DUREL CORPORATION

AN AFFILIATE OF 3M AND ROGERS CORPORATION

# **DUREL® EL Driver Product Selector Guide**

Applying its extensive knowledge of electroluminescent lamp technology, Durel developed a portfolio of driver ICs for a wide range of applications using EL backlighting systems. Most of Durel's EL drivers are based on its patented three-port (3P) circuit, which offers designers the simplicity of a single DC input, single AC output, and a shared common ground that provides an integrated EMI shielding. Durel's circuit offers the smallest system solution with enhanced performance at a low cost. The addition of Durel's proprietary controlled discharge circuitry in its newest devices extends the noise reduction capability of their EL drivers for acoustic noise sensitive applications such as handsets and other portable electronic products without sacrificing efficiency. All Durel EL drivers have a low power standby mode for longer battery life.

### D340

The D340 is the smallest, lowest cost EL driver in Durel's product line and requires only a single inductor to

complete a circuit capable of driving up to 4 in<sup>2</sup> (26 cm<sup>2</sup>) EL lamps. Based on the Durel 3P circuit, the D340 features a single regulated output with voltage of 140 Vpp from supply voltages of 1.2 - 7.0  $V_{DC}$ . The standby current from the power supply is normally 6nA, which is ideal for low-power portable products. The D340 is offered in an 8-pin MSOP by tube or tape/reel and in die form by wafer or waffle pack. A Durel D340

Designer's Kit is available as a tool for optimizing the circuit for your application.

### D355

The Durel D355 IC EL driver offers superior efficiency over a wide range of applications such as two-way pagers, MP3 players, other handheld electronics, and timepieces. Based on the Durel 3P topology, the D355 requires only one inductor and one capacitor to complete a circuit that will drive EL lamps up to 6 in<sup>2</sup> (40 cm<sup>2</sup>). The D355 operates with supply voltages of 1.0 - 7.0 V<sub>DC</sub>, and features low standby current. The D355 is offered in an 8-pin MSOP by tube or tape/reel and in die form by wafer or waffle pack. A Durel D355 Designer's Kit is available as a tool for optimizing the circuit for your application.

### D356

The D356 provides system performance similar to that of the D355. Their designs differ only in that the D356

uses an enable high system while the D355 functions with logic enable low. Both devices offer a built-in EMI shielding based on the Durel 3P circuit patented by Durel. A Durel D356 Designer's Kit is available as a tool for optimizing the circuit for your application.

## D365

The D365 is a high-powered EL driver with low-noise performance for backlighting handset and other applications that are sensitive to audible and electrical noise. Based on the Durel 3P circuit, the D365 also includes a proprietary circuit design that minimizes system noise by reducing the rate of voltage discharge from the lamp. It only requires one external inductor, one transistor, and one capacitor to make a complete EL lamp driving circuit with a supply voltage range of 2.5 - 6.5 V<sub>DC</sub>. Featuring low standby current, the D365 is ideal for low-power portable products. The D365 is offered in an 8-pin MSOP by tube or tape/reel. A Durel D365

Designer's Kit is available as a tool for optimizing the circuit for your application.

### D371

The D371 is a high performance EL driver based on the Durel 3P circuit. It uses a proprietary circuit design for programmable wave-shaping for low-noise performance in applications that are sensitive to audible and electrical noise.

This EL driver operates very efficiently over a supply voltage range of  $2.0-6.5 V_{DC}$ . External capacitors or clock signals may be used to set the lamp output and inductor frequencies. The D371 is offered in a 10-pin MSOP by tube or tape/reel and in die form by wafer or waffle pack. A Durel D371 Designer's Kit is available as a tool for optimizing the circuit.

### D372

The D372 EL driver delivers a regulated high-voltage AC signal for use in backlighting EL lamps with areas up to 12 in<sup>2</sup> (80 cm<sup>2</sup>). It also features programmable wave-shaping for low-noise performance in applications that are sensitive to audible and electrical noise. This EL driver operates efficiently over a supply voltage range of 2.0 - 6.5 V<sub>DC</sub>. External capacitors or clock signals may be used to set the lamp output and inductor switching frequencies. The D372 is offered in a 10-pin MSOP by tube or tape/reel and in die form by wafer or waffle pack. A Durel D372 Designer's Kit is available as a tool for optimizing the circuit.



EL Drive	<b>EL Driver Product Selector Guide</b>	Selector (	Guide				
		Supply		# External		Lamp	
Product	Package	Voltage	Features	Components	<b>Applications</b>	Area, in <sup>2</sup>	Availability
D340B	MSOP-8	1.2-7.0	3P, Low Cost Low current draw		Watches Pagers	< 4 in <sup>2</sup> < 25 cm <sup>2</sup>	Production
					Small LCDs	10.01	
D355A	MSOP-8	1.0-7.0	3P, ENA Low,	1-2	Watches, PDAs,	< 6 in <sup>2</sup>	Not recommended
			Low current draw		Pagers, MP3, GPS	$<40 \text{ cm}^{2}$	for new designs
			LF Control		,		,
D356A	MSOP-8	1.0-7.0	3P, ENA High,	1-2	Watches, PDAs,	< 6 in <sup>2</sup>	Not recommended
			Low current draw		Pagers, MP3, GPS	< 40 cm²	for new designs
D355B	MSOP-8	1.0-7.0	3P, ENA Low	1-2	Watches, PDAs,	< 6 in <sup>2</sup>	Production
			Low current discharge;		Pagers, MP3, GPS	$< 40 \text{ cm}^2$	
			Low current draw				
D356B	MSOP-8	1.0-7.0	3P, ENA High	1-2	Watches, PDAs,	< 6 in²	Production
			Low current discharge;		Pagers, MP3, GPS	$< 40 \text{ cm}^2$	
			Low current draw				
D361	MSOP-8	2.5-6.5	3P, High Power	2-3	Handsets, PDAs	< 12 in <sup>2</sup>	Not recommended
			Low Noise			< 80 cm <sup>2</sup>	for new designs
			LF/HF Control				
D365	MSOP-8	2.5-6.5	3P, High Power	2-3	Handsets, PDAs	< 12 in <sup>2</sup>	Production
			Low Noise			< 80 cm <sup>2</sup>	
			Low current draw				
D371	MSOP-10	2.0-6.5	3P, Low Noise	4	Handsets, PDAs	< 10 in <sup>2</sup>	Production
			Wave-shaping			<65 cm <sup>2</sup>	
			HF and LF Control				
D372	MSOP-10	2.0-6.5	Low Noise	3-5	Handsets, PDAs	< 12 in²	Production
			Wave-shaping,			< 80 cm <sup>2</sup>	
			Regulated Output				
This chart provi	des a general desc	ription of Durel Cor	This chart provides a general description of Durel Corporation's current inverter products.	Jucts.			

# ISO 9001 Certified

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