs
Cut-off frequency	f_c	$I_F = 30\text{mA DC} + 20\text{mA p-p}$	-	50	-	MHz	

●Electrical and optical characteristics curves

Fig.1 Forward Current Falloff

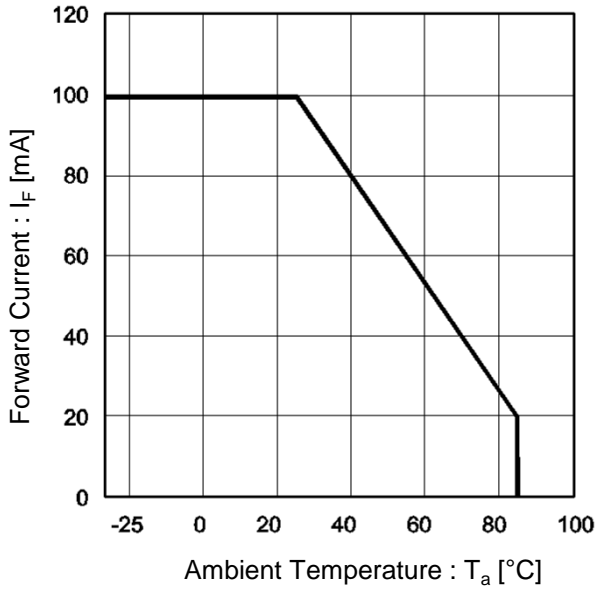


Fig.2 Forward Current vs. Forward Voltage

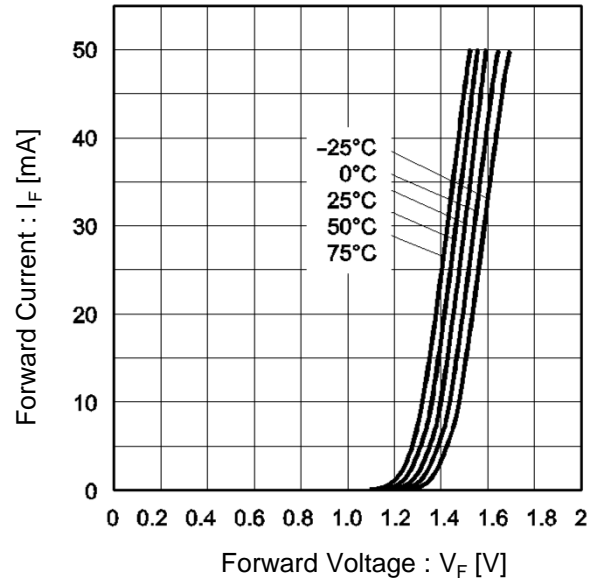


Fig.3 Wavelength

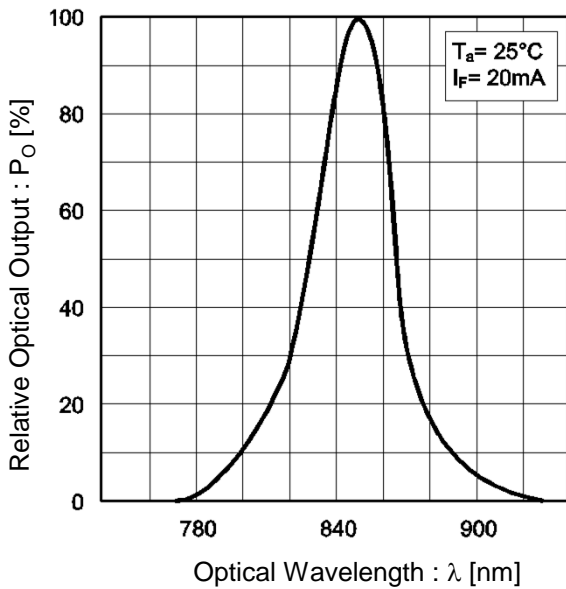
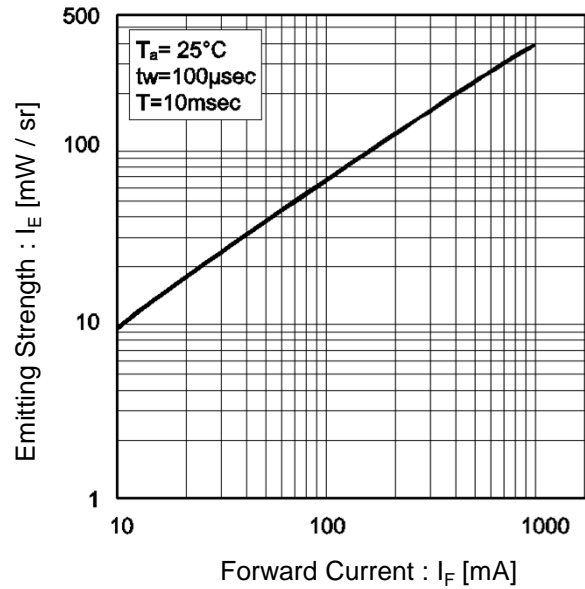


Fig.4 Emitting Strength vs. Forward Current



●Electrical and optical characteristics curves

Fig.5 Relative Emitter Strength vs. Ambient Temperature

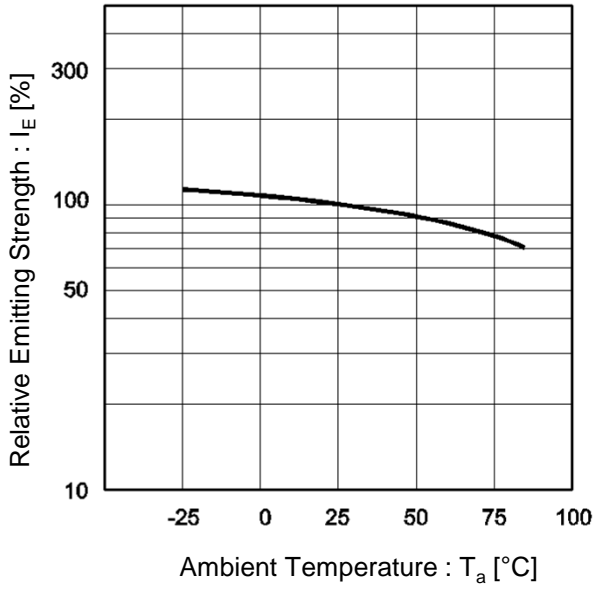


Fig.6 Frequency Characteristics

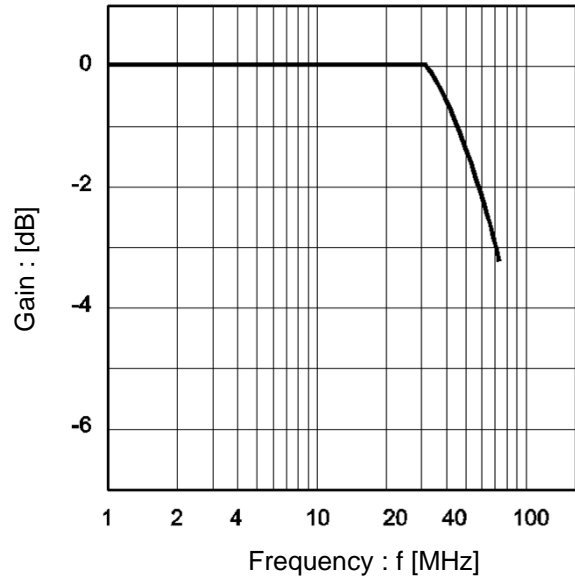
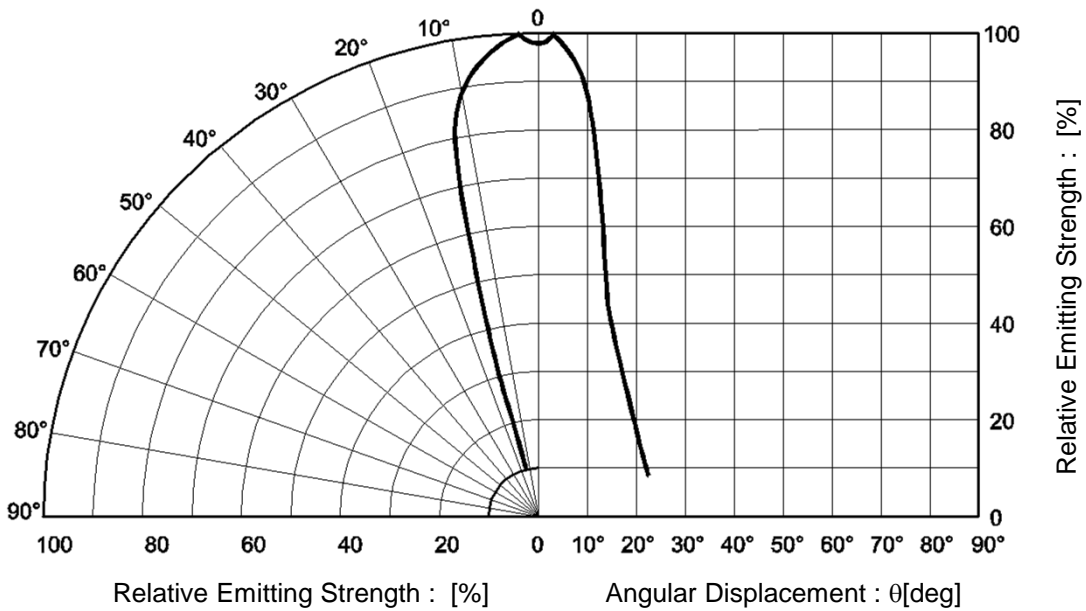


Fig.7 Directional Pattern



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