LT9550□ Series ϕ7.5mm Cylinder 'Yp' 'ED Lamp

■ Model No.

LT9550U Red (Super-luminosity) GaAlAs/GaAlAs
LT9550L Red (High-luminosity) GaAlAs/GaAs
LT9550E Yellow-green GaP

■ Features

1. ϕ 7.5mm all resin mold
2. Wide viewing angle
3. High-density mounting (flange less package)
4. Colorless transparency

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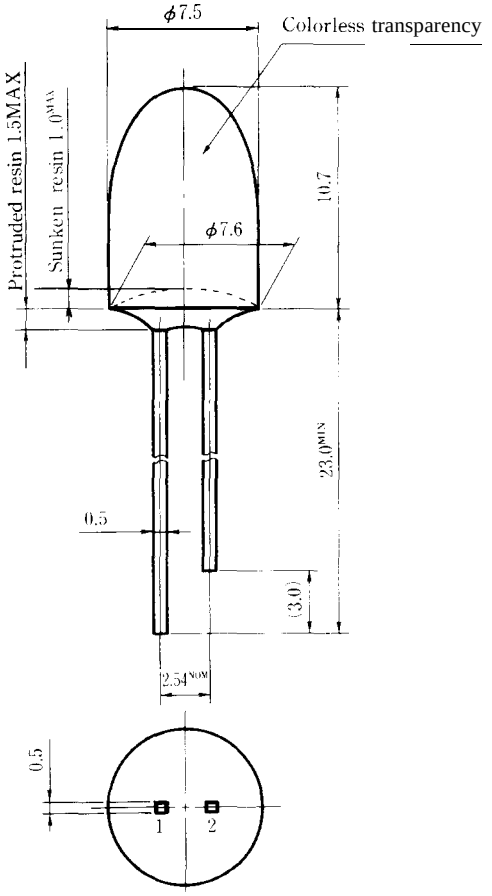
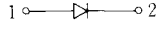
■ Outline Dimensions

(Unit: mm)



Pin connections



Unspecified tolerance : ±0.2mm

LT9550□

■ Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	LT9550U	LT9550L	LT9550E			Unit
Power dissipation		P	75	110	84			mW
Continuous forward current		I_F	30	50	30			mA
※1 Peak forward current		I_{FM}	50	300	50			mA
Derating factor	DC	–	0.40	0.67	0.40			mA/℃
	Pulse		0.67	4.00	0.67			mA/℃
Reverse voltage		V_R	4	5	5			V
Operating temperature		T_{opr}	–25 to +85					℃
Storage temperature		T_{stg}	-25 to +100					℃
※2 Soldering temperature		T_{sol}	260 (within 5 seconds)					℃

※1 Duty ratio = 1/10, Pulse width = 0.1ms
Duty ratio = 1/16, Pulse width ≦ lms for LT9550L
※2 At the position of 1.6mm from the bottom face of resin package

LT9550U (Red)

■ Electro-optical Characteristics

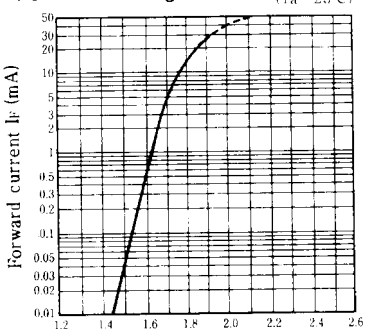
(Ta=25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT9550U	I_F=20mA		1.85	2.5	V
※3 Luminous intensity	I_V	LT9550U	I_F=20mA	400	700	-	mcd
Peak emission wavelength	λ_p	LT9550U	I_F=20mA	-	660	-	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT9550U	I_F=20mA	-	20	-	nm
Reverse current	I_R	LT9550U	V_R=3V		-	100	μA
Terminal capacitance	C_t	LT9550U	V=OV f=1 MHz	-	25	-	pF
Response frequency	f_c	LT9550U	-		8	-	MHz

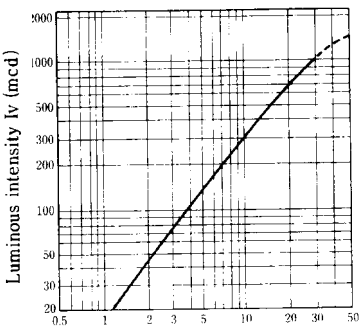
※3 Tolerance: ±30%

■ Characteristics Diagrams

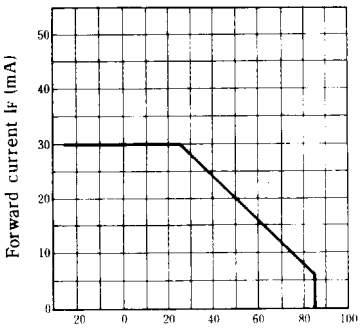
Forward Current vs. Forward Voltage (Ta=25℃)



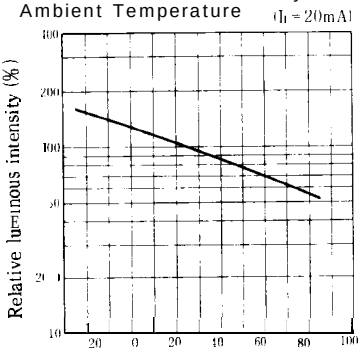
Luminous Intensity vs. Forward Current (Ta=25℃)



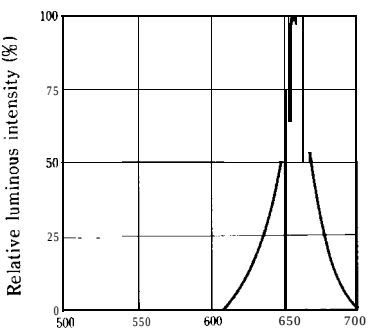
Forward Current **Derating** Curve



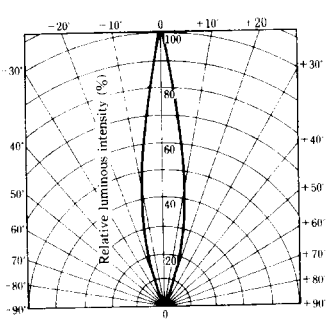
Relative Luminous Intensity vs. Ambient Temperature (I_F=20mA)



Spectrum Distribution (Ta=25℃)



Radiation Diagram (Ta=25℃)



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LT9550L (Red)

■ Electro-optical Characteristics

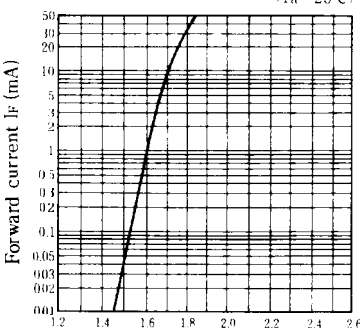
(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT9550L	I_F = 20mA	–	1.75	2.20	V
※3 Luminous intensity	I_V	LT9550L	I_F = 20mA	200	400	–	mcd
Peak emission wavelength	λ_p	LT9550L	I_F = 20mA	–	660	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT9550L	I_F = 20mA	–	20	–	nm
Reverse current	I_R	LT9550L	V_R = 4V	–		10	μA
Terminal capacitance	C_t	LT9550L	V=OV f=1 MHz	–	30	–	pF
Response frequency	f_c	LT9550L	–	–	8	-	MHz

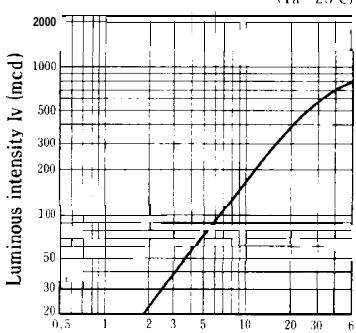
※3 Tolerance: ±30%

■ Characteristics Diagrams

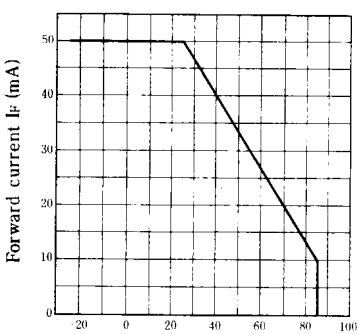
Forward Current vs. Forward Voltage



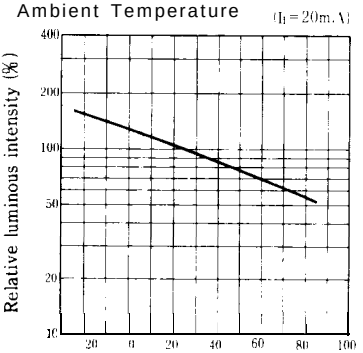
Luminous Intensity vs. Forward Current



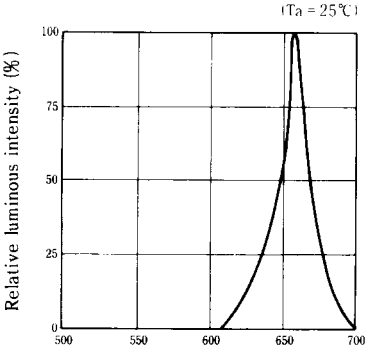
Forward Current Derating Curve



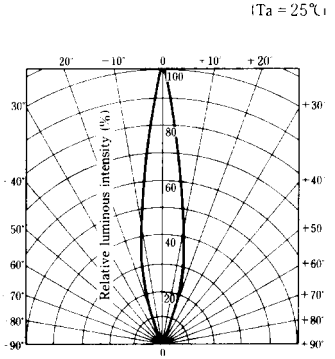
Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



Radiation Diagram



LT9550E (Yellow-green)

■ Electro-optical Characteristics

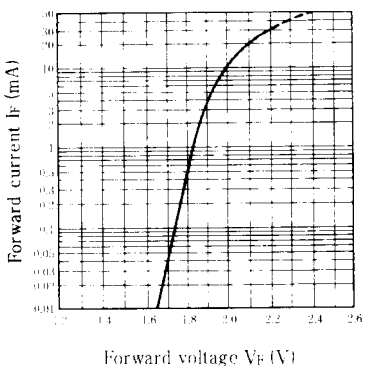
(Ta=25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT9550E	I_F=20mA		2.1	2.8	V
※3 Luminous intensity	I_V	LT9550E	I_F=20mA	150	300	–	mcd
Peak emission wavelength	λ_p	LT9550E	I_F=20mA		565	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT9550E	I_F=20mA		30	–	nm
Reverse current	I_R	LT9550E	V_R=4V			10	μA
Terminal capacitance	C_t	LT9550E	V=0V f=1 MHz	–	35	–	pF
Response frequency	f_c	LT9550E	–	–	4	–	MHz

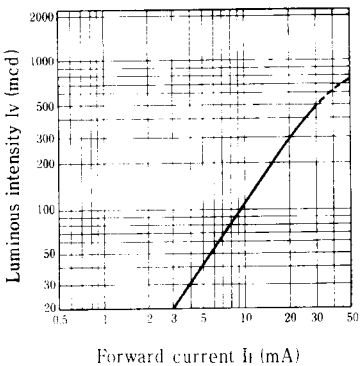
※3 Tolerance: ±30%

■ Characteristics Diagrams

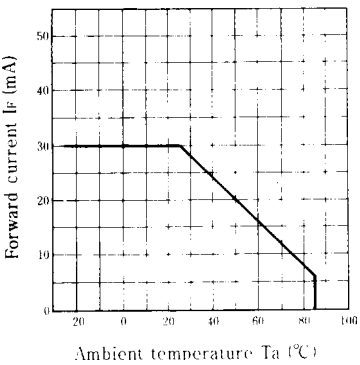
Forward Current vs. Forward Voltage (Ta=25℃)



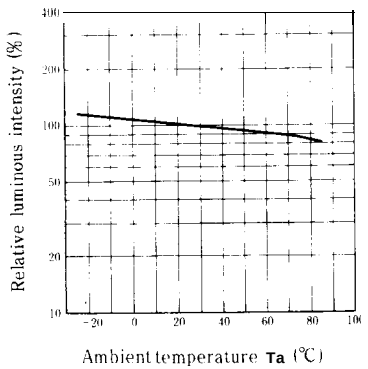
Luminous Intensity vs. Forward Current (Ta=25℃)



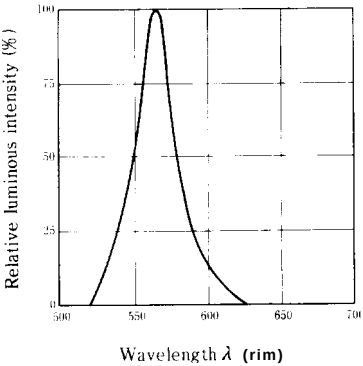
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (I_F=20mA)



Spectrum Distribution (Ta 25℃)



Radiation Diagram (Ta=25℃)