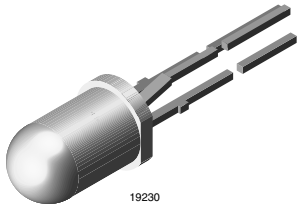
Bicolor LED in ∅ 5 mm Untinted Diffused Package



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

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm
- Product series: bicolor
- Angle of half intensity: ± 30°

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

OPTICAL AND ELECTRICAL CHARACTERISTICS[1] TLUV5300, RED						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN**	**TYP.**	**MAX**	**UNIT**
Per diode						
Luminous intensity [2]	I_F = 10 mA	I_V	1	2.5		mcd
Dominant wavelength	I_F = 10 mA	λ_d	612		625	nm
Peak wavelength	I_F = 10 mA	λ_p		630		nm
Angle of half intensity	I_F = 10 mA	φ		± 30		deg
Forward voltage	I_F = 20 mA	V_F		2	3	V
Reverse voltage	I_R = 10 μA	V_R	6	15		V
Junction capacitance	V_R = 0, f = 1 MHz	C_j		50		pF

Note:
[1] T_{amb} = 25 °C, unless otherwise specified
[2] in one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS[1] TLUV5300, GREEN						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN**	**TYP.**	**MAX**	**UNIT**
Per diode						
Luminous intensity [2]	I_F = 10 mA	I_V	1	2.5		mcd
Dominant wavelength	I_F = 10 mA	λ_d	552		575	nm
Peak wavelength	I_F = 10 mA	λ_p		565		nm
Angle of half intensity	I_F = 10 mA	φ		±30		deg
Forward voltage	I_F = 20 mA	V_F		2.4	3	V
Reverse voltage	I_R = 10 μA	V_R	6	15		V
Junction capacitance	V_R = 0, f = 1 MHz	C_j		50		pF

Note:
[1] T_{amb} = 25 °C, unless otherwise specified
[2] in one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$

TYPICAL CHARACTERISTICS

T_{amb} = 25 °C, unless otherwise specified

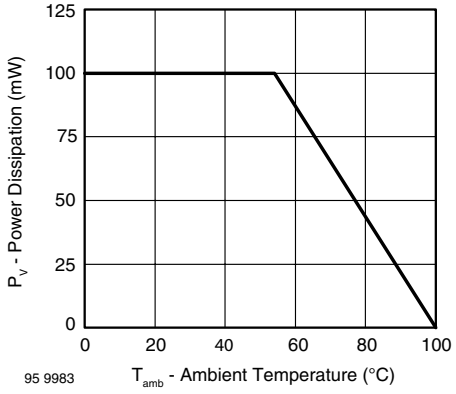


Figure 1. Power Dissipation vs. Ambient Temperature

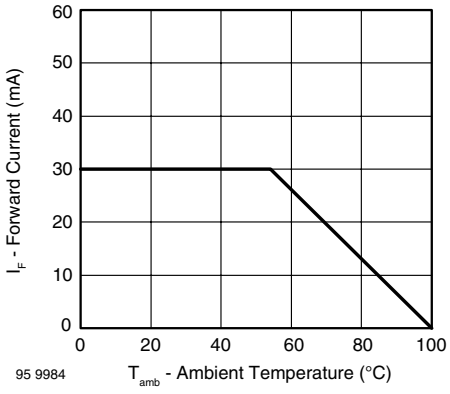


Figure 2. Forward Current vs. Ambient Temperature for InGaN

PACKAGE DIMENSIONS in millimeters