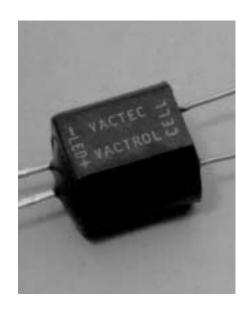
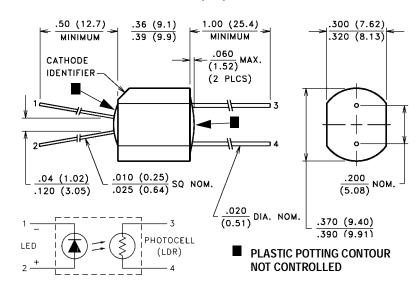
## VTL5C3, 5C4



### PACKAGE DIMENSIONS INCH (MM)



#### **DESCRIPTION**

VTL5C3 has a steep slope, good dynamic range, a very low temperature coefficient of resistance, and a small light history memory. VTL5C4 features a very low "on" resistance, fast response time, with a smaller temperature coefficient of resistance than VTL5C1.

#### **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: 2.0V (1.65V Typ.)

Min. Isolation Voltage @ 70% Rel. Humidity: 2500 VRMS

Output Cell Capacitance: 5.0 pF

Cell Voltage: 250V (VTL5C3),

50V (VTL5C4)

Input - Output Coupling Capacitance: 0.5 pF

#### **ELECTRO-OPTICAL CHARCTERISTICS @ 25°C**

Part Number	Material Type	ON Resistance 2		OFF 3	Slope	Dynamic Range	Response Time 4	
		Input current	Dark Adapted (Typ.)	Resistance @ 10 sec. (Min.)	(Typ.) R@ 0.5 mA R@ 5 mA	(Typ.) R <sub>DARK</sub> R@ 20 mA	Turn-on to 63% Final R <sub>ON</sub> (Typ.)	Turn-off (Decay) to 100 kΩ (Max.)
VTL5C3	3	1 mA 10 mA 40 mA	$30 \text{ k}\Omega$ $5 \Omega$ $1.5 \Omega$	10 ΜΩ	20	75 db	2.5 ms	35 ms
VTL5C4	4	1 mA 10 mA 40 mA	1.2 kΩ 125 Ω 75 Ω	400 MΩ	18.7	72 db	6.0 ms	1.5 sec

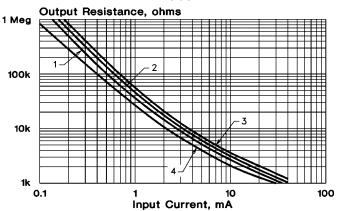
Refer to Specification Notes, page 41.

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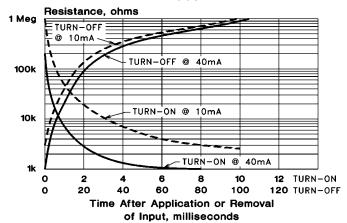
Phone: 314-423-4900 Fax: 314-423-3956 Web: www.excelitas.com

# **Typical Performance Curves**

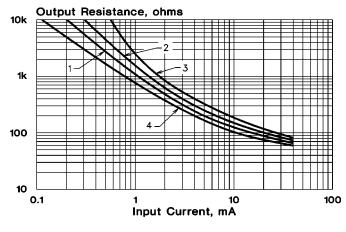
Output Resistance vs. Input Current VTL5C3



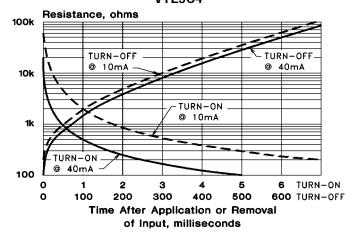
Response Time VTL5C3



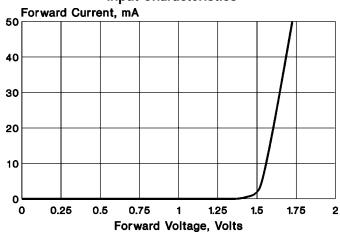
Output Resistance vs. Input Current VTL5C4



Response Time VTL5C4



#### Input Characteristics



#### Notes:

- 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 vs input current transfer curves are given for the following light adapt conditions:
  - (1)  $25^{\circ}\text{C} 24 \text{ hours } @ \text{ no input}$
  - (2) 25°C 24 hours @ 40 mA input
  - (3) +50°C 24 hours @ 40 mA input
  - (4)  $-20^{\circ}\text{C} 24 \text{ hours } @ 40 \text{ mA input}$
- 3. Response time characteristics are based upon test following adapt condition (2) above.

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