

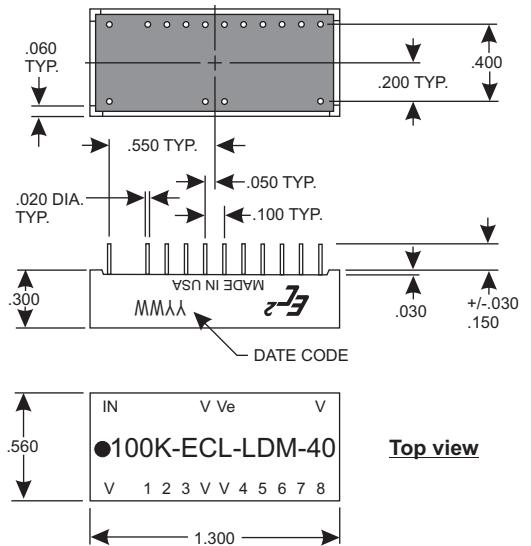
100K ECL Logic Delay Module

The 100K ECL Logic Delay Modules manufactured by Engineered Components Company are designed to provide output waveforms that reproduce the input waveform after a set amount of delay time has elapsed. The eight output waveforms are delay line taps provided at 12.5% increments of the total delay (12.5, 25, 37.5, 50, 62.5, 75, 87.5, and 100%). These delay modules are non-inverting. The delay times are calibrated to the listed tolerances on the rising edge delays. The products with a total delay of less than 16ns have additional delay present at tap 1 due to internal propagation delays (see the Product Selection Table).

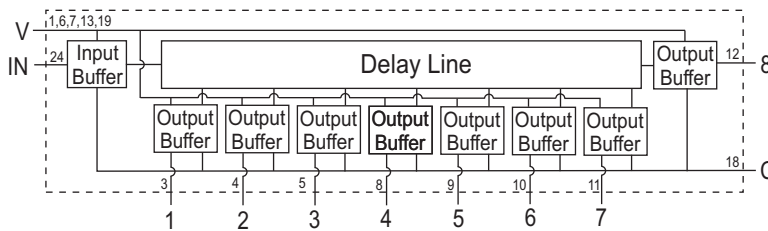
The MTBF on these modules, when calculated per MIL-HDBK-217, for a 50 deg.C ground fixed environment and with 50VDC applied, is in excess of 1 million hours. The temperature coefficient of delay is less than 150 ppm/deg.C over the operating temperature range of 0 to +85 deg. C.

The module is provided in a 24-pin DIP package, fully encapsulated in epoxy resin and is housed in a Diallyl Phthalate case, blue in color. The case marking is applied by silkscreen using white epoxy paint. The 15 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

MECHANICAL DIAGRAM



BLOCK DIAGRAM



Operating Specifications:

All measurements made at 25 deg. C
 All measurements made with V_{ee} = -4.5VDC, V_{cc} = 0VDC
 All measurements made with (1) 100K ECL output load
 All measurements made with a 50 ohm pulldown resistor to -2VDC at the input and output

Operating Temperature: 0 to +85 deg. C
 Storage Temperature: -55 to +125 deg. C

V_{cc} Supply Voltage: -4.5 +/-5% VDC
 V_{ee} Supply Current: 80mA typical
 Logic "High" Input:
 Voltage: -1.165VDC min.
 Current: 350uA max.
 Logic "Low" Input:
 Voltage: -1.475VDC max.
 Current: 0.5uA min.
 Logic "High" Voltage Out: -1.025VDC min.
 Logic "Low" Voltage Out: -1.620VDC max.

Product Selection Table

Part Number	Rise Time Max. (ns)	Output Delay and Tolerances (in ns)							
		Tap 1 (12.5%)	Tap 2 (25%)	Tap 3 (37.5%)	Tap 4 (50%)	Tap 5 (62.5%)	Tap 6 (75%)	Tap 7 (87.5%)	Tap 8 (100%)
100K-ECL-LDM-9	2.0	2.0+/-0.20	3.0+/-0.30	4.0+/-0.40	5.0+/-0.50	6.0+/-0.60	7.0+/-0.70	8.0+/-0.80	9.0+/-0.90
100K-ECL-LDM-12.5	2.0	2.0+/-0.20	3.5+/-0.35	5.0+/-0.50	6.5+/-0.65	8.0+/-0.80	9.5+/-0.95	11.0+/-1.00	12.5+/-1.00
100K-ECL-LDM-16	2.0	2.0+/-0.20	4.0+/-0.40	6.0+/-0.60	8.0+/-0.80	10.0+/-1.00	12.0+/-1.00	14.0+/-1.00	16.0+/-1.00
100K-ECL-LDM-20	2.0	2.5+/-0.25	5.0+/-0.50	7.5+/-0.75	10.0+/-1.00	12.5+/-1.00	15.0+/-1.00	17.5+/-1.00	20.0+/-1.00
100K-ECL-LDM-24	2.0	3.0+/-0.30	6.0+/-0.60	9.0+/-0.90	12.0+/-1.00	15.0+/-1.00	18.0+/-1.00	21.0+/-1.00	24.0+/-1.00
100K-ECL-LDM-28	2.0	3.5+/-0.35	7.0+/-0.70	10.5+/-1.00	14.0+/-1.00	17.5+/-1.00	21.0+/-1.00	24.5+/-1.00	28.0+/-1.00
100K-ECL-LDM-32	2.5	4.0+/-0.40	8.0+/-0.80	12.0+/-1.00	16.0+/-1.00	20.0+/-1.00	24.0+/-1.00	28.0+/-1.00	32.0+/-1.00
100K-ECL-LDM-36	2.5	4.5+/-0.45	9.0+/-0.90	13.5+/-1.00	18.0+/-1.00	22.5+/-1.00	27.0+/-1.00	31.5+/-1.00	36.0+/-1.00
100K-ECL-LDM-40	2.5	5.0+/-0.50	10.0+/-1.00	15.0+/-1.00	20.0+/-1.00	25.0+/-1.00	30.0+/-1.00	35.0+/-1.00	40.0+/-1.50
100K-ECL-LDM-44	3.0	5.5+/-0.55	11.0+/-1.00	16.5+/-1.00	22.0+/-1.00	27.5+/-1.00	33.0+/-1.00	38.5+/-1.00	44.0+/-1.50
100K-ECL-LDM-48	3.0	6.0+/-0.60	12.0+/-1.00	18.0+/-1.00	24.0+/-1.00	30.0+/-1.00	36.0+/-1.00	42.0+/-1.50	48.0+/-2.00
100K-ECL-LDM-52	3.0	6.5+/-0.65	13.0+/-1.00	19.5+/-1.00	26.0+/-1.00	32.5+/-1.00	39.0+/-1.50	45.5+/-2.00	52.0+/-2.00
100K-ECL-LDM-56	3.0	7.0+/-0.70	14.0+/-1.00	21.0+/-1.00	28.0+/-1.00	35.0+/-1.00	42.0+/-1.50	49.0+/-2.00	56.0+/-2.00
100K-ECL-LDM-60	4.0	7.5+/-0.75	15.0+/-1.00	22.5+/-1.00	30.0+/-1.00	37.5+/-1.00	45.0+/-1.50	52.5+/-2.00	60.0+/-2.00
100K-ECL-LDM-64	4.0	8.0+/-0.80	16.0+/-1.00	24.0+/-1.00	32.0+/-1.00	40.0+/-1.50	48.0+/-2.00	56.0+/-2.00	64.0+/-2.00
100K-ECL-LDM-68	4.0	8.5+/-0.85	17.0+/-1.00	25.5+/-1.00	34.0+/-1.00	42.5+/-1.50	51.0+/-2.00	59.5+/-2.00	68.0+/-2.00
100K-ECL-LDM-72	4.5	9.0+/-0.90	18.0+/-1.00	27.0+/-1.00	36.0+/-1.00	45.0+/-1.50	54.0+/-2.00	63.0+/-2.00	72.0+/-2.50
100K-ECL-LDM-76	4.5	9.5+/-0.95	19.0+/-1.00	28.5+/-1.00	38.0+/-1.00	47.5+/-2.00	57.0+/-2.00	66.5+/-2.00	76.0+/-2.50
100K-ECL-LDM-80	4.5	10.0+/-1.00	20.0+/-1.00	30.0+/-1.00	40.0+/-1.50	50.0+/-2.00	60.0+/-2.00	70.0+/-2.00	80.0+/-2.50

Special modules can often be manufactured to provide for customer specific applications.



engineered components company

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