

LT1 □ 52A Series Colorless Transparency Chip LED Devices

Model No.

LT1L52A Red (High-luminosity) GaAlAs/GaAs

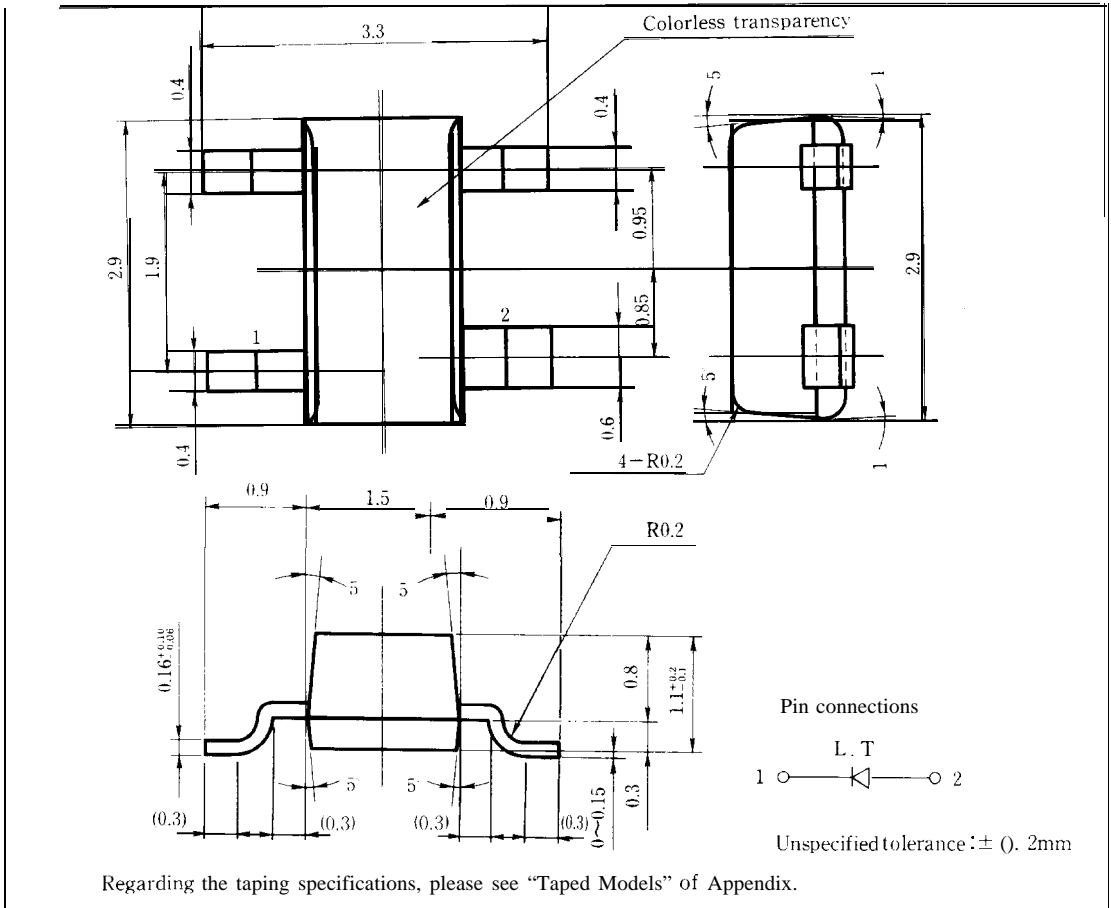
LT1T52A Red (High-luminosity) GaAlAs/GaAs

Features

1. Radiation size 1.5×2.9 mm
2. Colorless transparency lens type
3. Taped models : Tape width 8mm, 3,000 pcs/reel

Outline Dimensions

(Unit: mm)



SHARP

LT1 □ 52A

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	LT1L52A	LT1T52A				Unit	
Power dissipation	P	110	66				mW	
Continuous forward current	I _F	50	30				mA	
※1 Peak forward current	I _{FM}	300	50				mA	
Derating factor	DC	—	0.67	0.40			mA/°C	
	Pulse	—	4.00	0.67			mA/°C	
Reverse voltage	V _R	5	5				v	
Operating temperature	T _{opr}	-25 to +85						°C
Storage temperature	T _{stg}	-25 to +100						°C

※1 Duty ratio = 1/10, Pulse width = 0.1ms

Duty ratio = 1/16, Pulse width ≤ 1ms for LT1L52A

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LT1L52A (Red)/ LT1T52A (Red)

■ Electro-optical Characteristics

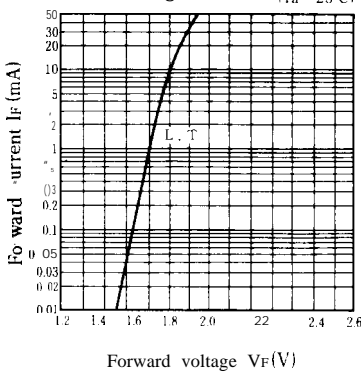
(Ta=25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	LT1L52A	I _F = 20mA	—	1.75	2.2	V
		LT1T52A	I _F = 20mA	—	1.75	2.2	
*2 Luminous intensity	I _v	LT1L52A	I _F = 20mA	6.0	15	—	mcd
		LT1T52A	I _F = 20mA	4.5	9.0	—	
Peak emission wavelength	λ _p	LT1L52A	I _F = 20mA	—	660	—	‘m
		LT1T52A	I _F = 20mA	—	660	—	
Spectrum radiation bandwidth	Δλ	LT1L52A	I _F = 20mA	—	20	—	‘m
		LT1T52A	I _F = 20mA	—	20	—	
Reverse current	I _R	LT1L52A	V _R = 4V	—	—	10	μA
		LT1T52A	V _R = 4V	—	—	10	
Terminal capacitance	C _t	LT1L52A	V=0V f=1MHz	—	30	—	pF
		LT1T52A	V=0V f=1MHz	—	30	—	
Response frequency	f _c	LT1L52A	—	—	8	—	‘Hz
		LT1T52A	—	—	8	—	

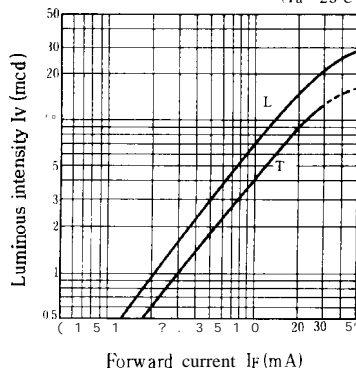
*2 Tolerance: ±30%

■ Characteristics Diagrams

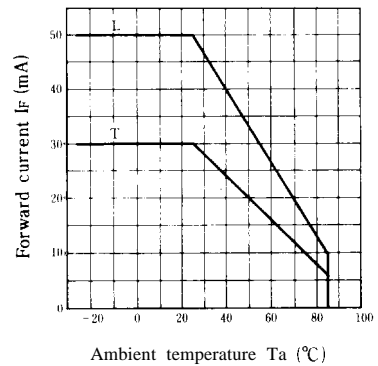
Forward Current vs. Forward Voltage



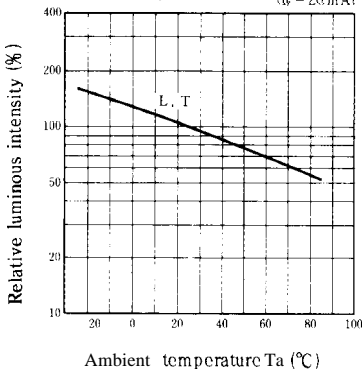
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution

