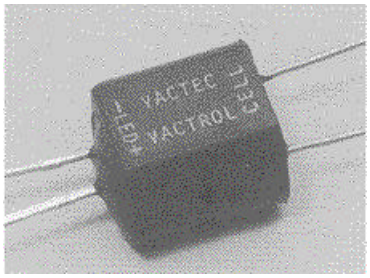
EG&G OPTOELECTRONICS

VTL5C1, 5C2
ANALOG OPTICAL ISOLATORS

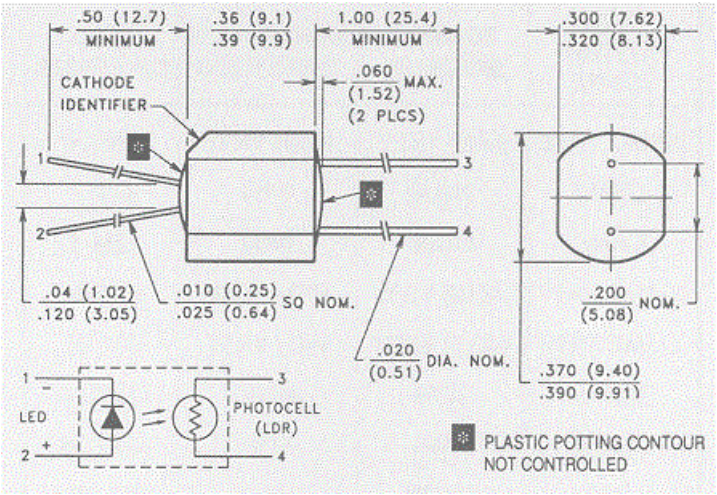


Description

The VTL5C1 offers 100 db dynamic range, fast response time and very high dark resistance.

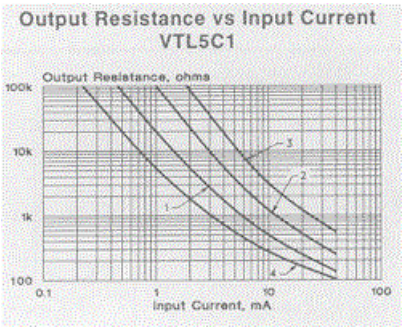
The VTL5C2 features a very steep slope, low temperature coefficient of resistance and a small light history memory.

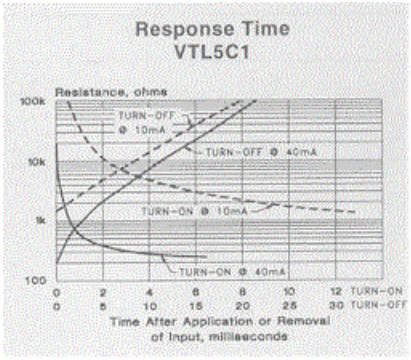
Abosolute Maximum Ratings @ 25°C	
Max Temperatures: Storage and Operating: -40°C to 75°C	LED Forward Voltage Drop @ 20 mA: 2.0V (1.65V Typ.)
Cell Power: 175 mW Derate above 30°C: 3.9 mW/°C	Min. Isolation Voltage @ 70% Rel. Humidity: 2500 VRMS
LED Current: 40 mA (1) Derate above 30°C: 0.9 mA/°C	Output Cell Capacitance: 5.0 pF
LED Reverse Breakdown Voltage: 3.0V	Cell Voltage: 100V (VTL5C1), 200V (VTL5C2)
	Input-Output Coupling Capacitance: 0.5 pF

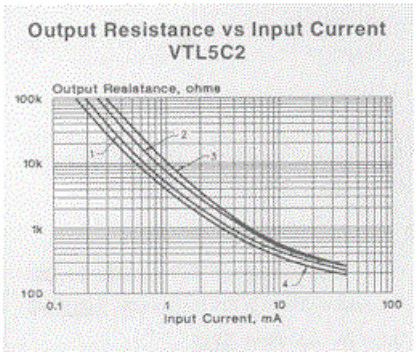


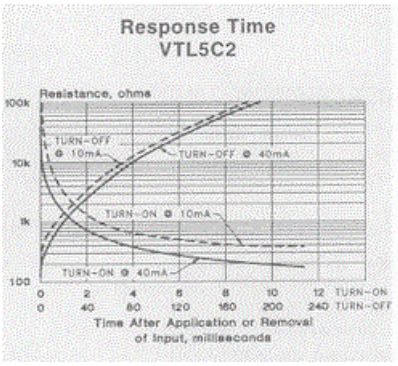
Part Nubmer	Material Type	ON Resistance (2)		OFF (3) Resistance @ 10 sec. (Min.)	Slope (Typ.) R_{DARK} R @ .5 mA / R @ 5 mA	Dynamic Range (Typ.) R_{DARK} / R @ 20 mA	Response Time (4)	
		Input Current	Dark Adapted (Typ.)				Turn-on to 63% Final R_{ON} (Typ.)	Turn-off (Decay) to 100kΩ (Max.)
VTL5C1	1	1mA 10mA 40mA	20kΩ 600Ω 200Ω	50 MΩ	15	100 db	2.5 ms	35 ms
VTL5C2	0	1mA 10mA 40mA	5.5kΩ 800Ω 200Ω	1 MΩ	24	69 db	3.5 ms	500 ms

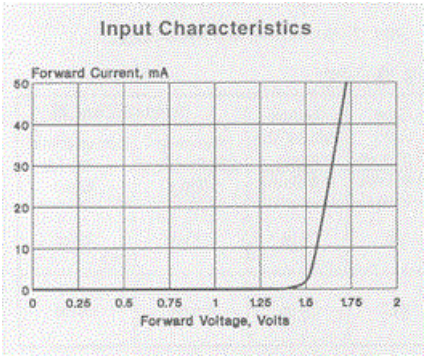
Typical Performance Curves











Notes:

1. At 1.0 mA and below, units may have substantially higher resistance than shown in the typical curves. Consult the factory if closely controlled characteristics are required at low input currents.
2. Output resistance vs input current transfer curves are given fo rthe folowoing 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 follwoing adapt condition (2) above.

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