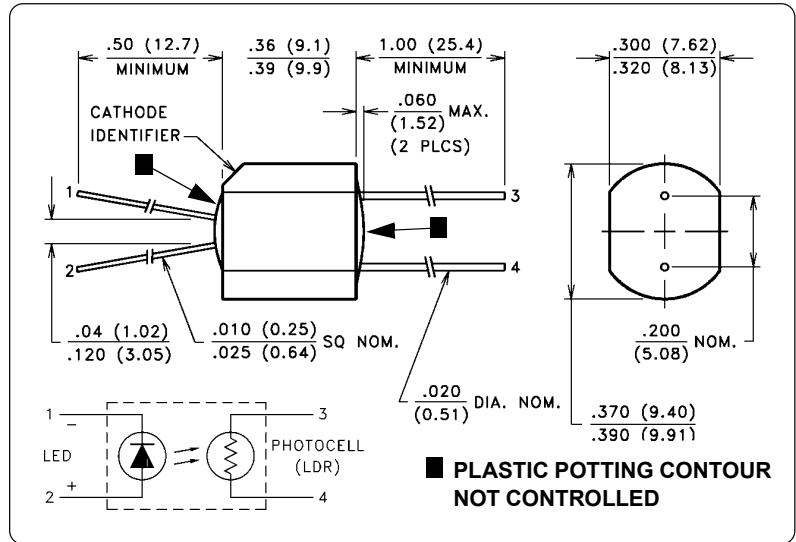
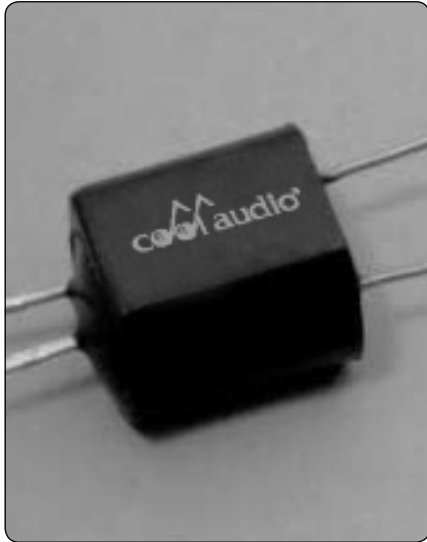


### 1. Package Dimensions Inch (mm)



### 2. Description

VTL5C3 has a steep slope, good dynamic range, a very low temperature coefficient of resistance, and a small light history memory.

### 3. Absolute Maximum Ratings @ 25°C

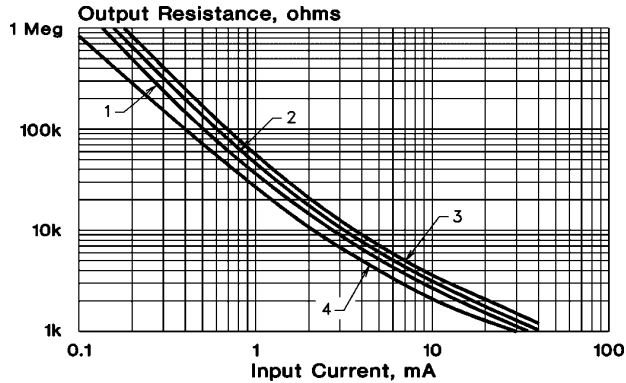
Maximum Temperatures		Min. Isolation Voltage @ 70% Rel. Humidity:	2500 VRMS
Storage and Operating:	-40°C to 75°C	LED Reverse Breakdown Voltage:	2.0 V (1.65 V Typ.)
Cell Power:	175 mW	Output Cell Capacitance:	5.0 pF
Derate above 30°C:	3.9 mW / °C	Cell Voltage:	250 V (VTL5C3)
LED Current:	40 mA <b>1</b>	Input - Output Coupling Capacitance:	0.5 pF
Derate above 30°C:	0.9 mA / °C		
LED Forward Voltage Drop @ 20 mA:	3.0 V		

### 4. Electro-Optical Characteristics @ 25°C

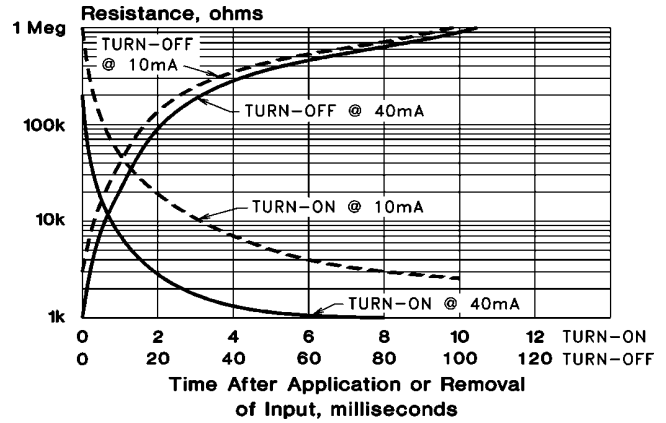
Part Number	Material Type	ON Resistance <b>2</b>		OFF <b>3</b> Resistance @ 10 sec. (Min.)	Slope (Typ.) $\frac{R @ 0.5 \text{ mA}}{R @ 5 \text{ mA}}$	Dynamic Range (Typ.) $\frac{R_{\text{DARK}}}{R @ 20 \text{ mA}}$	Response Time <b>4</b>	
		Input current	Dark Adapted (Typ.)				Turn-on to 63% Final $R_{\text{ON}}$ (Typ.)	Turn-off (Decay) to 100 kΩ (Max.)
VTL5C3	3	1 mA 10 mA 40 mA	10 kΩ 1 kΩ 500 Ω	10 MΩ	20	75 db	2.5 ms	35 ms

## 5. Typical Performance Curves

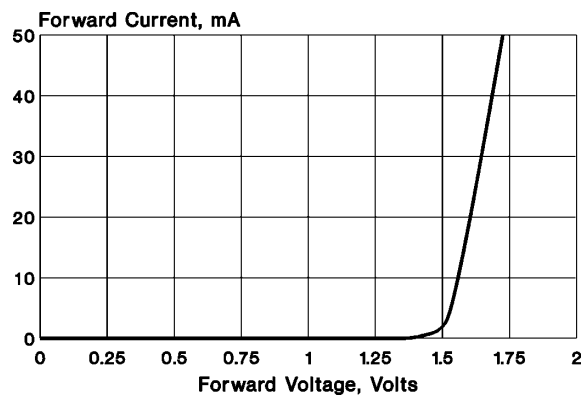
**Output Resistance vs. Input Current**  
VTL5C3



**Response Time**  
VTL5C3



**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 vs 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.