

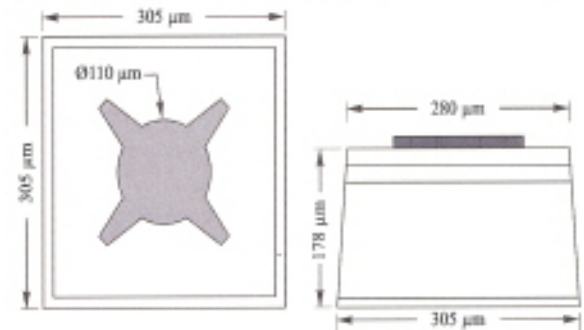
# POWERBR(ite)<sup>TM</sup> Technology

## UAPRX590-XXX

### HIGH PERFORMANCE YELLOW LED DIE

#### Maximum Ratings @ T<sub>A</sub> = 25° C (Based upon T 1 ¼ Package)

DC Forward Current	30mA
Peak Forward Current (<10ms, 1/10 Duty cycle)	100mA
Led Junction Temp	100° C
Forward Voltage	2.5V DC
Reverse Voltage	-5.0 V DC
Operating Temperature Range	-40° C + 85° C
Storage Temperature Range	-40° C +100° C



#### Typical Electro-Optical Characteristics @ 25° C, 20 mA DC

Part Code	Luminous Intensity I <sub>v</sub> , mcd		Forward Voltage V <sub>f</sub> , V		Reverse Current I <sub>r</sub> @ 5V, µA	Peak Wavelength λ <sub>p</sub> , nm	Dominant Wavelength λ <sub>d</sub> , nm			Spectral Width (FWHM) Δλ, nm	Series Resistance R <sub>s</sub>
	Min	Typ	Typ	Max	Max	Typ	Min	Typ	Max	Typ	Typ
0B2	75	90	2.0	2.4	10.0	597	580	590	600	18	7
0D2	90	110	2.0	2.4	10.0	597	580	590	600	18	7
0E2	100	120	2.0	2.4	10.0	597	580	590	600	18	7
0F2	100	300	2.0	2.4	10.0	597	580	590	600	18	7
0H2	130	150	2.0	2.4	10.0	597	580	590	600	18	7

#### Mechanical Specifications

Die Size	305µm x 305µm +/- 15µm. (0.012" X 0.012" ±0.0015")		
Die Thickness	178µm +/-25µm (0.007 ±0.001) Bond Pad: 110µm diameter		
Contact Metal (P)	Au		
Backside Metal (N)	Au		

#### Options

- LED Die, Sample Tested, die not inked out or removed. UAPRA590-XXX
- 100% Electrically Tested, with rejects removed, sold as "Known Good Die" on tape. UAPRB590-XXX

#### Notes:

- The luminous intensity is determined by sample testing LED with a beam candela integrating fixture. A ± 15% tolerance applies due to measuring variations.
- The dominant wavelength is determined by testing header mounted bare LED die with a spectral radiometer. A ± 2nm tolerance applies due to measuring variations.
- Sample electrical testing is performed with die on header. 100% electrically tested product is probe tested prior to wafer dicing.
- Maximum ratings are package dependent. Ratings were determined using a T-1 ¼ 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.