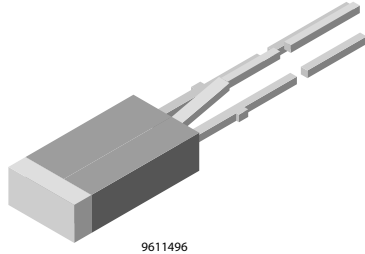


Bicolor Symbol LED in 2.5 x 5 mm Untinted Top-Diffused Package



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 RATINGS¹⁾ 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:

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

OPTICAL AND ELECTRICAL CHARACTERISTICS ¹⁾ TLSV5100R, RED						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Per diode						
Luminous intensity ²⁾	$I_F = 10 \text{ mA}$	I_V	0.63	1		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	λ_d	612		625	nm
Peak wavelength	$I_F = 10 \text{ mA}$	λ_p		635		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	ϕ		± 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 $I_{Vmin}/I_{Vmax} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS ¹⁾ TLSV5100G, GREEN						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Per diode						
Luminous intensity ²⁾	$I_F = 10 \text{ mA}$	I_V	0.63	1		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	λ_d	562		575	nm
Peak wavelength	$I_F = 10 \text{ mA}$	λ_p		565		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	ϕ		± 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

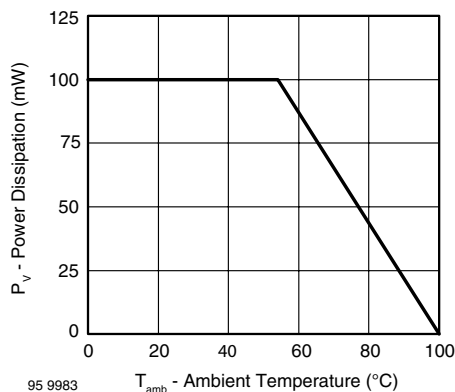


Figure 1. Power Dissipation vs. Ambient Temperature

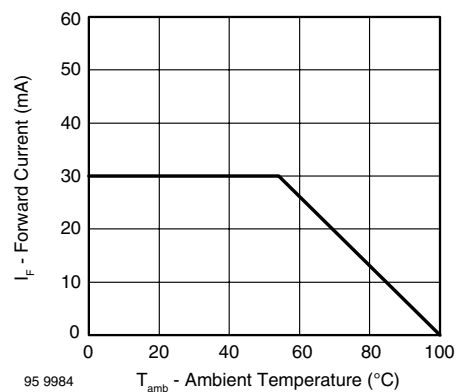
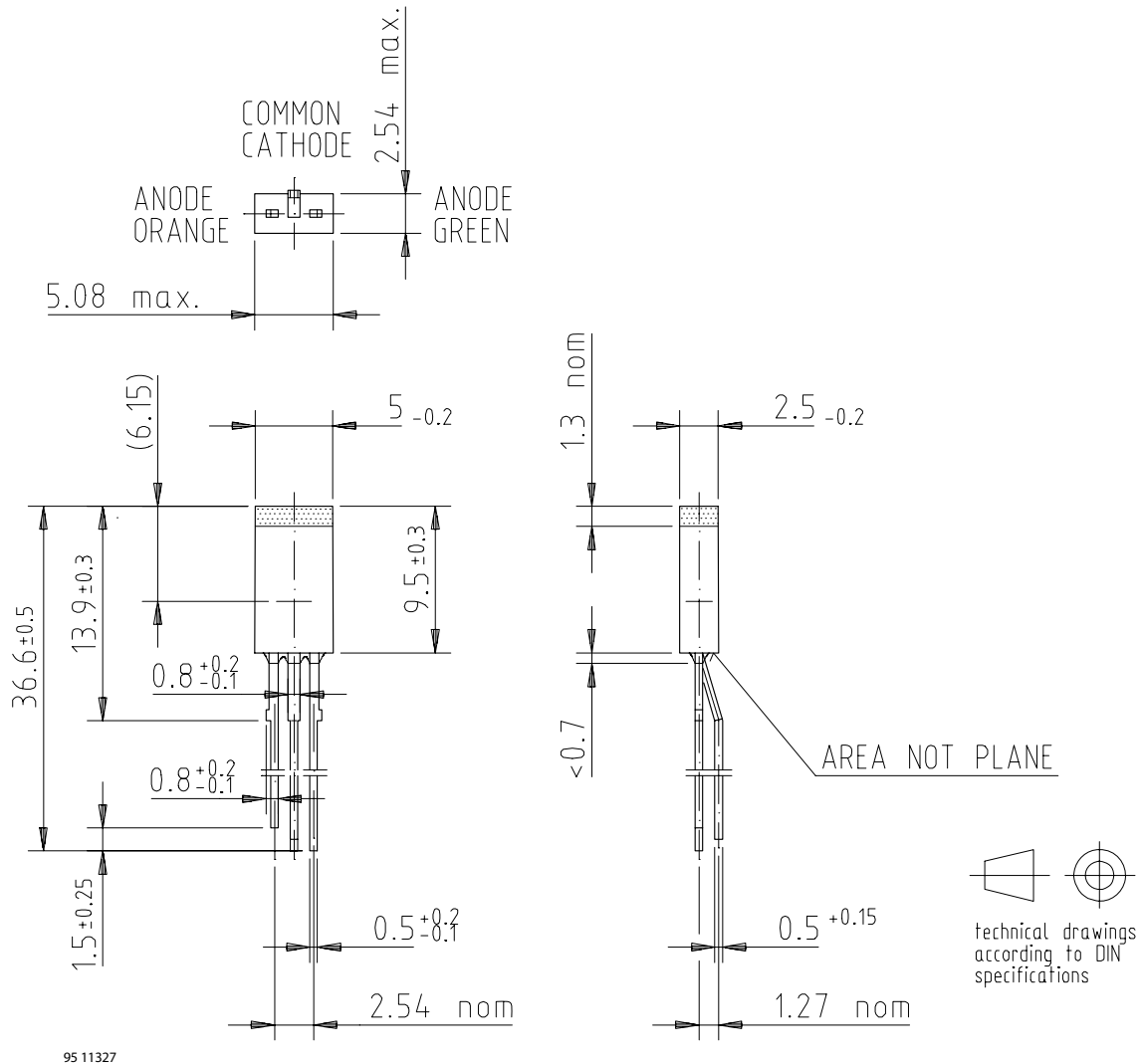


Figure 2. Forward Current vs. Ambient Temperature for InGaN

PACKAGE DIMENSIONS in millimeters



technical drawings according to DIN specifications