

# TLN217(F)

Lead Free Product

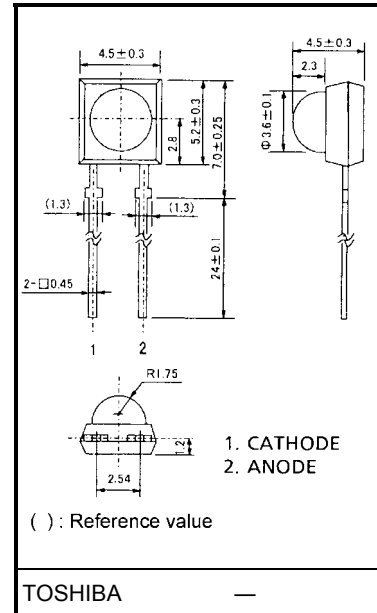
Infrared Light-Emitting Diode for Still Camera

Light Source for Auto Focus

The TLN217(F) is a high output infrared LED employing a new structure of GaAlAs current confining LED chip.

- Optical radiation of current confining LED chip is condensed by clear resin lens.
- High output and low forward voltage
- Peak emission wavelength:  $\lambda_p = 870 \text{ nm}$  (typ.)
- Spectral line half width:  $\Delta\lambda = 35 \text{ nm}$  (typ.)
- Effective emission diameter:  $210 \times 466 \mu\text{m}$  (typ.)

Unit: mm

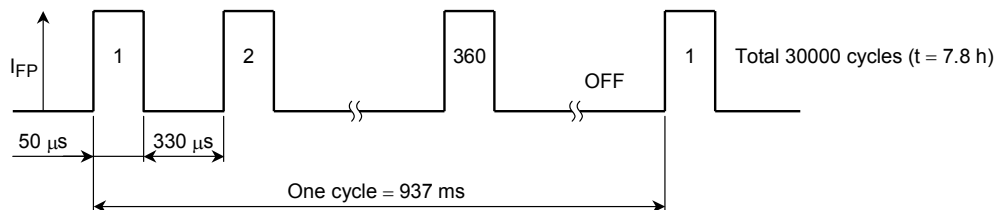


Weight: 0.18 g (typ.)

## Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Pulse forward current	$I_{FP}$ (Note 1)	1.1	A
Reverse voltage	$V_R$	1	V
Operating temperature	$T_{opr}$	-25 to 60	°C
Storage temperature	$T_{stg}$	-40 to 90	°C

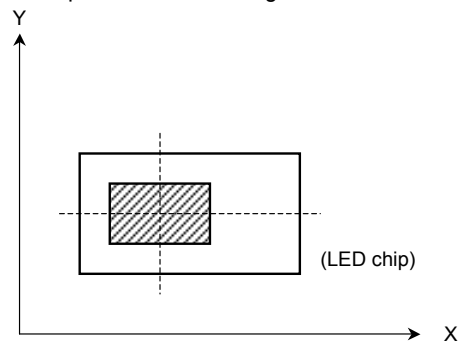
Note 1: Total 30000 cycles (total power applied time is 7.8 h). One cycle takes 137-ms power applied time and 800-ms pause time under the drive condition of 2.6 kHz frequency and 13.2% duty cycle.



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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Pulse forward voltage	$V_{FP}$	$I_{FP} = 300 \text{ mA}$ , $t = 10 \text{ ms}$	—	1.6	1.75	V
Reverse current	$I_R$	$V_R = 1 \text{ V}$	—	—	100	$\mu\text{A}$
Effective emission spot size	X	Half value of peak (Note 2)	—	466	—	$\mu\text{m}$
	Y	Half value of peak (Note 2)	—	210	—	
Radiation flux	$\phi_e$	$I_{FP} = 300 \text{ mA}$ , $t = 10 \text{ ms}$ (Note 3)	12	17	—	mW
Half value angle	$\theta_{\frac{1}{2}}$	$I_F = 50 \text{ mA}$	—	$\pm 32.5$	—	$^\circ$
Peak emission wavelength	$\lambda_p$	$I_F = 50 \text{ mA}$	850	870	900	nm
Spectral line half width	$\Delta\lambda$	$I_F = 50 \text{ mA}$	—	35	—	nm

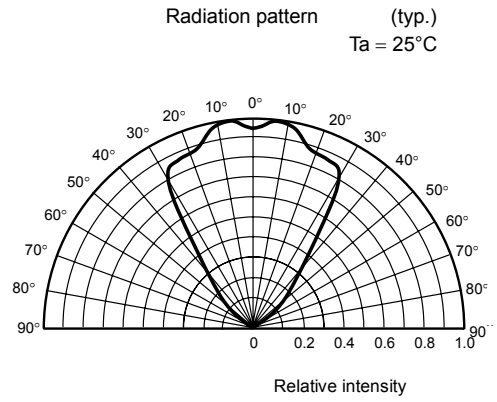
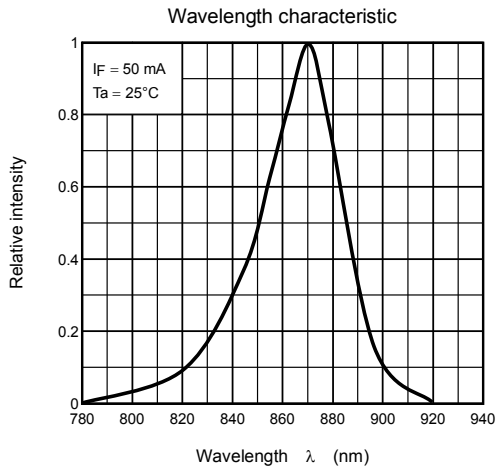
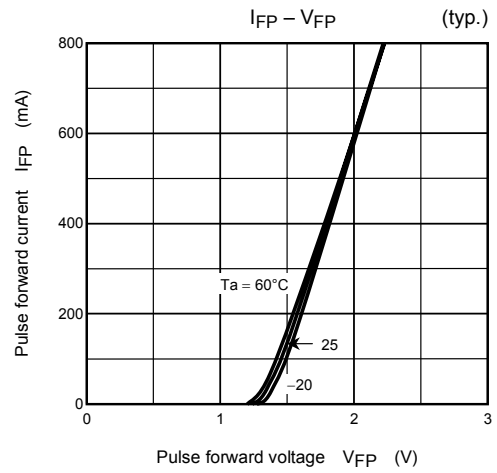
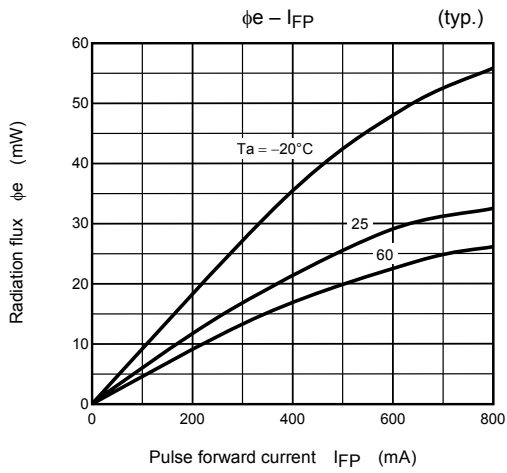
Note 2: The directions of X and Y are in the following diagram.  
The shaded area represents the emitting surface.



Note 3: Luminous radiation output to effective angle =  $\pm 25^\circ$

## Precaution

- Soldering temperature: 260°C (max)  
Soldering time: 5 s (max)  
(Soldering must be performed 2 mm from the bottom of the package.)
- When forming the leads, bend each lead under the 2 mm from the body of the device. Soldering must be performed after the leads have been formed.
- The TLN217(F) is intended for a camera AF use only. Please do not use this device except for a camera.



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