



Durel Division

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## D305A IC Designer's Kit Guide

### Introduction:

Rogers DUREL® D305A IC Designer's Kit is intended to aid you in developing an EL lamp driver configuration using the DUREL D305A IC that meets your power draw budget while achieving your brightness requirements from the EL lamp. A list of components contained in the kit is in Table 1.

Table 1: List of Components	
Description	Qty
D305A IC unit samples	5
D305A IC Designer's Kit Board	1
D305A IC Mini-Module Board	1
Kit Board Power Connector	1
EL Lamp sample with connector	1
Assorted SMT Inductors	>2
SMT adapter boards	2
Leaded CHF Capacitors – various values	>2
Bypass cap: 1.0uF	1

### The D305A IC Designer's Kit Board:

The Designer's Kit Board (see Figure 1), which comes with a D305A IC already soldered to the board, is a useful tool for optimizing a D305A IC driver circuit for any application. Refer to the D305A IC datasheet as a guideline with sample circuits as a starting point of your design. Simply insert an appropriate value of inductor (L) between the socket labeled as VBAT and the pre-soldered SMT diode, add timing components (CLF, CHF, and Rf) into the labeled sockets, as shown in Figure 1, and connect a high voltage storage capacitor (Cs), a stabilizing capacitor (CRf), and your choice of wave-shaping resistor (Rd) to complete your driving circuit. Additional sockets are provided in the Kit Board for a bypass capacitor between Vcc and ground (GND) to absorb electrical noise in the DC input.

A jumper header On the Designer's Kit Board is normally attached to connect E to Vcc or GND. This jumper header can be removed to control the enable pin (E) with an externally supplied signal. Make sure that an appropriate load is connected between Va and Vb before applying power to the chip through the Kit Board power connections. A sample DUREL 3 PROTOLIGHT® EL lamp is provided in the Designer's Kit. This lamp may be cut to your required lit area.

The user can easily replace all the external components with different values on the Designer's Kit Board in order to achieve design goals. A selection of standard values of capacitors and inductors are included in the D305A IC Designer's Kit for your use.

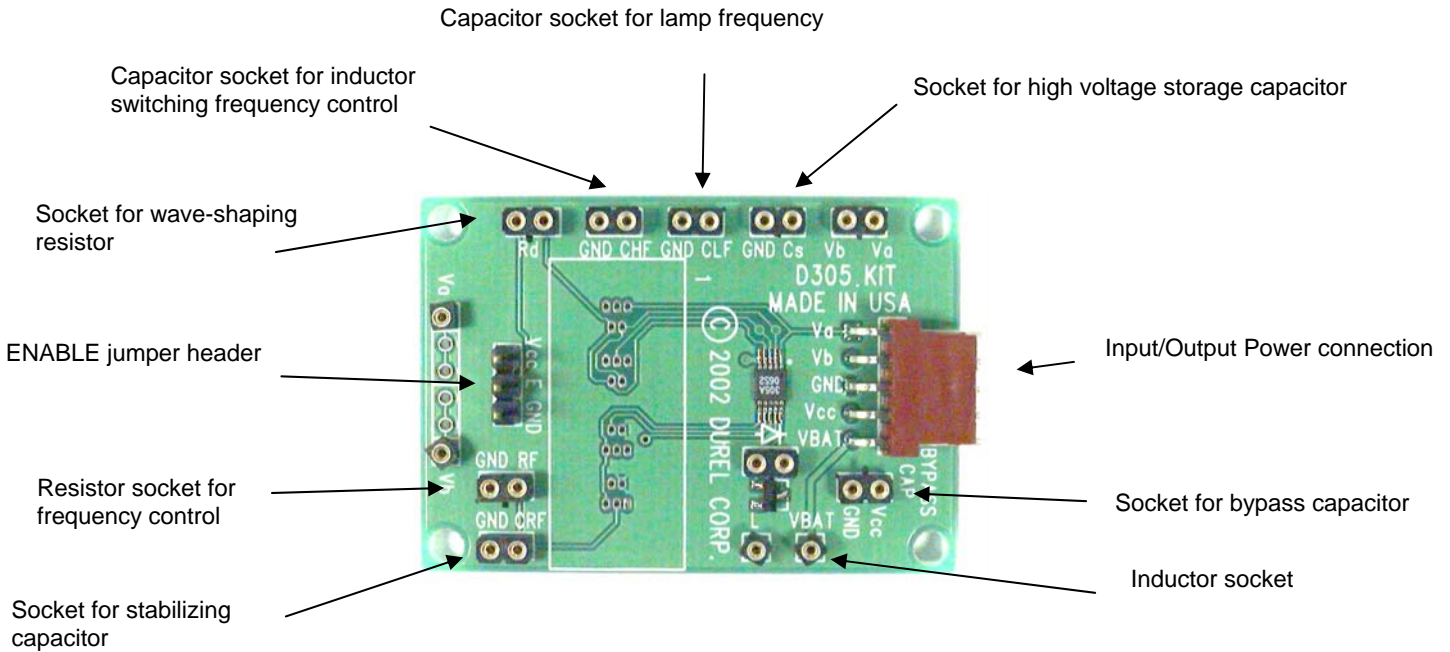
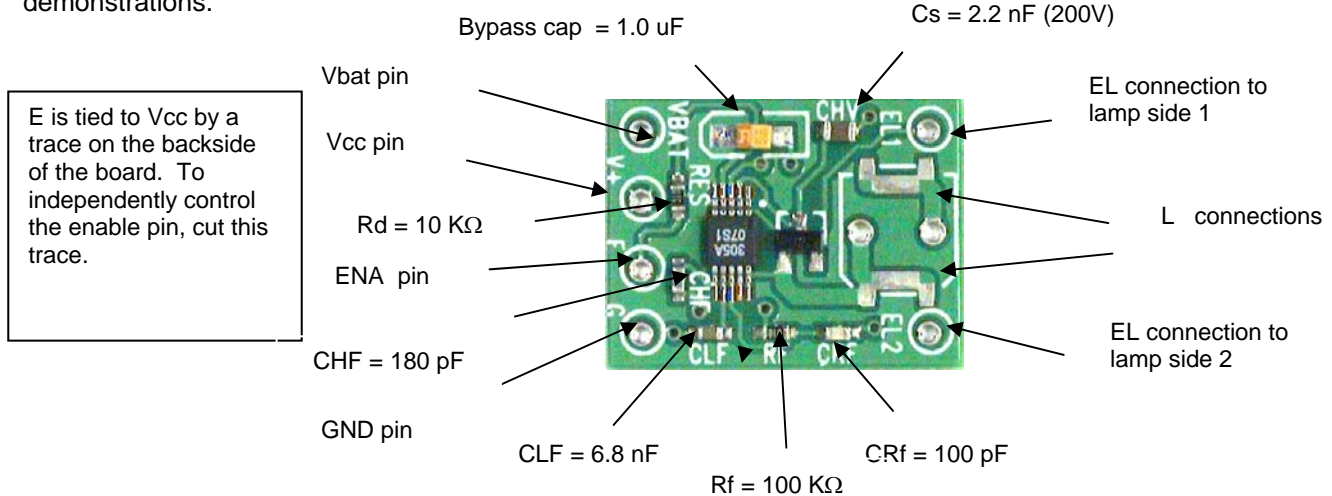


Figure 1: The D305A IC Designer's Kit Board

### The D305A IC Mini-Module Board:

The D305A IC Mini-Module Board (see Figure 2) is an example of a finished circuit based on the D305A IC. It is meant as a representation of the board area requirement for the EL lamp driver circuit in the application. Most of the external components have been selected and pre-soldered onto the module board, except for the surface mount inductor. The mini-module board can be configured to fit into finished product for demonstrations.



### 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 systems. 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 systems for each application.

Rogers EL drivers are covered by one or more of the following U.S. patents #5,313,141; #5,789,870; #5,677,599; #6,043,610. Corresponding foreign patents are issued or pending.