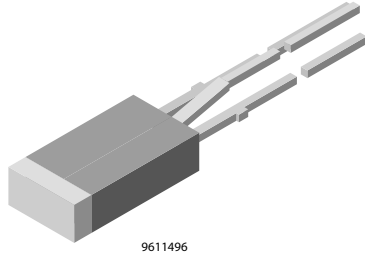


# Bicolor Symbol LED in 2.5 x 5 mm Untinted Top-Diffused Package



9611496

## PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: symbol
- Product series: bicolor
- Angle of half intensity:  $\pm 50^\circ$

## FEATURES

- Even luminance of the emitting surface
- Ideal as flush mounted panel indicators
- For DC and pulse operation
- Color mixing possible due to separate anode terminals
- Luminous intensity selected into groups
- Categorized for green color
- Wide viewing angle
- Common cathode
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



## APPLICATIONS

- Indicating and illumination purposes

## PARTS TABLE

PART	COLOR, LUMINOUS INTENSITY	TECHNOLOGY
TLSV5100	Green/red, $I_V > 0.63$ mcd	GaP on GaP

## ABSOLUTE MAXIMUM RATINGS<sup>1)</sup> TLSV5100

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage per diode		$V_R$	6	V
DC Forward current per diode		$I_F$	30	mA
Surge forward current per diode	$t_p \leq 10 \mu\text{s}$	$I_{FSM}$	1	A
Power dissipation per diode	$T_{amb} \leq 55^\circ\text{C}$	$P_V$	100	mW
Total power dissipation	$T_{amb} \leq 55^\circ\text{C}$	$P_{tot}$	150	mW
Junction temperature		$T_j$	100	$^\circ\text{C}$
Operating temperature range		$T_{amb}$	- 40 to + 100	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 100	$^\circ\text{C}$
Soldering temperature	$t \leq 5$ s, 2 mm from body	$T_{sd}$	260	$^\circ\text{C}$
Thermal resistance junction/ambient per diode		$R_{thJA}$	450	K/W
Thermal resistance junction/ambient total		$R_{thJA}$	300	K/W

Note:

<sup>1)</sup>  $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

<b>OPTICAL AND ELECTRICAL CHARACTERISTICS<sup>1)</sup> TL5V5100R, RED</b>						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Per diode						
Luminous intensity <sup>2)</sup>	$I_F = 10 \text{ mA}$	$I_V$	0.63	1		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	$\lambda_d$	612		625	nm
Peak wavelength	$I_F = 10 \text{ mA}$	$\lambda_p$		635		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	$\phi$		$\pm 50$		deg
Forward voltage	$I_F = 20 \text{ mA}$	$V_F$		2	3	V
Reverse voltage	$I_R = 10 \mu\text{A}$	$V_R$	6	15		V
Junction capacitance	$V_R = 0, f = 1 \text{ MHz}$	$C_j$		50		pF

Note:

1)  $T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

2) in one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$

<b>OPTICAL AND ELECTRICAL CHARACTERISTICS<sup>1)</sup> TL5V5100G, GREEN</b>						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Per diode						
Luminous intensity <sup>2)</sup>	$I_F = 10 \text{ mA}$	$I_V$	0.63	1		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	$\lambda_d$	562		575	nm
Peak wavelength	$I_F = 10 \text{ mA}$	$\lambda_p$		565		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	$\phi$		$\pm 50$		deg
Forward voltage	$I_F = 20 \text{ mA}$	$V_F$		2.4	3	V
Reverse voltage	$I_R = 10 \mu\text{A}$	$V_R$	6	15		V
Junction capacitance	$V_R = 0, f = 1 \text{ MHz}$	$C_j$		50		pF

Note:

1)  $T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

2) in one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$

## TYPICAL CHARACTERISTICS

$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

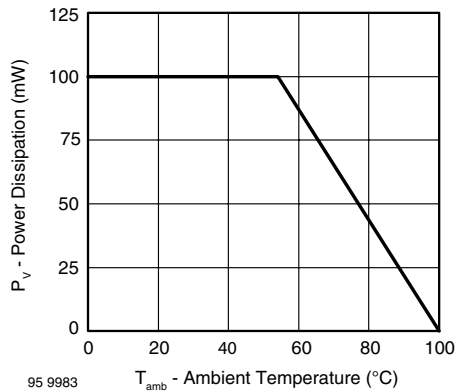


Figure 1. Power Dissipation vs. Ambient Temperature

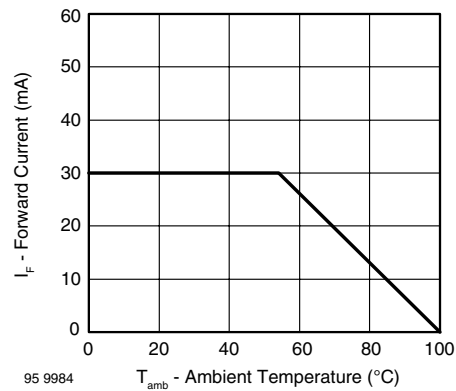
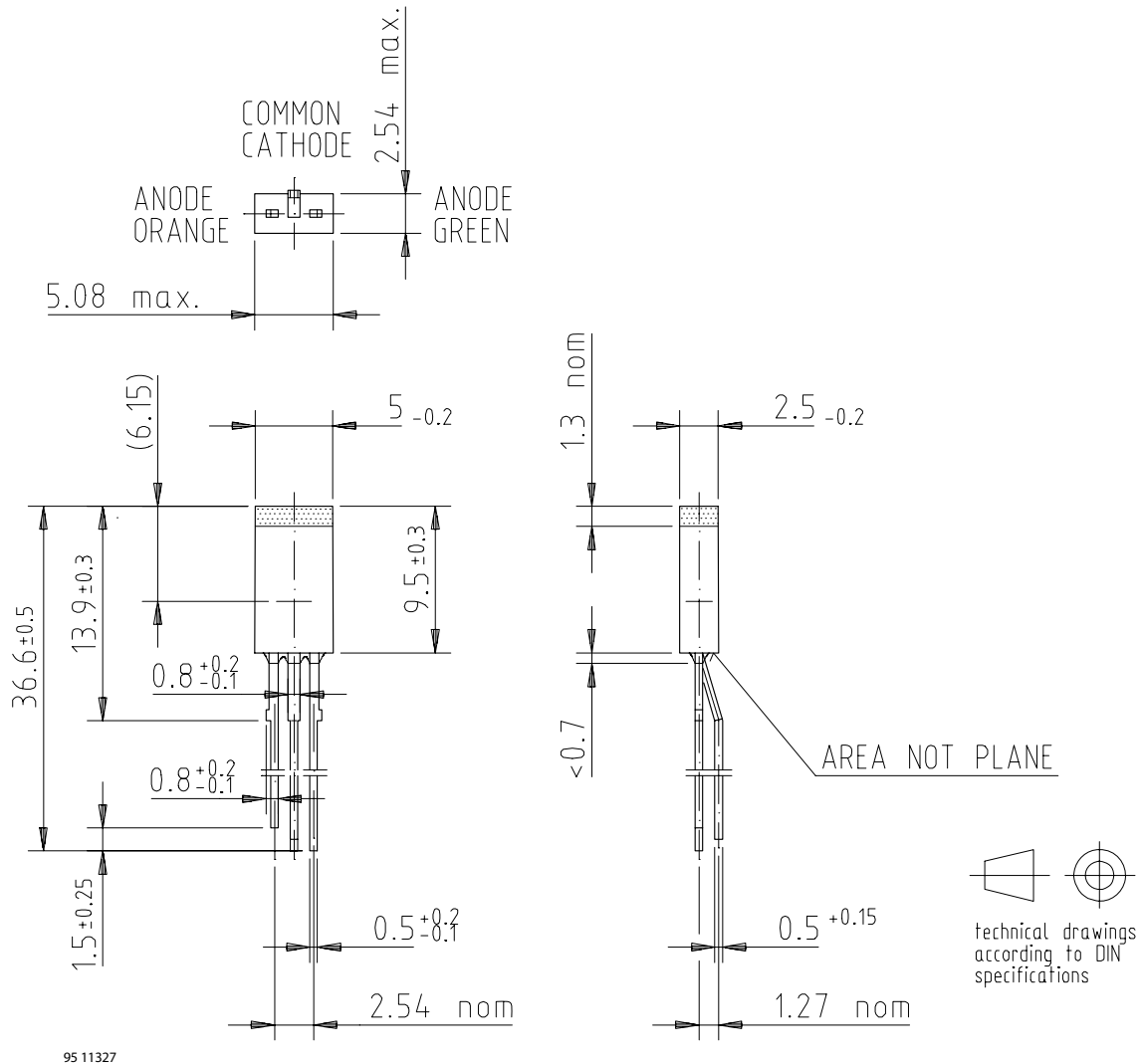


Figure 2. Forward Current vs. Ambient Temperature for InGaN

**PACKAGE DIMENSIONS** in millimeters



technical drawings according to DIN specifications