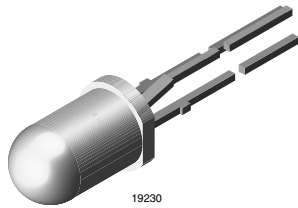


## Bicolor LED in $\varnothing$ 5 mm Untinted Diffused Package



### PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm
- Product series: bicolor
- Angle of half intensity:  $\pm 30^\circ$

### 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 device



### APPLICATIONS

- Indicating and illumination purposes

### PARTS TABLE

PART	COLOR, LUMINOUS INTENSITY	TECHNOLOGY
TLUV5300	Green/red, $I_V > 1$ mcd	GaAsP on GaP

### ABSOLUTE MAXIMUM RATINGS<sup>1)</sup> TLUV5300

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	$t_p \leq 10 \mu s$	$I_{FSM}$	1	A
Power dissipation per diode	$T_{amb} \leq 55^\circ C$	$P_V$	100	mW
Total power dissipation	$T_{amb} \leq 55^\circ C$	$P_{tot}$	150	mW
Junction temperature		$T_j$	100	$^\circ C$
Operating temperature range		$T_{amb}$	- 40 to + 100	$^\circ C$
Storage temperature range		$T_{stg}$	- 55 to + 100	$^\circ C$
Soldering temperature	$t \leq 5$ s, 2 mm from body	$T_{sd}$	260	$^\circ C$
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>  $T_{amb} = 25^\circ C$ , unless otherwise specified

OPTICAL AND ELECTRICAL CHARACTERISTICS <sup>1)</sup> TLUV5300, RED						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Per diode						
Luminous intensity <sup>2)</sup>	$I_F = 10 \text{ mA}$	$I_V$	1	2.5		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	$\lambda_d$	612		625	nm
Peak wavelength	$I_F = 10 \text{ mA}$	$\lambda_p$		630		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	$\varphi$		$\pm 30$		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 <sup>1)</sup> TLUV5300, GREEN						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Per diode						
Luminous intensity <sup>2)</sup>	$I_F = 10 \text{ mA}$	$I_V$	1	2.5		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	$\lambda_d$	552		575	nm
Peak wavelength	$I_F = 10 \text{ mA}$	$\lambda_p$		565		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	$\varphi$		$\pm 30$		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

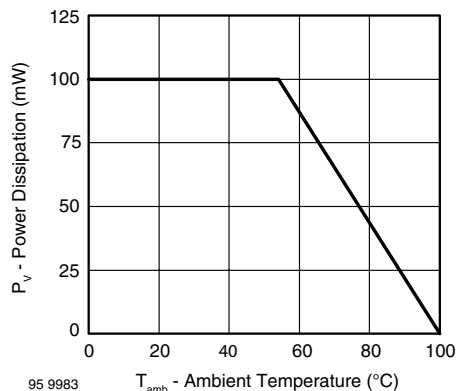


Figure 1. Power Dissipation vs. Ambient Temperature

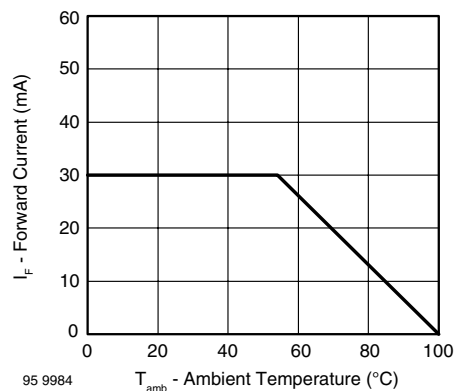
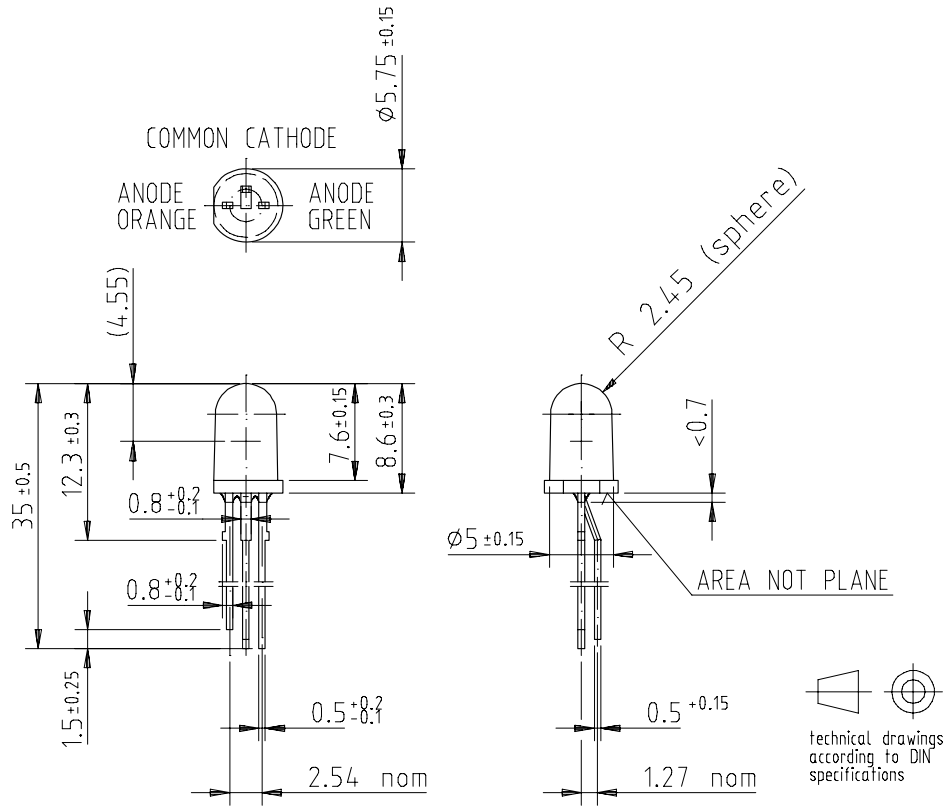


Figure 2. Forward Current vs. Ambient Temperature for InGaN

**PACKAGE DIMENSIONS** in millimeters



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