LT1 ❑ 73A Series compact Chip LED Devices

■ Model No.

LT1 T73A Red (High- luminosity)	GaAlAs/GaAs
LT1P73A Red	GaP
LT1D73A Red	GaAsP/GaP
LT1S73A Sunset orange	GaAsP/GaP
LT1H73A Yellow	GaAsP/GaP
LT1E73A Yellow-green	GaP
LT1K73A Green	GaP

■ Features

1. Compact type
2. Radiation size 1.45 ×1.45mm
3. Milky diffusion lens type
4. Taped models : Tape width 8mm,3,000pcs/reel

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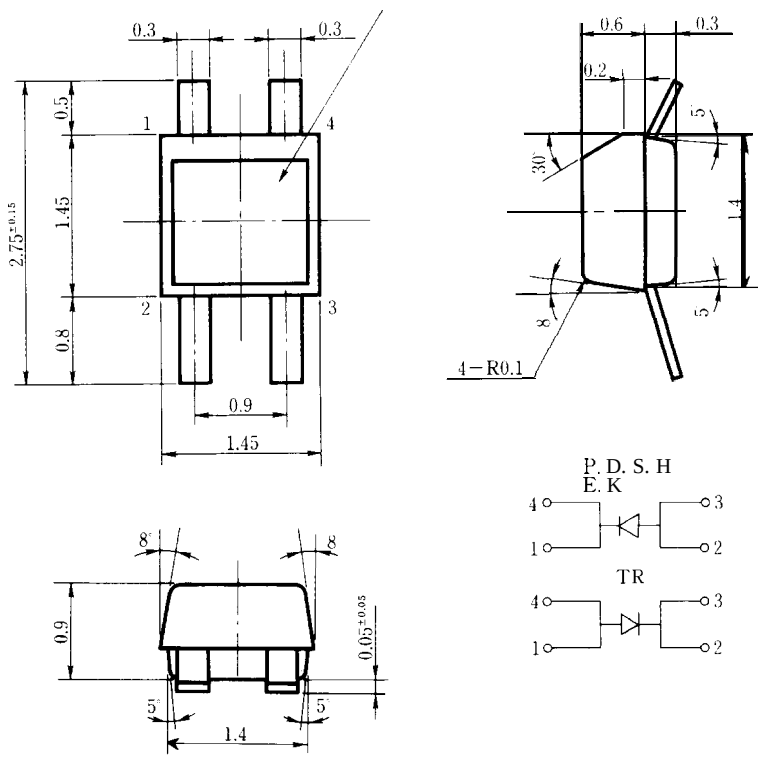
■ Outline Dimensions

(Unit: mm)

Milky diffusion



Unspecified tolerance : ±0.2mm

Regarding the taping specifications, please see "Taped Models" of Appendix

LT1 ❑ 73A

■ Absolute Maximum Ratings

(Ta = 25℃)

Parameter		Symbol	LT1T73A	LT1P73A	LT1D73A	LT1H73A		Unit
					LT1S73A	LT1E73A		
						LT1K73A		
Power dissipation		P	66	23	84	50		mW
Continuous forward current		I_F	30	10	30	20		mA
※1 Peak forward current		I_{FM}	50	50	50	50		mA
Derating factor	DC	−	0.40	0.13	0.40	0.27		mA/℃
	Pulse	−	0.67	0.67	0.67	0.67		mA/℃
Reverse voltage		V_R	5	5	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

LT1 T73A (Red)

■ Electro-optical Characteristics

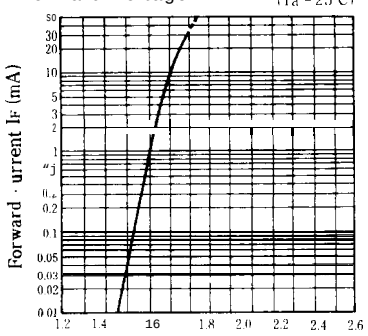
(Ta=25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT1T73A	$I_F = 20mA$		1.75	2.2	V
※2 Luminous intensity	I_V	LT1T73A	$I_F = 20mA$	2.8	7.0	–	mcd
Peak emission wavelength	λ_p	LT1T73A	$I_F = 20mA$	–	660	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT1T73A	$I_F = 20mA$		20	–	nm
Reverse current	I_R	LT1T73A	$V_R = 4V$	–	–	10	μA
Terminal capacitance	C_t	LT1T73A	V=OV f=1 MHz	–	30	–	pF
Response frequency	f_c	LT1T73A	–	–	8	–	MHz

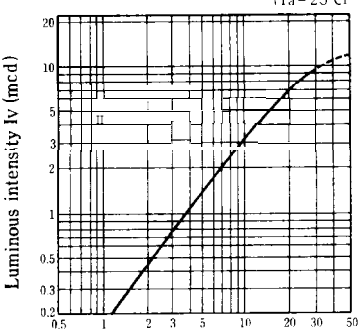
※2 **Tolerance:** ±30%

■ Characteristics Diagrams

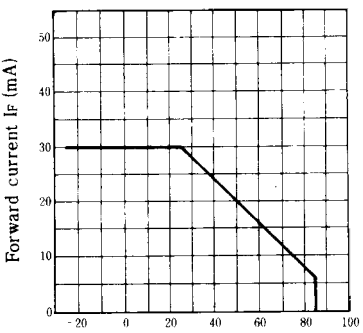
Forward Current va. Forward Voltage



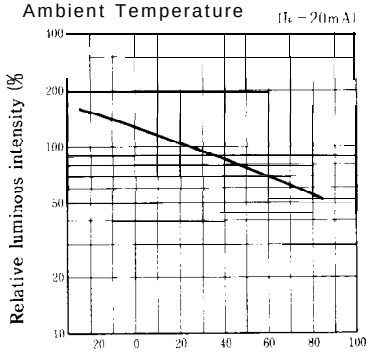
Luminous Intensity vs. Forwsrd Current



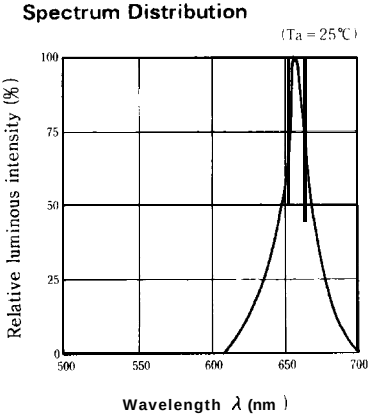
Forward Current **Derating** Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



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LT1 P73A (Red) / LT1 D73A (Red)

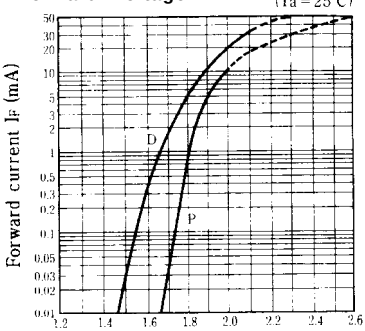
■ Electro-optical Characteristics (Ta=25"C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT1P73A	I_F=5mA	–	1.9	2.3	V
		LT1D73A	I_F=20mA		2.0	2.8	
※2 Luminous intensity	I_V	LT1P73A	I_F=5mA	0.4	1.2	–	mcd
		LT1D73A	I_F=20mA	2.5	9,0	–	
Peak emission wavelength	λ_p	LT1P73A	I_F=5mA	–	695	–	‘m
		LT1D73A	I_F=20mA	–	635	–	
Spectrum radiation bandwidtb	$\Delta\lambda$	LT1P73A	I_F=5mA	–	100	–	‘m
		LT1D73A	I_F=20mA	–	35	–	
Reverse current	I_R	LT1P73A	V_R=4V	–	–	10	μA
		LT1D73A	V_R=4V	–	–	10	
Terminal capacitance	C_t	LT1P73A	V=OV f=1MHz	–	55	–	pF
		LT1D73A	V=OV f=1MHz	–	20	–	
Response frequency	f_c	LT1P73A	–	–	4	–	‘Hz
		LT1D73A	–	–	4	–	

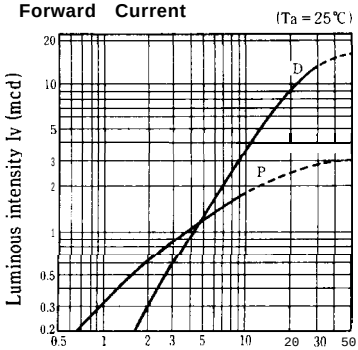
※2 Tolerance: ±30%

■ Characteristics Diagrams

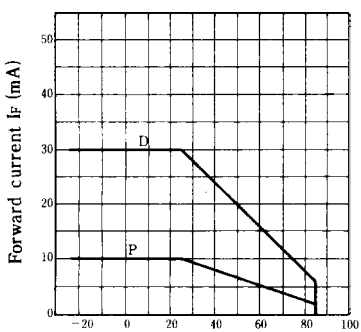
Forward Current vs. Forward Voltage



Luminous intensity vs. Forward Current

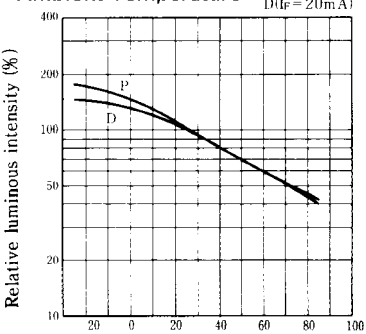


Forward Current Derating Curve

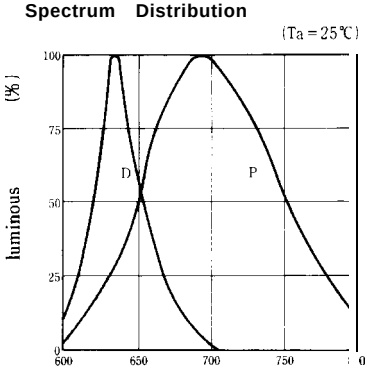


Relative Luminous Intensity vs. Ambient Temperature

P(IF = 5mA)
D(IF = 20mA)



Spectrum Distribution



LT1 S73A (Sunset orange) / LT1 H73A (Yellow)

■ Electro-optical Characteristics (Ta=25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT1S73A	I_F=20mA	—	2.0	2.8	V
		LT1H73A	I_F=10mA	—	1.9	2.5	
※2 Luminous intensity	I_V	LT1S73A	I_F=20mA	2.5	7.8	–	mcd
		LT1H73A	I_F=10mA	1.0	3.7	–	
Peak emission wavelength	λ_p	LT1S73A	I_F=20mA	—	610	–	‘m
		LT1H73A	I_F=10mA		585	–	
Spectrum radiation bandwidtb	$\Delta\lambda$	LT1S73A	I_F=20mA	—	35	–	‘m
		LT1H73A	I_F=10mA	—	30	–	
Reverse current	I_R	LT1S73A	V_R=4V	—	—	10	μA
		LT1H73A	V_R=4V		—	10	
Terminal capacitance	C_t	LT1S73A	V=OV f=1MHz	–	15		pF
		LT1H73A	V=OV f=1MHz	–	35	–	
Response frequency	f_c	LT1S73A	–	—	4	–	MHz
		LT1H73A	–		4	–	

※2 **Tolerance:** ±30%

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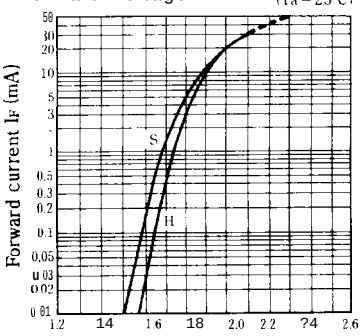
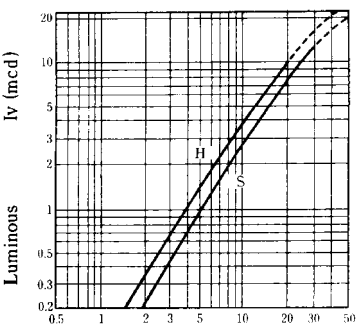
■ Characteristics Diagrams

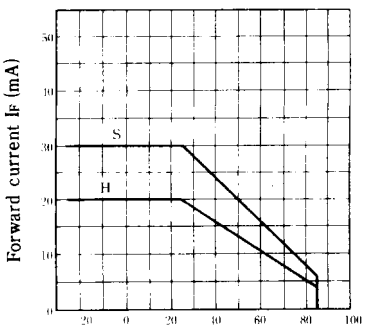
Forward Current vs. Forward Voltage (Ta=25℃)



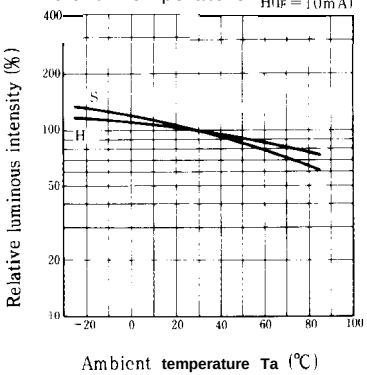
Luminous Intensity va. Forward Current (Ta=25℃)



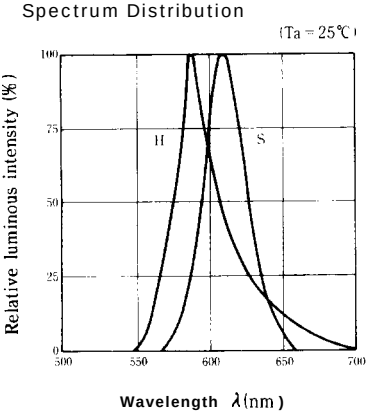
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature S(IF=20mA) H(IF=10mA)



Spectrum Distribution (Ta=25℃)



LT1 E73A (Yellow-green) / LT1 K73A (Green)

■ Electro-optical Characteristics

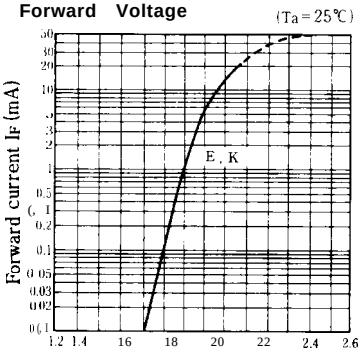
(Ta=25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT1E73A	I_F=10mA		1.95	2.5	V
		LT1K73A	I_F=10mA	–	1.95	2.5	
※2 Luminous intensity	Iv	LT1E73A	I_F=10mA	1.6	4.7	–	mcd
		LT1K73A	I_F=10mA	1,2	2.2	–	
Peak emission wavelength	λ_p	LT1E73A	I_F=10mA	–	565	–	‘m
		LT1K73A	I_F=10mA	–	555	–	
Spectrum radiation bandwidth	$\Delta\lambda$	LT1E73A	I_F=10mA	–	30	–	‘m
		LT1K73A	I_F=10mA	–	25	–	
Reverse current	I_R	LT1E73A	V_R=4V		–	10	μA
		LT1K73A	V_R=4V	–		10	
Terminal capacitance	C_t	LT1E73A	V=OV f=1MHz	–	35	–	*F
		LT1K73A	V=OV f=1MHz	–	40	–	
Response frequency	f,	LT1E73A	–		4	–	‘Hz
		LT1K73A	–	–	4	–	

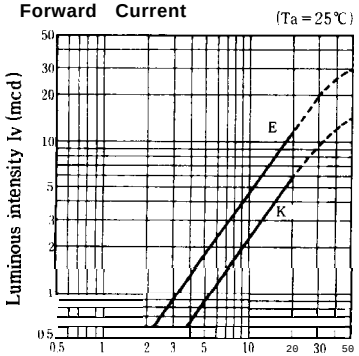
※2 Tolerance: ±30%

■ Characteristics Diagrams

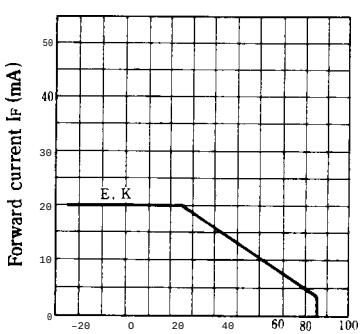
Forward Current vs. Forward Voltage



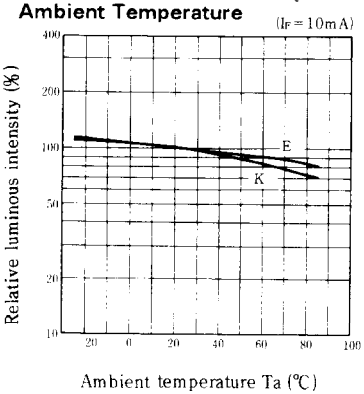
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution