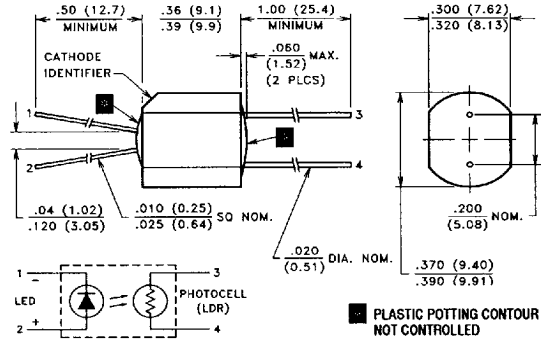


UL Listed File #73887

PACKAGE DIMENSIONS inch (mm)



DESCRIPTION

VTL5C9 has a 112 db dynamic range, fast response time, high dark resistance, but with a more shallow slope and lower "on" resistance at low (1 mA) drive currents than the VTL5C1.

VTL5C10 offers a low "on" resistance at low drive currents, a fast response time, and has a smaller temperature coefficient than the VTL5C9.

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 @ 40 mA: **2.8 V (2.2 V typical)**
 Min. Isolation Voltage @ 70% Relative Humidity: **2500 VRMS**
 Output Cell Capacitance: **5.0 pF**
 Cell Voltage: **100 V (VTL5C9), 50 V (VTL5C10)**
 Input - Output Coupling Capacitance: **0.5 pF**

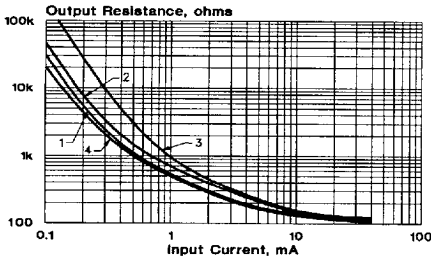
ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

Part Number	Material Type	Output Resistance					Response Time 7		
		ON Resistance 2			OFF Resistance (Min.)	Slope (Typ.) R @ 5 mA R @ 5 mA	Dynamic Range (Typ.) R _{0.1} R @ 20 mA	Turn-on to 1.0 kΩ (Typ.)	Turn-off (Decay) to 100 kΩ (Max.)
		Input Current	Dark Adapted (Max.)	Light Adapted (Max.)					
VTL5C9	1	2 mA	630 Ω	—	50 MΩ 3	7.3	112 db	4.0 ms	50 ms
VTL5C10	4	1 mA	400 Ω	—	400 kΩ 3	3.8	75 db	1.0 ms	1.5 sec

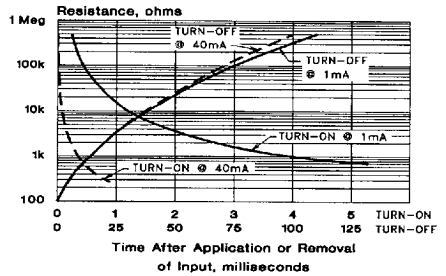


Typical Performance Curves

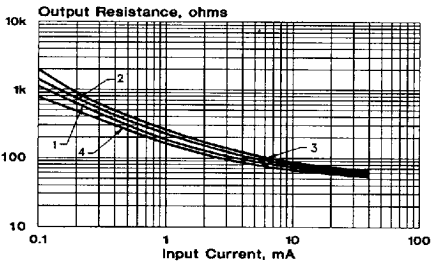
Output Resistance vs Input Current VTL5C9



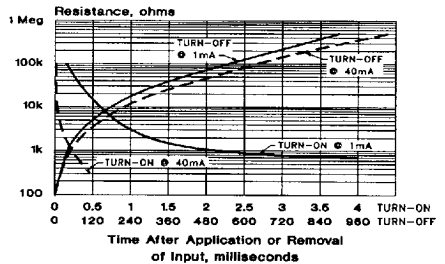
Response Time VTL5C9



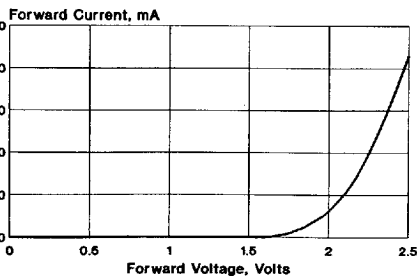
Output Resistance vs Input Current VTL5C10



Response Time VTL5C10



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.