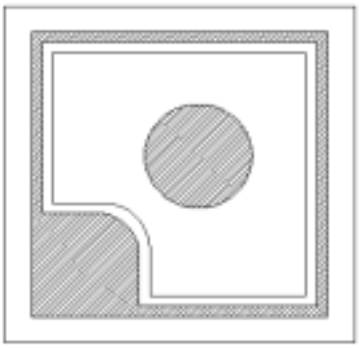
POWERGa(i)N™ Technology

UNPRX450-X0X

HIGH PERFORMANCE **BLUE** LED DIE

Maximum Ratings @ T_A = 25° C

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/Optical 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	Dominant Wavelength λ_d nm			Spectral Width (FWHM) $\Delta\lambda$ nm	Series Resistance R_s
	Min	**Typ**	**Typ**	**Max**	**Typ**	**Max**	**Typ**	**Min**	**Typ**	**Max**	**Typ**	**Typ**
UNPRC450F01	1.4	2.0	3.6	4.0	4.0	10.0	436	445	450	455	30	30
UNPRB450E02	1.2	1.5	3.6	4.0	4.0	10.0	436	440	450	460	30	30
UNPRA450D02	1.0	1.2	3.6	4.0	4.0	10.0	436	440	450	460	30	30

Mechanical Specifications

Die Size	325um x 325um ±15um (0.013" X 0.013" ±0.0015")	
Die Thickness	125um +/-20um (0.005 ±0.0005)	Bond Pad 100um diameter
Contact Metal (Both P and N contact are Au for consistent and reliable bonds.)		Au
Backside Metal		N/A

Options

- 100% Tested or Sample Tested, Sorted or Unsorted, Contact Factory for details on our test/sort capability.
- Die mounted on 200 mm Plastic Tape Or Grip Ring, Contact Factory for other available options.

Notes:

1. The optical power is determined by measuring bare die mounted on TO-46 headers using an integrating sphere. An Index matching encapsulent is not used to enhance this measurement.

2. The dominate wavelength is calculated from the 1931 2^0 CIE Chromaticity Diagram.

3. A tolerance of ± 15% on brightness level, and ± 2 nm on chromaticity, due to measuring variations applies.

4. Maximum ratings are package dependent. The above ratings were determined using a T-1 ¾ Pkg for characterization . Ratings for other packages may differ. The forward currents are not limited by the die but by the effect of the package on the junction temperature of the LED.

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 average values of acceptable sample sizes.

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