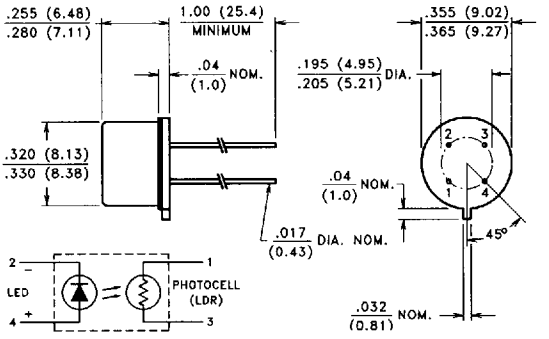
PACKAGE DIMENSIONS inch (mm)



TO-5 PACKAGE OUTLINE

DESCRIPTION

VTL2C1 offers the steepest slope, largest dynamic range, and fastest response time of any VTL2Cx series device.

VTL2C2 has a low "on" resistance and small temperature coefficient of resistance, with minimal light history memory.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Maximum Temperatures
Storage and Operating: -40°C to 75°C

Cell Power: 100 mW
Derate above 30°C: 2.22 mW/ °C

LED Current: 40 mA [1]
Derate above 30°C: 0.9 mA / °C

LED Reverse Breakdown Voltage: 3.0 V

LED Forward Voltage Drop @ 20 mA: 2.0 V (1.65 V typical)

Min. Isolation Voltage @ 70% Relative Humidity: 500 V pk

Output Cell Capacitance: 5.0 pF

Cell Voltage: 70 V (VTL2C1), 100 V (VTL2C2)

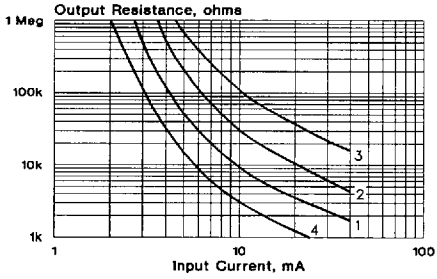
Input - Output Coupling Capacitance: 2.0 pF

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

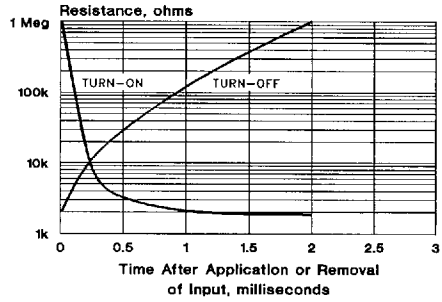
Part Number	Material Type	Output Resistance						Response Time [4]		
		ON Resistance [2]			OFF [3] Resistance @ 10 sec. (Min.)	Slope (Typ.) R @ .5 mA / R @ 5 mA	Dynamic Range (Typ.) R_{DARK} / R @ 20 mA	Turn-on to 63% Final R_{ON} (Typ.)	Turn-off (Decay) to (Max.)	
		Input Current	Dark Adapted (Typ.)	Light Adapted (Max.)					1 MΩ	100 kΩ
VTL2C1	1	5 mA 40 mA	50 kΩ 2 kΩ	— 10 kΩ	100 MΩ	—	80 db	0.5 ms	3.5 ms	—
VTL2C2	0	1 mA 40 mA	10 kΩ 300 Ω	— 500 Ω	1 MΩ	15	63 db	3.5 ms	—	500 ms

Typical Performance Curves

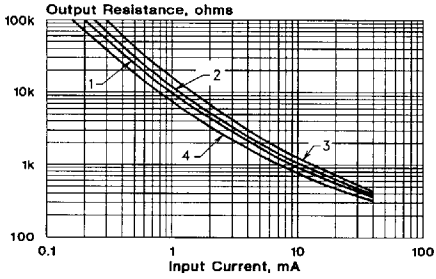
Output Resistance vs Input Current VTL2C1



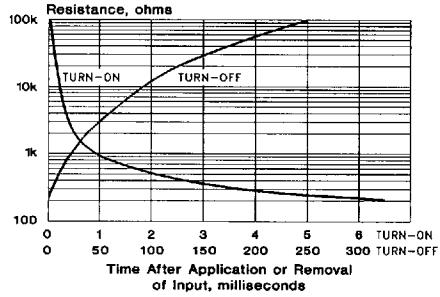
Response Time VTL2C1



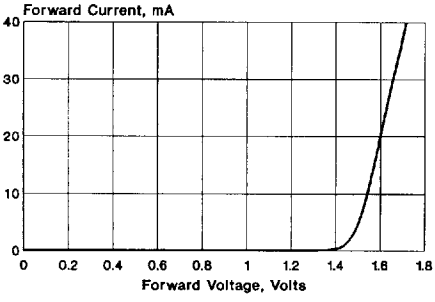
Output Resistance vs Input Current VTL2C2



Response Time VTL2C2



Input Characteristics



Notes:

1. At 1.0 mA and below, units may have substantially higher resistance than shown in the typical curves. Consult factory if closely controlled characteristics are required at low input currents.
2. Output resistance or input current transfer curves are given for the following light adapt conditions:
   (1) 25°C — 24 hours @ no input
   (2) 25°C — 24 hours @ 40 mA input
   (3) +50°C — 24 hours @ 40 mA input
   (4) −20°C — 24 hours @ 40 mA input
3. Response time characteristics are based upon test following adapt condition (2) above.