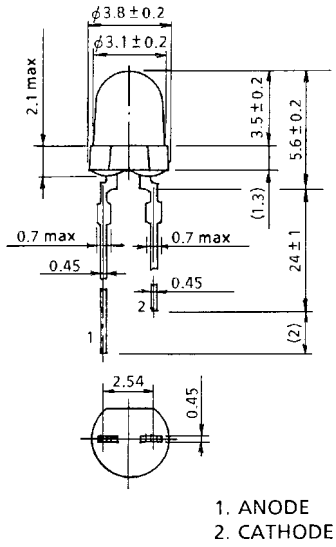
TOSHIBA InGaAℓP LED

TLRE53T,TLRME53T,TLSE53T,TLOE53T,TLYE53T, TLPYE53T,TLGE53T,TLFGE53T,TLPGE53T

Panel Circuit Indicators

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	4-4E1A

Weight: 0.14 g

- φ3 mm package
- InGaAℓP technology
- All plastic mold
- Transparent lens
- Line-up: 6 colors (red, orange, yellow, pure yellow, green and pure green)
- High intensity light emission
- Excellent low current light output
- Applications: message boards, security devices and dashboard displays

Line-up

Product Name	Color	Material
TLRE53T	Red	InGaAλP
TLRME53T	Red	
TLSE53T	Red	
TLOE53T	Orange	
TLYE53T	Yellow	
TLPYE53T	Pure Yellow	
TLGE53T	Green	
TLFGE53T	Green	
TLPGE53T	Pure Green	

Maximum Ratings (Ta = 25°C)

Product Name	Forward Current I_F (mA)	Reverse Voltage V_R (V)	Power Dissipation P_D (mW)	Operating Temperature T_{opr} (°C)	Storage Temperature T_{stg} (°C)
TLRE53T	50	4	120	−40~100	−40~120
TLRME53T	50	4	120		
TLSE53T	50	4	120		
TLOE53T	50	4	120		
TLYE53T	50	4	120		
TLPYE53T	50	4	120		
TLGE53T	50	4	120		
TLFGE53T	50	4	120		
TLPGE53T	50	4	120		

Electrical and Optical Characteristics (Ta = 25°C)

Product Name	Typ. Emission Wavelength				Luminous Intensity I_V			Forward Voltage V_F			Reverse Current I_R	
	λ_d	λ_P	$\Delta\lambda$	I_F	Min	Typ.	I_F	Typ.	Max	I_F	Max	V_R
TLRE53T	630	(644)	20	20	153	400	20	1.9	2.4	20	50	4
TLRME53T	626	(636)	23	20	272	600	20	1.9	2.4	20	50	4
TLSE53T	613	(623)	20	20	272	800	20	1.9	2.4	20	50	4
TLOE53T	605	(612)	20	20	272	1000	20	2.0	2.4	20	50	4
TLYE53T	587	(590)	17	20	272	800	20	2.0	2.4	20	50	4
TLPYE53T	580	(583)	14	20	153	450	20	2.0	2.4	20	50	4
TLGE53T	571	(574)	17	20	153	400	20	2.0	2.4	20	50	4
TLFGE53T	565	(568)	15	20	85	200	20	2.0	2.4	20	50	4
TLPGE53T	558	(562)	14	20	47.6	130	20	2.1	2.4	20	50	4
Unit	nm			mA	mcd		mA	V		mA	μA	V

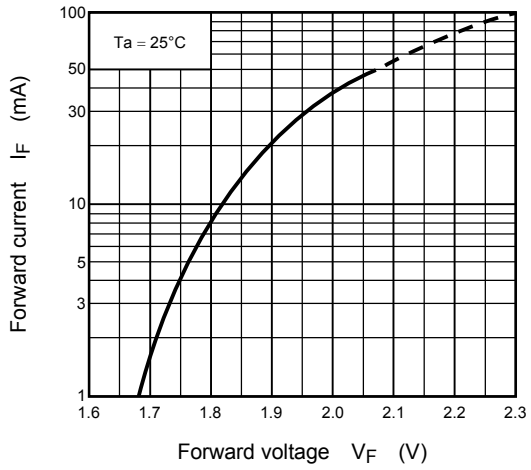
Precautions

Please be careful of the following:

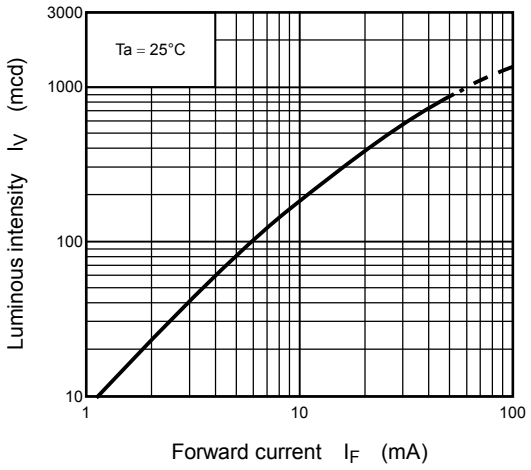
- Soldering temperature: 260°C max, soldering time: 3 s max
  (soldering portion of lead: up to 2 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light.
  If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.

TLRE53T

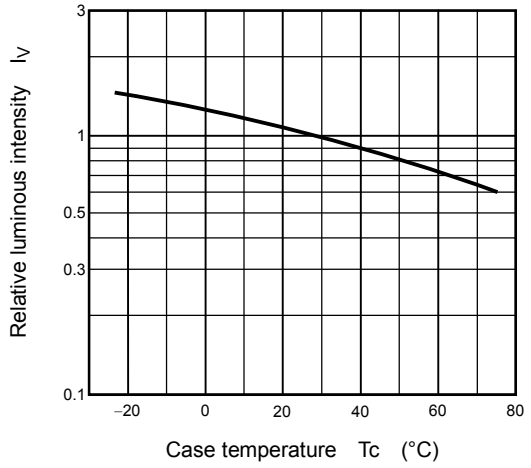
$I_F - V_F$



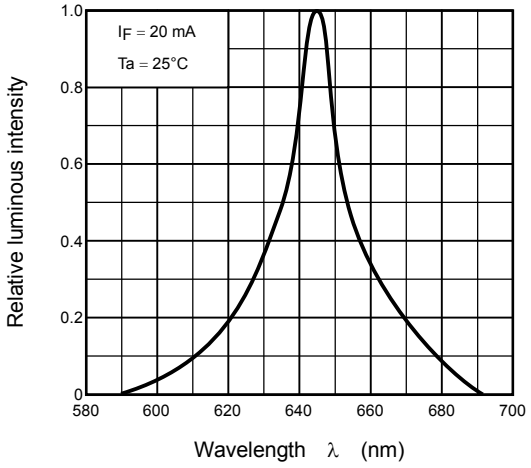
$I_V - I_F$



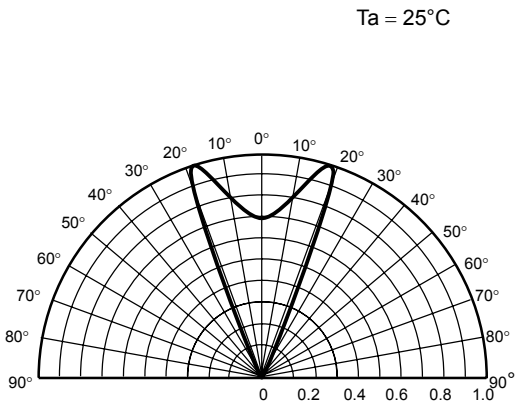
$I_V - Tc$



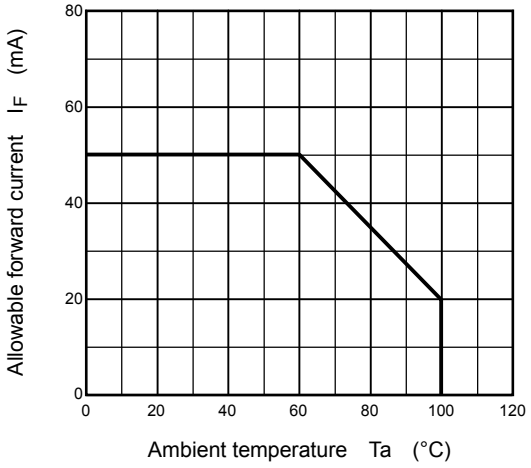
Relative luminous intensity – Wavelength



Radiation pattern

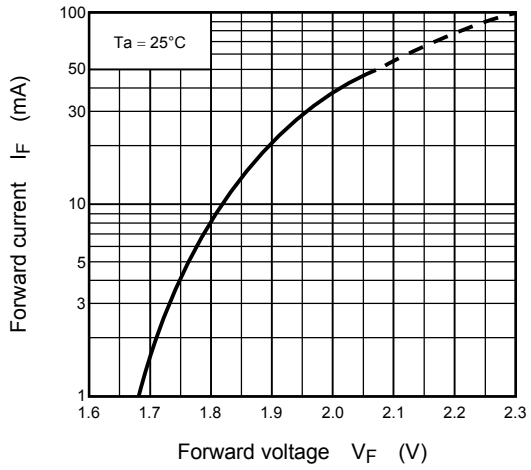


$I_F - Ta$

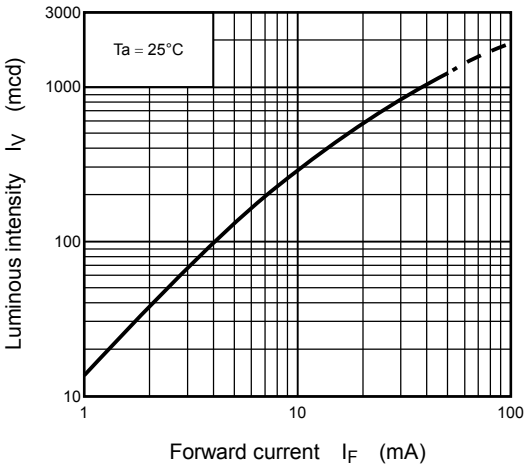


TLRME53T

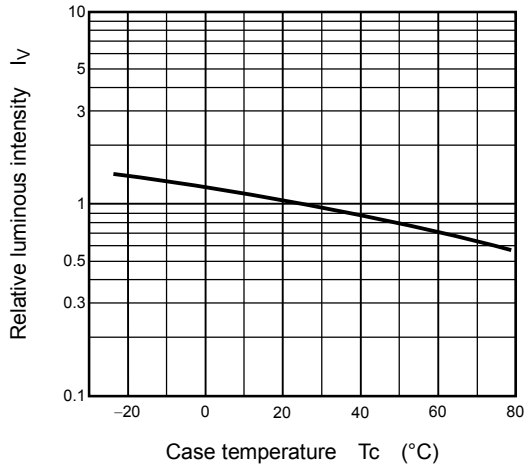
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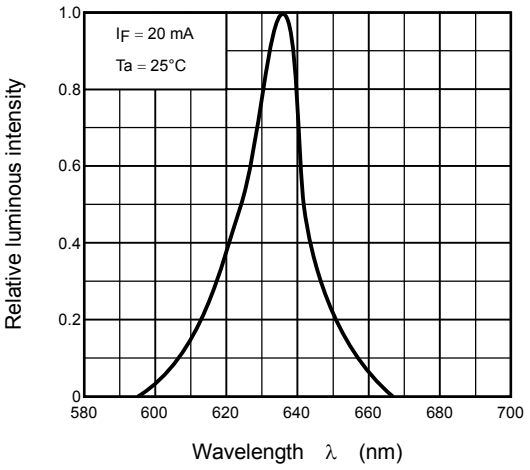
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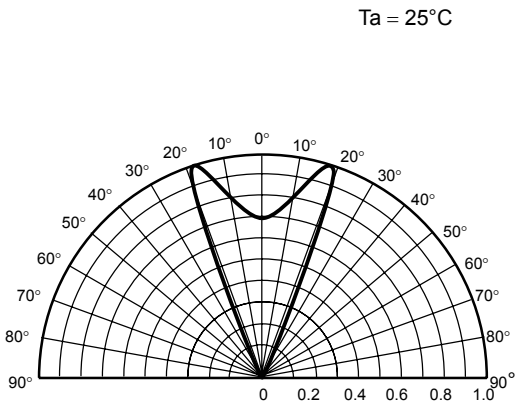
$I_V - Tc$



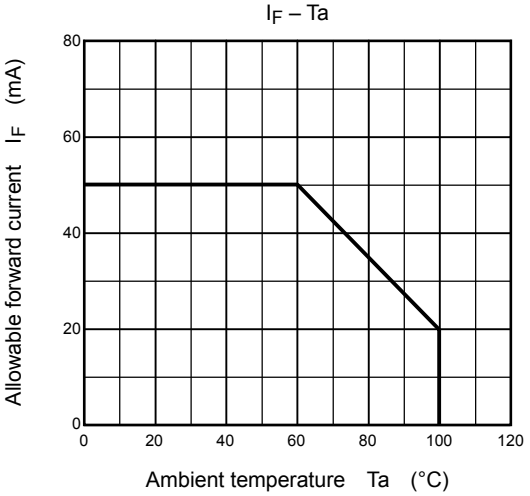
Relative luminous intensity – Wavelength



Radiation pattern

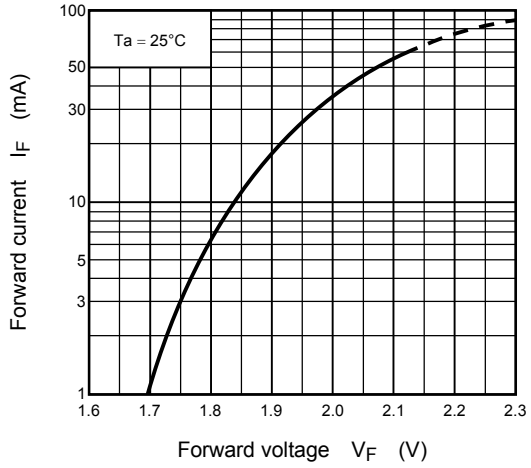


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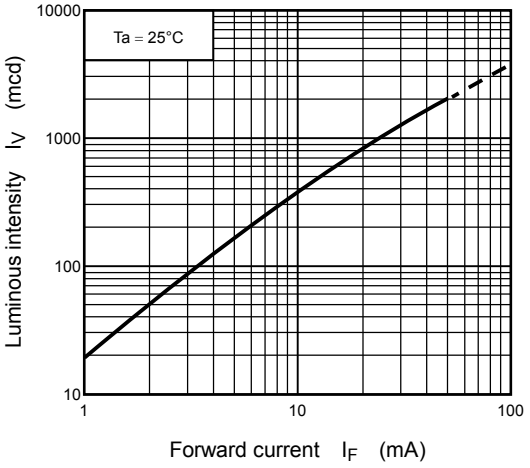


TLSE53T

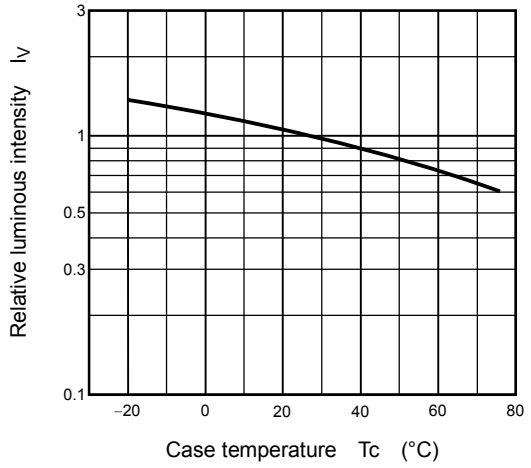
$I_F - V_F$



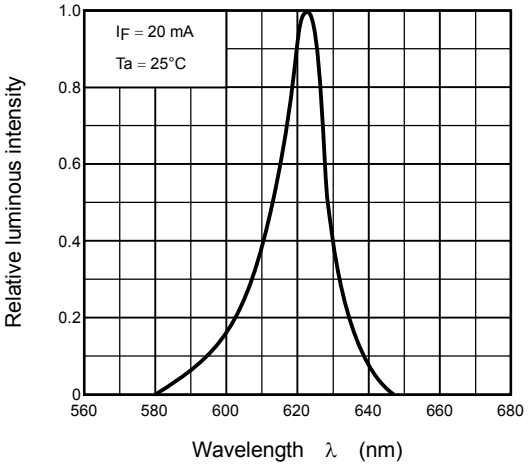
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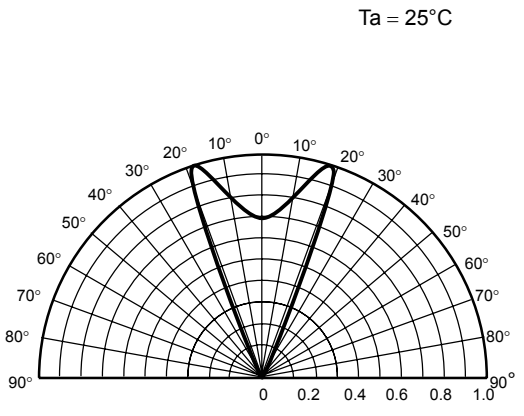
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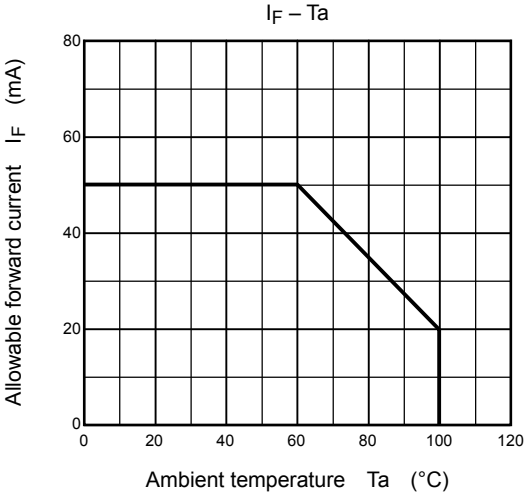
Relative luminous intensity – Wavelength



Radiation pattern

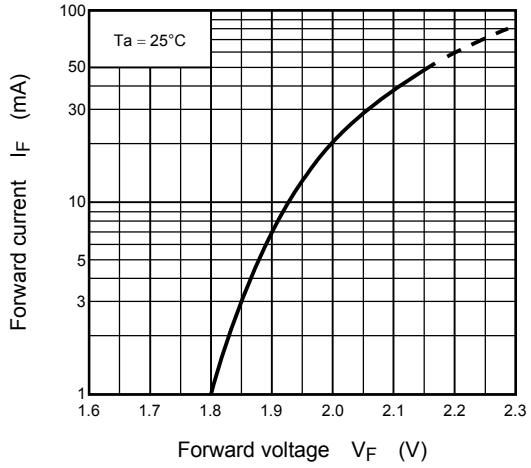


$I_F - Ta$

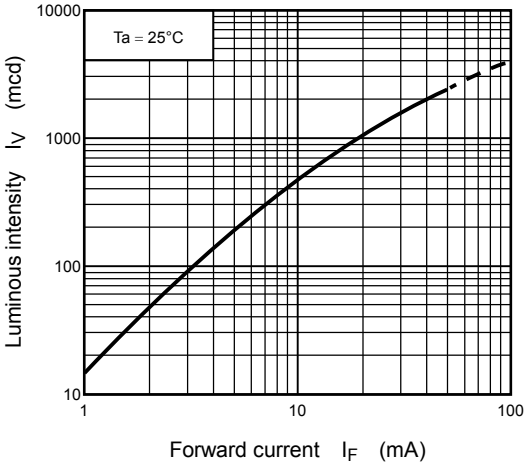


TLOE53T

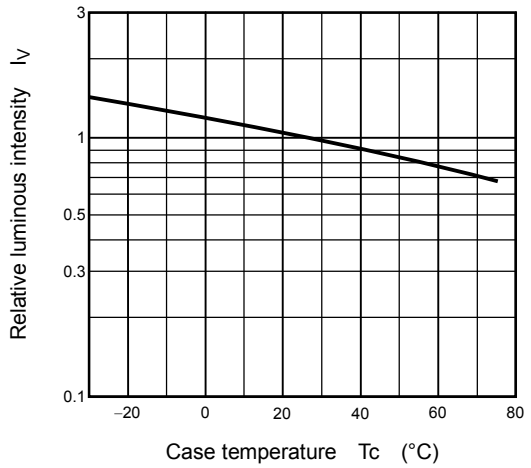
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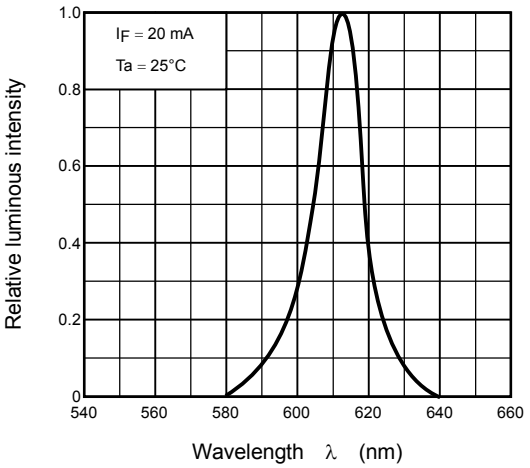
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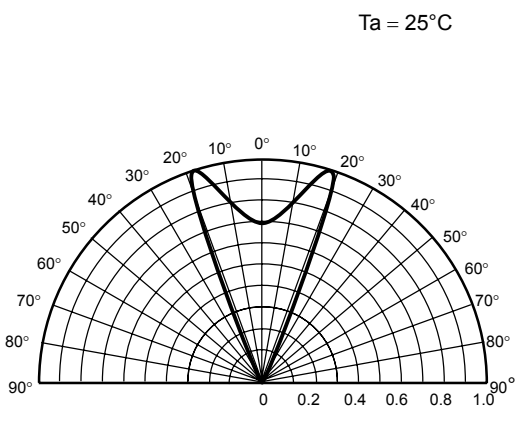
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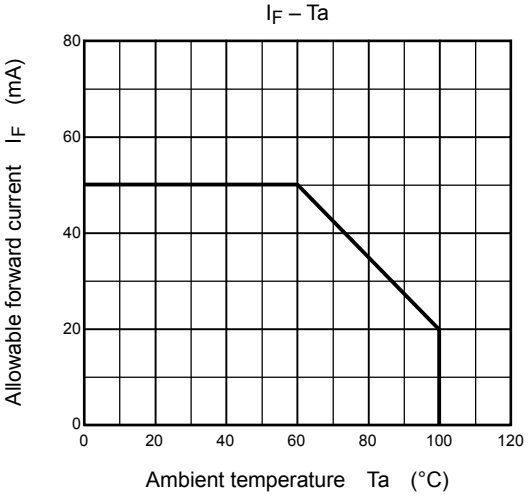
Relative luminous intensity – Wavelength



Radiation pattern

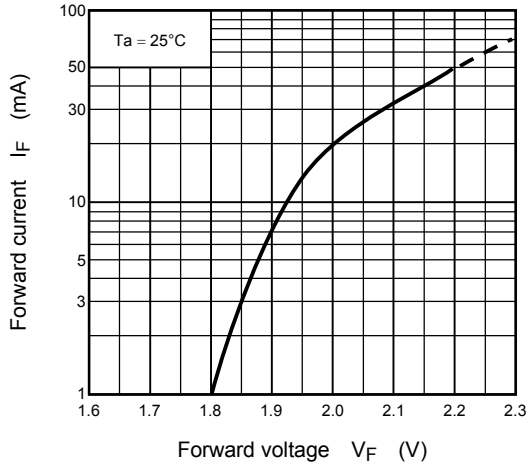


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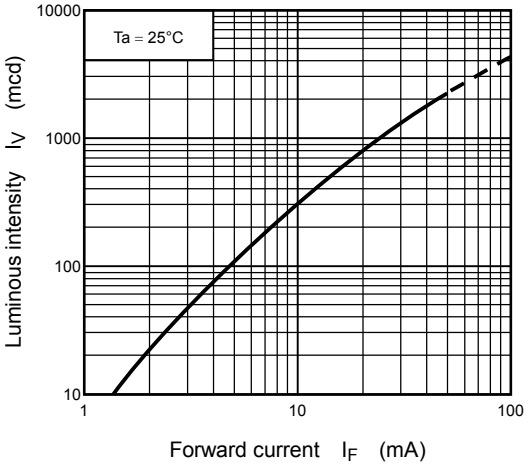


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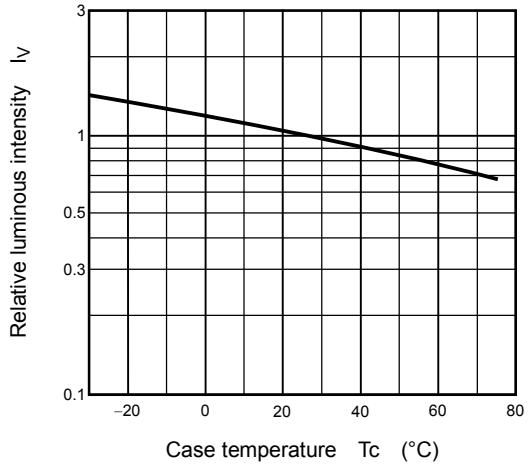
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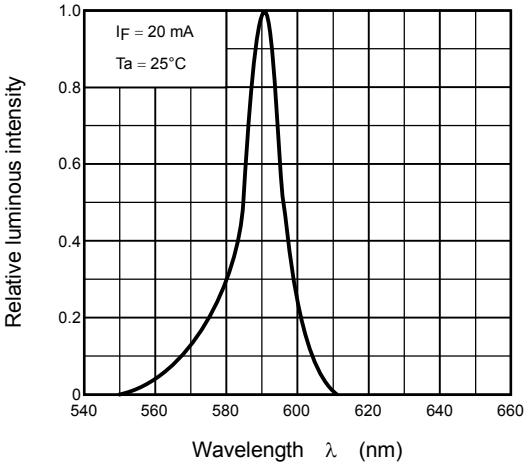
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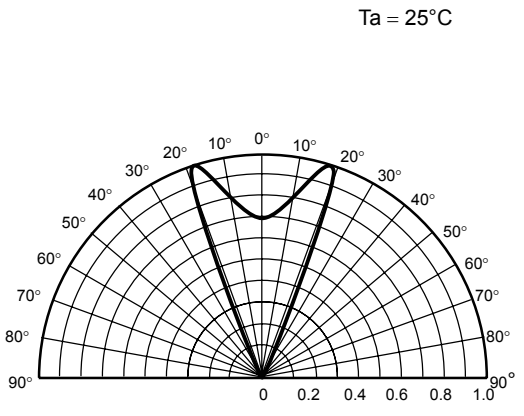
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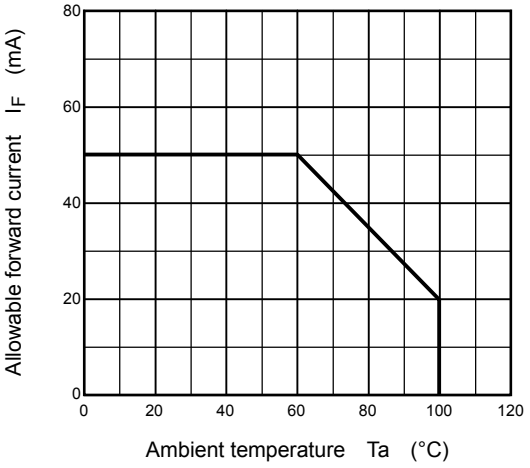
Relative luminous intensity – Wavelength



Radiation pattern

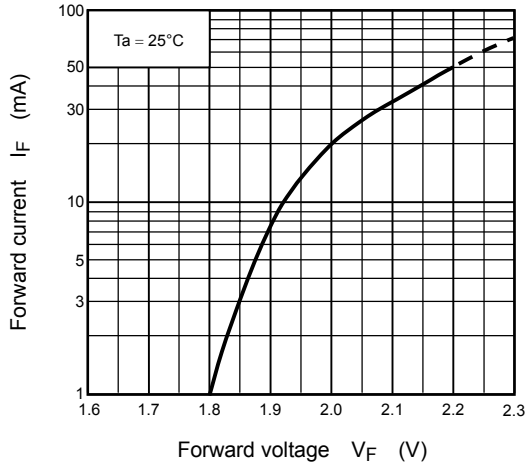


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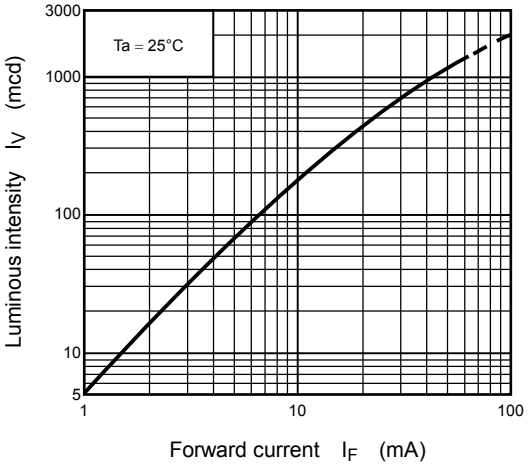


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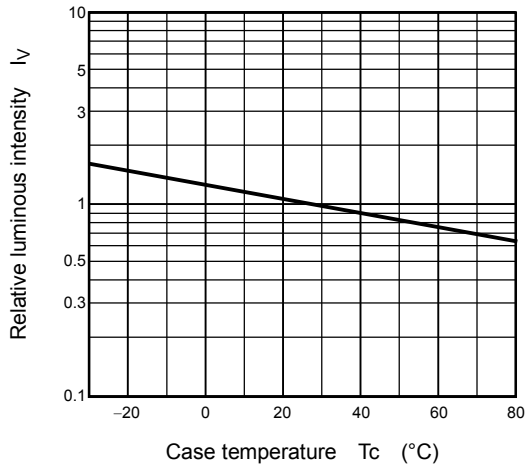
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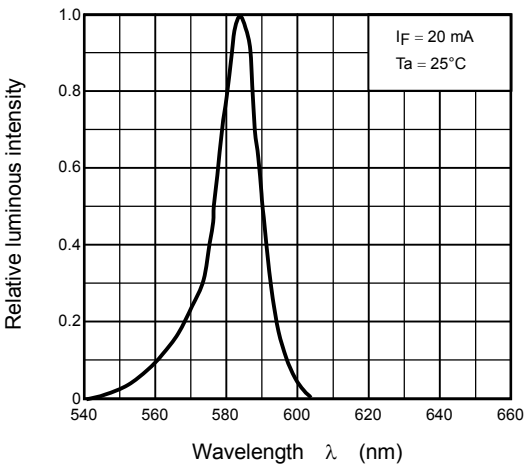
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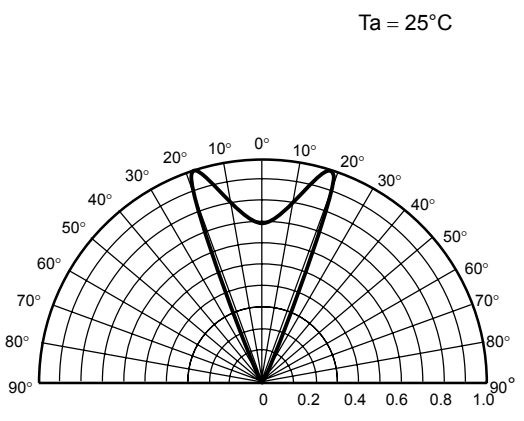
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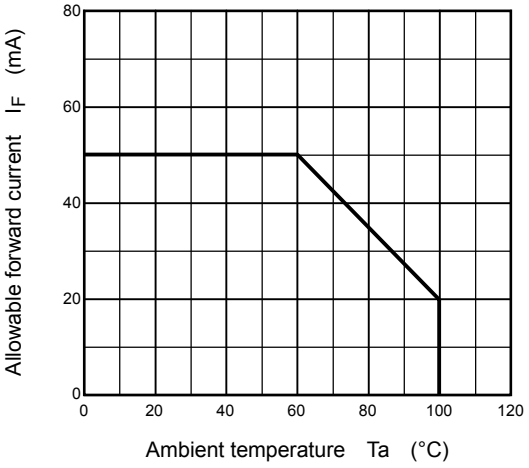
Relative luminous intensity – Wavelength



Radiation pattern

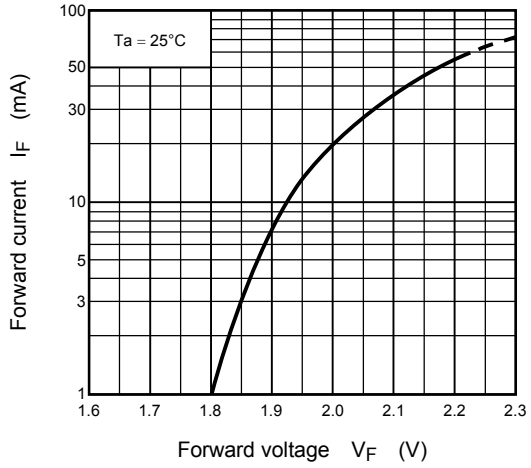


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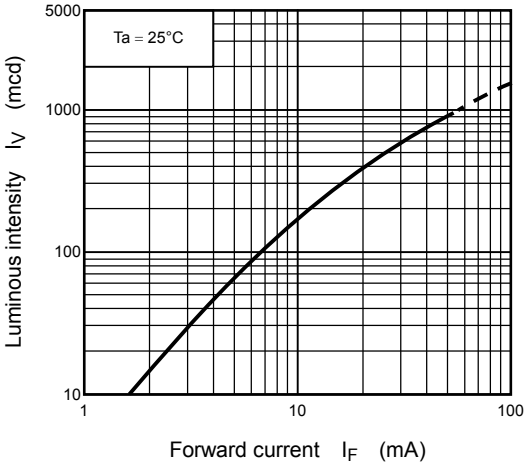


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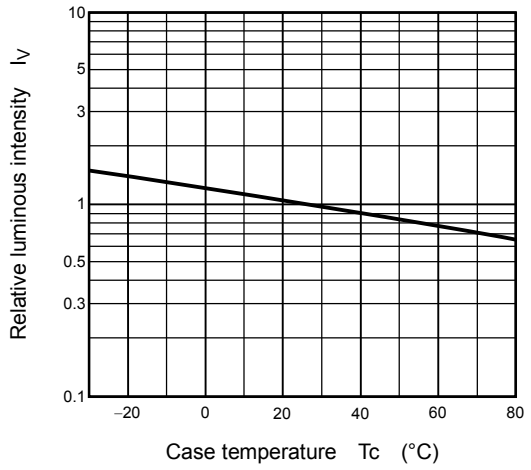
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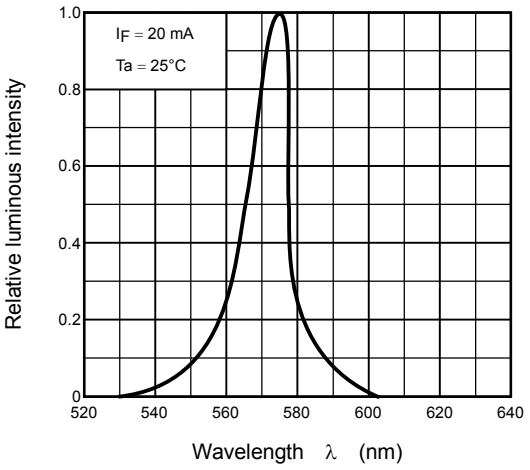
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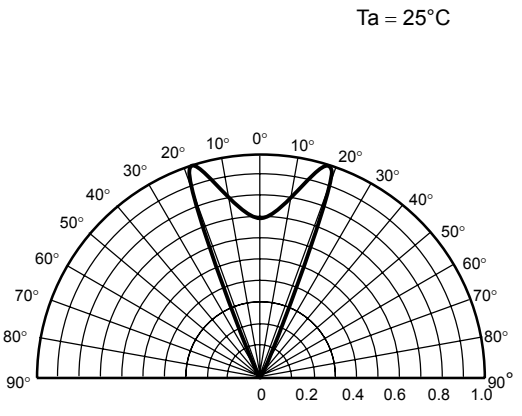
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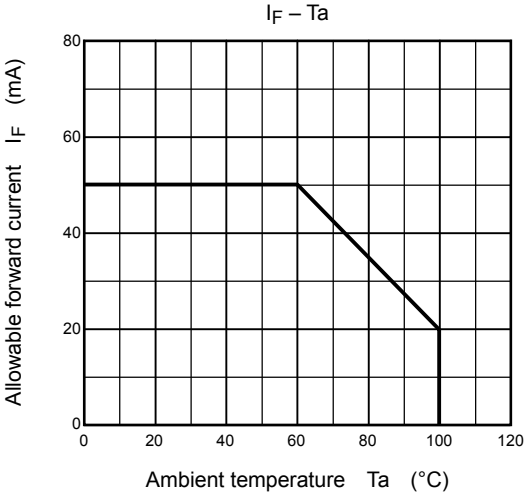
Relative luminous intensity – Wavelength



Radiation pattern

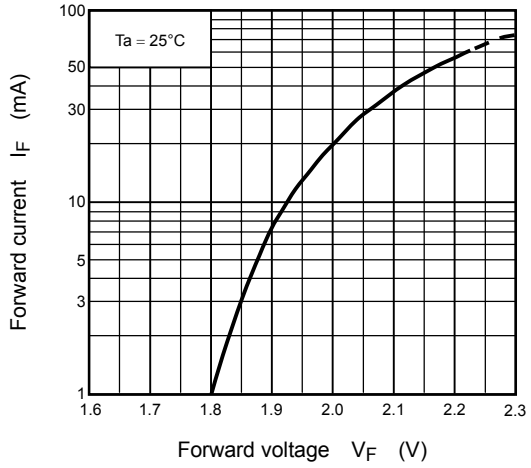


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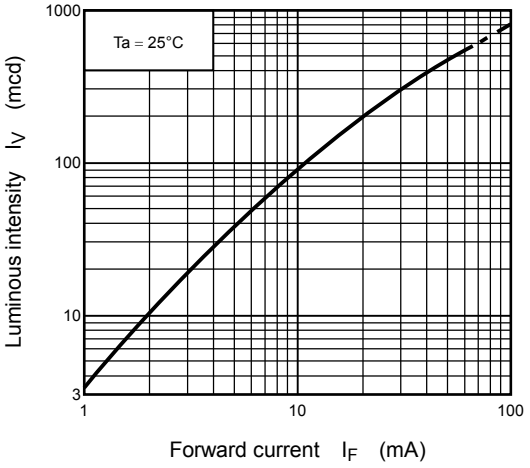


TLFGE53T

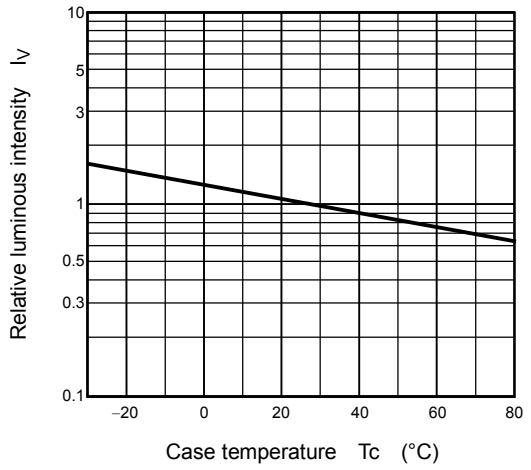
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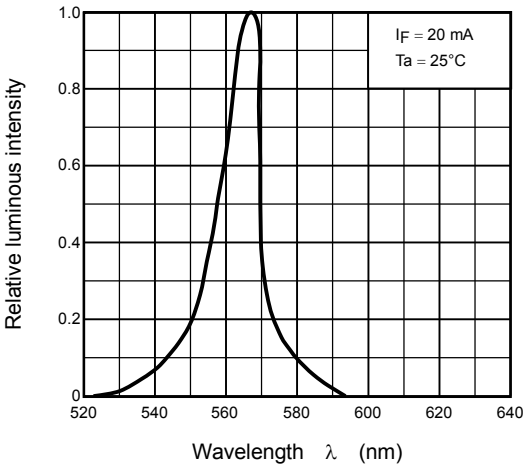
$I_V - I_F$



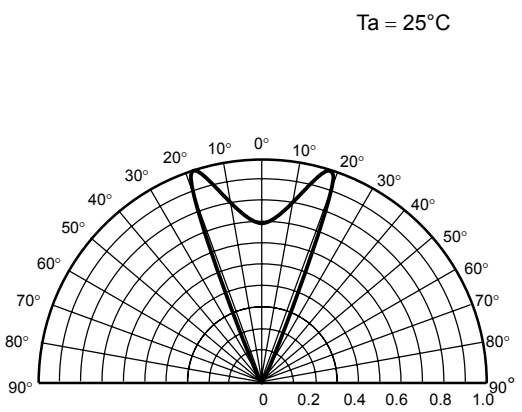
$I_V - Tc$



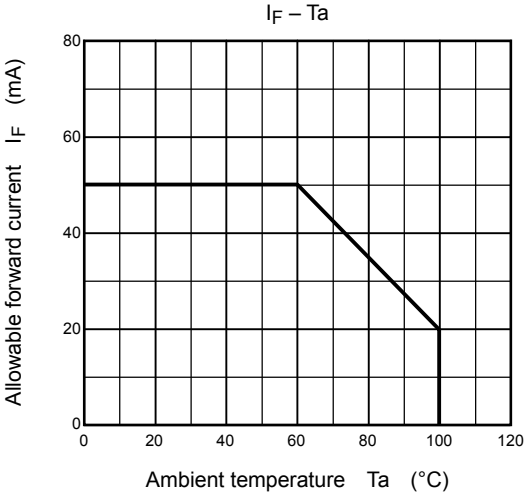
Relative luminous intensity – Wavelength



Radiation pattern

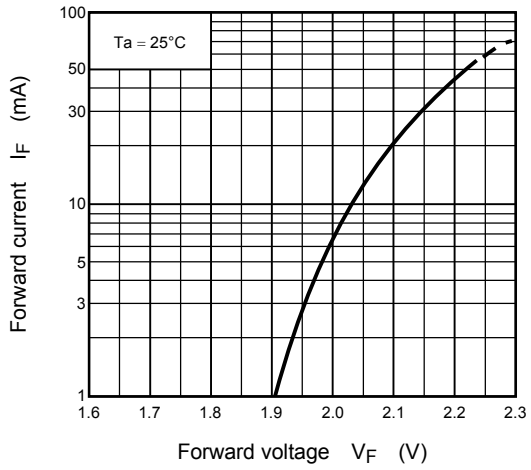


$I_F - Ta$

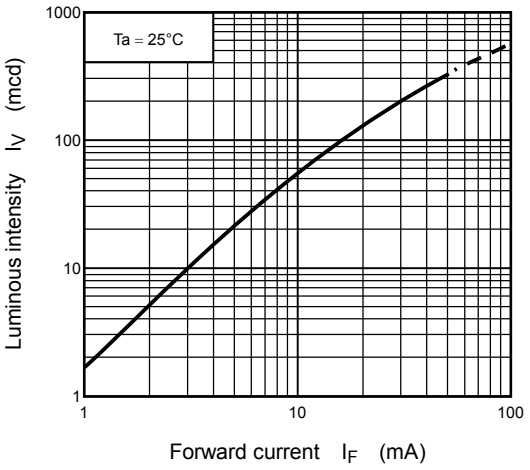


TLPGE53T

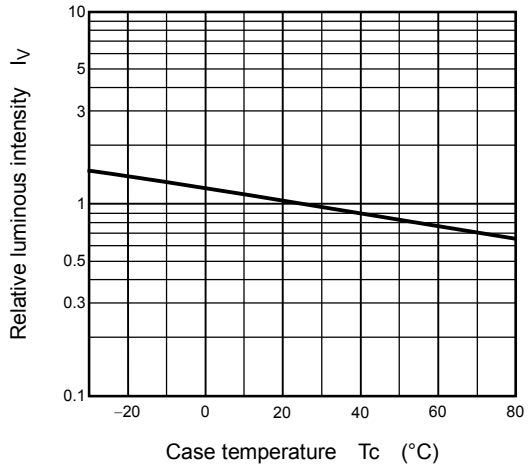
$I_F - V_F$



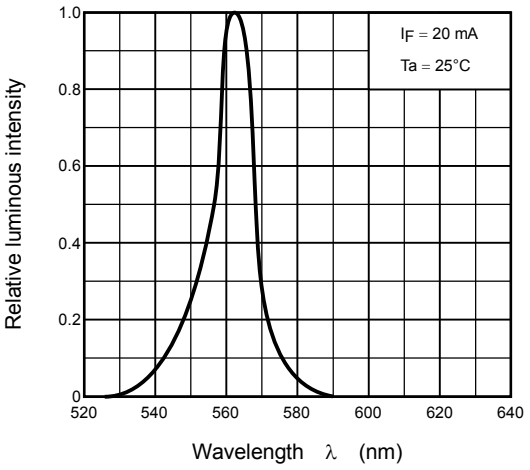
$I_V - I_F$



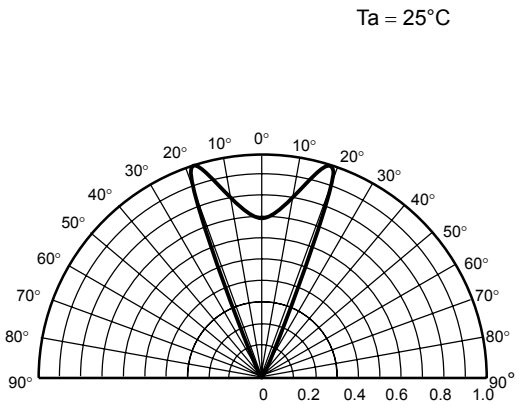
$I_V - Tc$



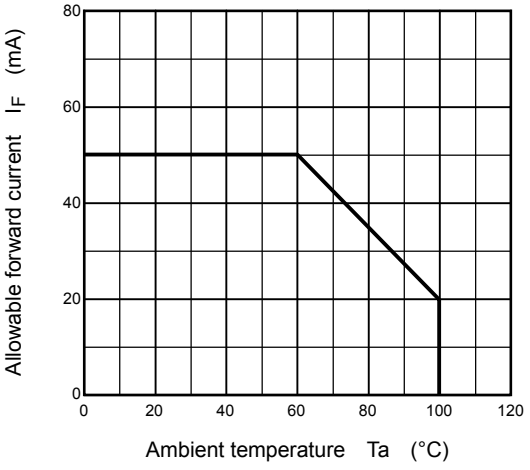
Relative luminous intensity – Wavelength



Radiation pattern



$I_F - Ta$



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