

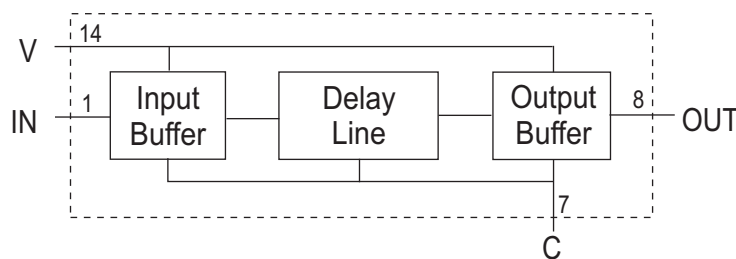
# TTL Military Logic Delay Line

The TTL Military Logic Delay Lines manufactured by Engineered Components Company are designed to provide an output waveform that reproduces the input waveform after a set amount of delay time has elapsed. These delay lines are non-inverting. The delay times are calibrated to the listed tolerances on the rising edge delays.

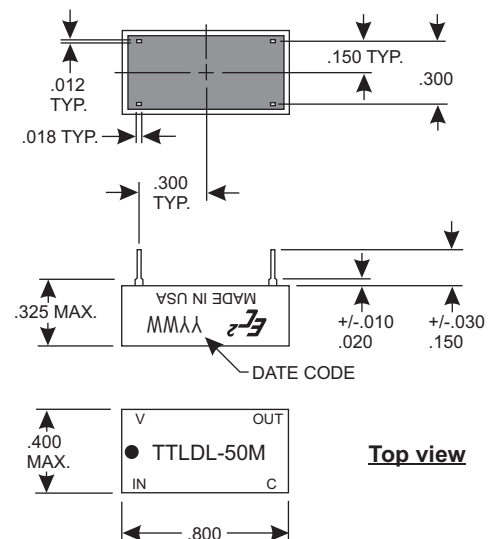
The MTBF on these modules, when calculated per MIL-HDBK-217, for a 50 deg.C ground fixed environment and with 50VDC applied, is in excess of 3 million hours. The temperature coefficient of delay is less than 1200 ppm/deg.C over a temperature range of -55 to +100 deg. C. These modules are designed to operate over the full military temperature range of -55 to +125 deg. C.

The module is provided in a 14-pin DIP package, fully encapsulated in epoxy resin and is housed in a Diallyl Phthalate case, red in color. The case marking is applied by silkscreen using white epoxy paint. The 4 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

## BLOCK DIAGRAM



## MECHANICAL DIAGRAM



Product Selection Table

Part Number	Output Delay and Tolerance (in ns)
TTLDL-6M	6.0+/-1.0
TTLDL-7M	7.0+/-1.0
TTLDL-8M	8.0+/-1.0
TTLDL-9M	9.0+/-1.0
TTLDL-10M	10.0+/-1.0
TTLDL-11M	11.0+/-1.0
TTLDL-12M	12.0+/-1.0
TTLDL-13M	13.0+/-1.0
TTLDL-14M	14.0+/-1.0
TTLDL-15M	15.0+/-1.0
TTLDL-16M	16.0+/-1.0
TTLDL-17M	17.0+/-1.0
TTLDL-18M	18.0+/-1.0
TTLDL-19M	19.0+/-1.0
TTLDL-20M	20.0+/-1.0
TTLDL-21M	21.0+/-1.0
TTLDL-22M	22.0+/-1.0
TTLDL-23M	23.0+/-1.0
TTLDL-24M	24.0+/-1.0
TTLDL-25M	25.0+/-1.0
TTLDL-30M	30.0+/-1.5
TTLDL-35M	35.0+/-1.5
TTLDL-40M	40.0+/-1.5
TTLDL-45M	45.0+/-2.0
TTLDL-50M	50.0+/-2.0
TTLDL-55M	55.0+/-2.0

Product Selection Table (Cont.)

Part Number	Output Delay and Tolerance (in ns)
TTLDL-60M	60.0+/-2.0
TTLDL-65M	65.0+/-2.5
TTLDL-70M	70.0+/-2.5
TTLDL-75M	75.0+/-2.5
TTLDL-80M	80.0+/-2.5
TTLDL-85M	85.0+/-3.0
TTLDL-90M	90.0+/-3.0
TTLDL-95M	95.0+/-3.0
TTLDL-100M	100.0+/-3.0
TTLDL-125M	125.0+/-4.0
TTLDL-150M	150.0+/-4.5
TTLDL-175M	175.0+/-5.0
TTLDL-200M	200.0+/-6.0
TTLDL-225M	225.0+/-7.0
TTLDL-250M	250.0+/-8.0
TTLDL-275M	275.0+/-9.0
TTLDL-300M	300.0+/-10.0
TTLDL-350M	350.0+/-11.0
TTLDL-400M	400.0+/-12.0
TTLDL-450M	450.0+/-14.0
TTLDL-500M	500.0+/-15.0
TTLDL-600M	600.0+/-18.0
TTLDL-700M	700.0+/-20.0
TTLDL-800M	800.0+/-22.0
TTLDL-900M	900.0+/-24.0
TTLDL-1000M	1000.0+/-26.0

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

## Operating Specifications:

All measurements made at 25 deg. C  
 All measurements made with Vcc = +5VDC  
 All measurements made with (1) TTL output load

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

Vcc Supply Voltage: 4.75 to 5.25VDC

Vcc Supply Current:

Constant "0" in = 60mA typical

Constant "1" in = 20mA typical

Logic "High" Input:

Voltage: 2.0VDC min. ; Vcc max.

Current: 2.4VDC = 50uA max. ; 5.5VDC = 1mA max.

Logic "Low" Input:

Voltage: 0.8 VDC max.

Current: -2.0mA max.

Logic "High" Voltage Out: 2.4VDC min.

Logic "Low" Voltage Out: 0.4VDC max.



**engineered components company**

A Division of Cornucopia Tool & Plastics, Inc. PO Box 1915, 448 Sherwood Rd., Paso Robles CA 93447

Phone: 805-369-0034

Fax: 805-369-0033

Web: www.ec2.com