

## **DUREL® 3 HBC-225 Very High Brightness, Long Life, Green Electroluminescent Lamp**

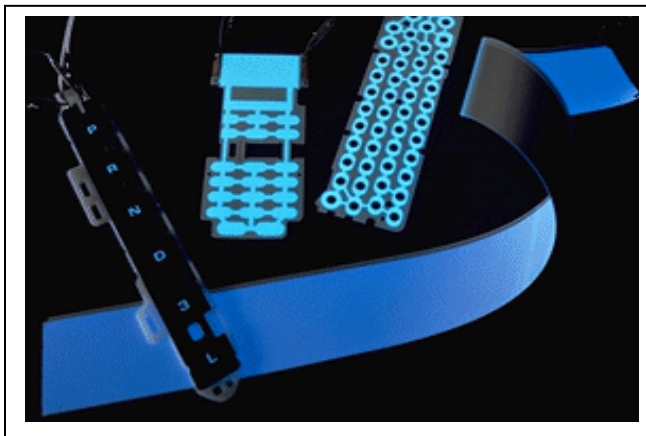
*Data Sheet*

### **FEATURES:**

- **Engineered for Match Lamp to Driver Performance**
- **Environmentally Robust**
- **Very High Brightness**
- **Extremely Long Life**
- **Green Lit Color**
- **Uniform Appearance**

### **APPLICATIONS:**

- **LCD Backlighting**
- **Keymat / Keypad Backlighting**
- **Cellular Phones**
- **Personal Digital Assistants**
- **Cordless Phones**
- **Remote Controls**
- **Watch / Timepiece**
- **Home Electronics**



### **History**

The Durel Division of Rogers Corporation began as a joint venture of 3M and Rogers in 1988. The combined strengths of these two firms in coatings and phosphor technology enabled Durel to develop products to meet the evolving needs of its customers. In September of 2003, the two parent companies agreed that Durel's future was best served through its integration into Rogers Corporation.

Today, Rogers Corporation is a high volume manufacturer of DUREL® 3 electroluminescent (EL) backlighting systems used in wireless telecommunications, portable electronics, automotive and timepiece applications. The Durel Division's vertically integrated products offer the user match-system performance and the ability to purchase a complete solution from a single vendor.

### **HBC- 225**

The HBC-225 lamp was developed for applications where extremely long life and superior environmental performance are important. This lamp emits a green light that can be easily cascaded into a broadband white on-color.

### **Engineered for Pumping-Inductor Driver Performance**

Rogers has engineered the HBC-225 lamp for maximum brightness and efficiency when powered by the Rogers' brand or equivalent pumping-inductor style IC drivers.

If you have any questions regarding this or other Rogers' products, please call Customer Service at (480) 917-6000 or visit our website at: <http://www.rogerscorporation.com/duurel>

## DUREL 3 HBC 225 Lamp Performance Data

Rogers has engineered the Very High Brightness lamp constructions for maximum brightness and efficiency when powered by the DUREL brand or equivalent pumping-inductor style IC drivers. Many factors affect the performance of a DUREL 3 electroluminescent system. Specifications should be established using the actual lamp design and driver configuration intended for that application. Power supply figures are provided below for reference only.

### Maximum Ratings

Property	Units	Maximum	Typical
Supply Voltage	Vrms	150	40 - 100
Supply Frequency	Hz	3000	200 - 500
Input Current	mA/in <sup>2</sup>	2.0	0.2 - 1.0
	mA/cm <sup>2</sup>	0.31	0.03 – 0.16
Temperature Ranges	° C	-25 to 85	0 to 40
Storage Temperature Range	° C	-40 to 85	0 to 50
Thermal Shock Resistance	° C	-30 to 75	N/A
		10 cycles	
Thickness	inches		.008 - .012
	millimeters		.203 - .305

### Performance Characteristics

Parameter	Units	Typical 80 Vrms/200 Hz Power Supply	Typical 80 Vrms/400 Hz Power Supply	Typical 100 Vrms/400 Hz Power Supply
Brightness	Ft L	8.0	16.0	22.0
	Cd/m <sup>2</sup>	27.4	54.8	75.5
Current Density	mA/in <sup>2</sup>	0.4	0.9	1.11
	mA/cm <sup>2</sup>	.07	.13	.17
Chromaticity	X	.18	.17	.17
	Y	.46	.43	.43

#### Time to Half Luminance

Ambient	Hours	3100	1600	900
50°C / 90% RH	Hours	590	330	190
65°C / 95% RH	Hours	290	145	120
70°C, Ambient	Hours	240	130	100

This data is based on power supply results.  
Time to half luminance is typically longer on driver

## ISO 9001:2000, ISO/TS 16949:2002, and ISO 14001:1996 Certified

The information contained in this data sheet is intended to assist you in designing with Rogers' EL lamps. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the data sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers' EL lamps for each application.

Rogers' EL lamps are covered by one or more of the following U.S. patents: #5,156,885, #5,418,062, # 5,439,705, #5,593,782, #5,908,698, #6,445,128, and #6,528,943. Corresponding foreign patents are issued or pending.

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