

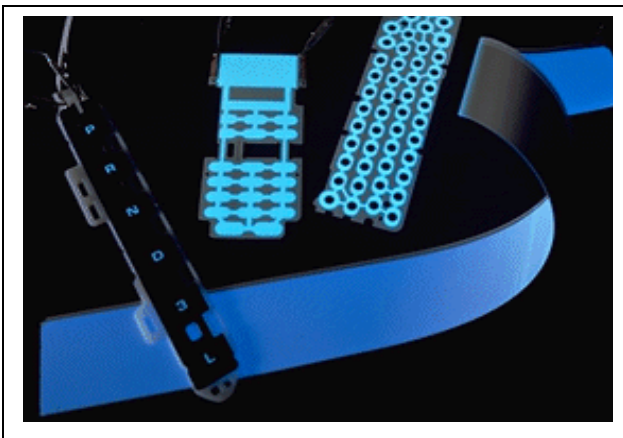
DUREL® 3 HBC-454 Very High Brightness, Long Life, Orange Electroluminescent Lamp

FEATURES:

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

APPLICATIONS:

- **LCD Backlighting**
- **Keypad / 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- 454

The HBC-454 lamp was developed for applications where extremely long life and superior environmental performance are important. This lamp emits orange light.

Engineered for Pumping-Inductor Driver Performance

Rogers has engineered the HBC-454 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/durel>

DUREL 3 HBC 454 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 ²	2.0	0.2 - 1.0
	mA/cm ²	0.31	0.03 - .016
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	1.8	3.5	5.0
	Cd/m ²	6.1	12.0	17.3
Current Density	mA/in ²	0.5	0.9	1.23
	mA/cm ²	.08	.14	.19
Chromaticity	X	.53	.53	.53
	Y	.45	.44	.44
Time to Half Luminance				
Ambient	Hours	4000	3200	675
50°C / 90% RH	Hours	1000	500	360
65°C/ 95% RH	Hours	475	230	200
70°C, Ambient	Hours	420	240	200

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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