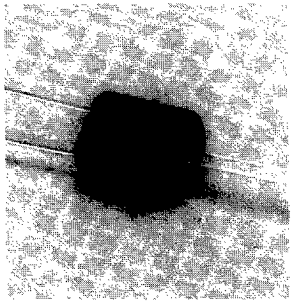
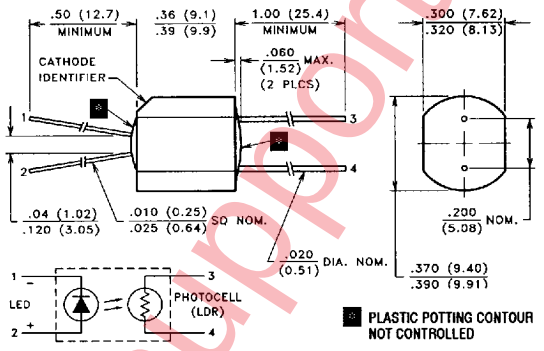
VTL5C6, 5C7



UL Listed File #73887

PACKAGE DIMENSIONS inch (mm)



DESCRIPTION

VTL5C6 has a large dynamic range, high dark resistance, a low temperature coefficient of resistance, and a small light history memory.

VTL5C7 is a shallow sloped device with good dynamic range, average temperature coefficient of resistance, speed of response, and light history memory.

ABSOLUTE MAXIMUM RATINGS @ 25°C

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

Cell Power: 175 mW
Derate above 30°C: 3.9 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: 2500 VRMS

Output Cell Capacitance: 5.0 pF

Cell Voltage: 250 V (VTL5C6), 50 V (VTL5C7)

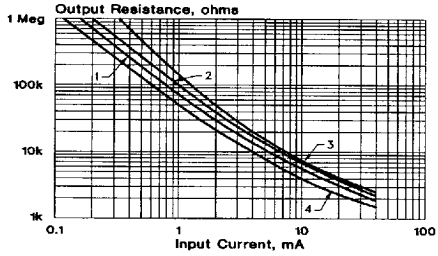
Input - Output Coupling Capacitance: 0.5 pF

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

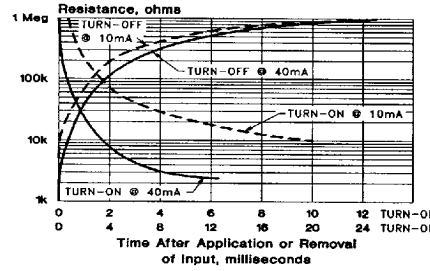
Part Number	Material Type	Output Resistance						Response Time [4]		
		ON Resistance [2]			OFF [3] Resistance @ 10 sec. (Min.)	Slope (Typ.) R @ .5 mA / R @ 5 mA	Dynamic Range (Typ.) R_{DARK} / R @ 20 mA	Turn-on to 63% Final R_{ON} (Typ.)	Turn-off (Decay) to (Max.)	
		Input Current	Dark Adapted (Typ.)	Light Adapted (Max.)					1 MΩ	100 kΩ
VTL5C6	6	1 mA 10 mA 40 mA	75 kΩ 10 kΩ 2 kΩ	— — 3.5 kΩ	100 MΩ	16.7	88 db	3.5 ms	50 ms	—
VTL5C7	7	0.4 mA 2 mA	5 kΩ 1.1 kΩ	— 1.5 kΩ	1 MΩ	5.7	75 db	6.0 ms	—	1 sec

Typical Performance Curves

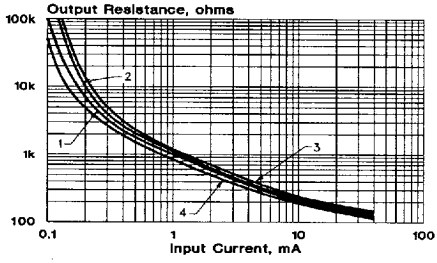
Output Resistance vs Input Current VTL5C6



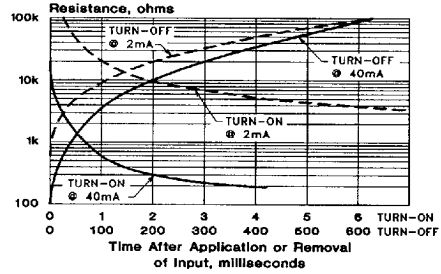
Response Time VTL5C6



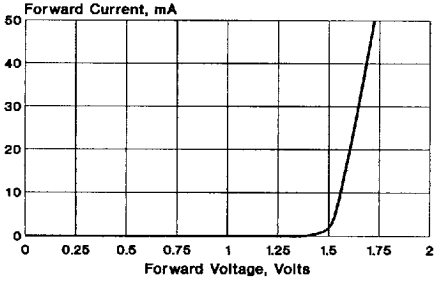
Output Resistance vs Input Current VTL5C7



Response Time VTL5C7



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.