UNIROYAL Optoelectronics

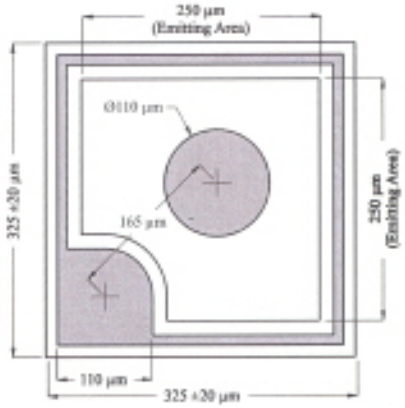
POWERGa(i)N Technology

UNPRX505-XXX

HIGH PERFORMANCE **CYAN** LED DIE

Maximum Ratings @ T_A = 25 C (Based upon T 1 ¾ Package)

DC Forward Current	30mA
Peak Forward Current (<10ms,1/10 Duty cycle)	100Ma
Led Junction Temp	100° C
Forward Voltage	4.0 V DC
Reverse Voltage	-5.0 V DC
Operating Temperature Range	-40° C+ 85° C
Storage Temperature Range	-40° C+100° C
ESD Class (Mil Std 883)	I



Typical Electrical Characteristics @ 25° C, 20 mA DC

Part Code	Optical Power mW	Forward Voltage V_f, V		Reverse Current $I_{r\ @\ 5V,\ uA}$		Peak Wavelength λ_p nm	Typical Dominant Wavelength λ_d nm			Spectral Width (FWHM) $\Delta\lambda$ nm	Series Resistance R_s
	Typ	Typ	Max	Typ	Max	Typ	Min	Avg	Max	Typ	Typ
0D1	1.0	3.6	4.0	4.0	10.0	495	500	505	510	30	30
0E1	1.2	3.6	4.0	4.0	10.0	495	500	505	510	30	30
0G1	1.6	3.6	4.0	4.0	10.0	495	500	505	510	30	30
0I1	2.0	3.6	4.0	4.0	10.0	495	500	505	510	30	30
0K1	2.4	3.6	4.0	4.0	10.0	495	500	505	510	30	30

Mechanical Specifications

Die Size:	325um x 325um ±20um (0.013" X 0.013" ±0.0010")
Die Thickness:	125um +/-20um (0.005 ±0.0005) Bond Pad: 110um diameter
Contact Metal:	(Both P and N contact are Au for consistent and reliable bonds.) Au
Backside Metal:	N/A (Unclad)

Options

- Sample Tested: Whole diced wafer on tape, die not inked out or removed: UNPRA505-XXX.
- 100% Tested: With ASCII file and/or die inked out (not removed), sold as whole diced wafer on tape: UNPRB505-XXX.
- 100% Tested: Die are tested, sorted, binned "Known Binned Die", and sold on tape: UNPRC505-XXX.

Notes:

1. The optical power is determined by probe testing LED with a spectral radiometer. A ± 15% tolerance applies due to measuring variations.
2. The dominant wavelength is determined by probe testing LED with a spectral radiometer. A ± 2nm tolerance applies due to measuring variations.
3. All electro-optical measurements are referenced by measuring bare die mounted on TO-46 headers using an integrating sphere. An index matching encapsulent is not used to enhance these measurements (bare die test only).
4. Maximum ratings are package dependent. Ratings were determined using a T-1 ¾ style package for the electrical drive characterization data cited. Ratings for other package types will differ. The forward current is not limited by the die but by the effect of the package on the device junction temperature.
5. All die products conform to the listed specifications when packaged and operated within the maximum limits shown above. Typical values are provided for information only but are within the range of expected values of acceptable sample sizes.
6. A shipping tolerance of ± 10% applies to all deliveries.

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