

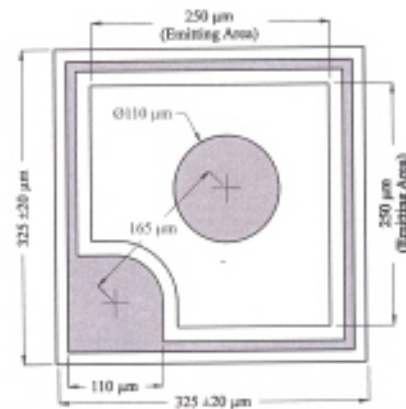
# POWERGa(i)N™ Technology

## UNPRX460-XXX

### HIGH PERFORMANCE BLUE LED DIE

#### Maximum Ratings @ T<sub>A</sub> = 25° C (Based upon T-1 ½ 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 20 mA DC

Part Code	Optical Power mW	Forward Voltage V <sub>f</sub> V		Reverse Current I <sub>r</sub> @ 5V, uA		Peak Wavelength λ <sub>p</sub> nm	Typical Dominant Wavelength λ <sub>d</sub> nm			Spectral Width (FWHM) Δλ nm	Series Resistance R <sub>s</sub>
		Typ	Max	Typ	Max		Min	Avg	Max		
0G1	1.6	3.6	4.0	4.0	10.0	455	455	460	465	30	30
0H1	2.0	3.6	4.0	4.0	10.0	455	455	460	465	30	30
0K1	2.4	3.6	4.0	4.0	10.0	455	455	460	465	30	30
0M1	2.8	3.6	4.0	4.0	10.0	455	455	460	465	30	30
0P1	3.4	3.6	4.0	4.0	10.0	455	455	460	465	30	30

#### Mechanical Specifications

Die Size:	325µm x 325µm ±20µm (0.013" X 0.013" ±0.0010")
Die Thickness:	125µm +/-20µm (0.005 ±0.0005) Bond Pad: 110µm 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: UNPRA460-XXX.
• 100% Tested: With ASCII file and/or die inked out (not removed), sold as whole diced wafer on tape: UNPRB460-XXX.
• 100% Tested: Die are tested, sorted, binned "Known Binned Die", and sold on tape: UNPRC460-XXX.

#### Notes:

- The optical power is determined by probe testing LED with a spectral radiometer. A ± 15% tolerance applies due to measuring variations.
- The dominant wavelength is determined by probe testing LED with a spectral radiometer. A ± 2nm tolerance applies due to measuring variations.
- All electro-optical measurements are referenced by measuring bare die mounted on TO-46 headers using an integrating sphere. An index matching encapsulant is not used to enhance these measurements (bare die test only).
- Maximum ratings are package dependent. Ratings were determined using a T-1 ½ 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.
- 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.
- A shipping tolerance of ± 10% applies to all deliveries.

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